DRAFT Standard for Responsible Mining and Mineral Processing 2.0

October 2023



Initiative for Responsible Mining Assurance

Contents

Contents	2
Disclaimers	4
Preamble	6
How the IRMA Standard may be used	7
History of development of the IRMA Standard	7
Principles and Objectives	8
Scope of the IRMA Standard	10
Chapter Structure	12
Language	13
IRMA Achievement Levels and Continuing Improvement	13
IRMA Decision Making Process	16
Questions, Complaints and Grievances	16
Collaboration with Related Standards and Certification Systems	16
Associated Documents	17
Comment on the IRMA Standard	17
Principle 1: Business Integrity	18
Chapter 1.1 Legal Compliance	19
Chapter 1.2 Community and Stakeholder Engagement	28
Chapter 1.3 Human Rights Due Diligence	40
Chapter 1.X (NEW) Gender Equality & Gender Protections	53
Chapter 1.4 Complaints and Grievance Mechanism and Access to Remedy	65
Chapter 1.5 Financial Transparency and Anti-Corruption	75
Chapter 1.XX (NEW) Mineral Supply Chain and Responsible Sourcing	86
Principle 2: Planning for Positive Legacies	88
Chapter 2.1 Environmental and Social Impact Assessment and Management	89
Chapter 2.2 Indigenous Peoples and Free, Prior and Informed Consent (FPIC)	121
Chapter 2.3 Obtaining Community Support and Delivering Benefits	141
Chapter 2.4 Land Acquisition, Displacement, and Resettlement	150
Chapter 2.5 Community Emergency Preparedness and Response	181
Chapter 2.6 Planning and Financing Reclamation and Closure	192
Principle 3: Social Responsibility	211
Chapter 3.1 Fair Labor and Terms of Work	212
Chapter 3.2 Occupational Health and Safety	237

Chapter 3.3 Community Health and Safety
Chapter 3.4 Conflict-Affected and High-Risk Area Due Diligence
Chapter 3.5 Security Arrangements
Chapter 3.6 Artisanal and Small-Scale Mining
Chapter 3.7 Cultural Heritage
Principle 4: Environmental Responsibility
Chapter 4.1 Waste and Materials Management
Chapter 4.2 Water Management
Chapter 4.X (NEW) Management of Physical Stability
Chapter 4.3 Air Quality
Chapter 4.4 Noise and Vibration
Chapter 4.5 Greenhouse Gas Emissions and Energy Consumption
Chapter 4.6 Biodiversity, Ecosystem Services and Protected Areas
Chapter 4.XX (NEW) Land and Soil Management
Full Glossary of Terms

Disclaimers

Context and Disclaimer on IRMA DRAFT Standard 2.0

IRMA DRAFT Standard for Responsible Mining and Minerals Processing 2.0 is being released for public consultation, inviting the world to join in a conversation around expectations that drive value for greater environmental and social responsibility in mining and mineral processing.

This draft document invites a global conversation to improve and update the 2018 IRMA Standard for Responsible Mining Version 1.0. It is not a finished document, nor seeking final review, but rather is structured to invite a full range of questions, comments and recommendations to improve the IRMA Standard.

This IRMA DRAFT Standard for Responsible Mining and Minerals Processing (v.2.0) has been prepared and updated by the IRMA Secretariat based on learnings from the implementation of the Standard (v.1.0), experience from the first mines independently audited, evolving expectations for best practices in mining to reduce harm, comments and recommendations received from stakeholders and Indigenous rights holders, and the input of subject-specific expert Working Groups convened by IRMA in 2022.

IRMA's Standard has a global reputation for comprehensive in-depth coverage addressing the range of impacts, as well as opportunities for improved benefit sharing, associated with industrial scale mining. This consultation draft proposes a number of new requirements; some may wonder whether IRMA's Standard already includes too many requirements. The proposed additions are suggested for a range of reasons (explained in the text following), including improving auditability by separating multiple expectations that were previously bundled into a single requirement, addressing issues that previously weren't sufficiently covered (e.g. gender, greenhouse gas emissions), and providing more opportunities for mining companies to receive recognition for efforts to improve social and environmental protection.

Please note, expert Working Groups were created to catalyze suggestions for solutions on issues we knew most needed attention in this update process. They were not tasked to come to consensus nor make formal recommendations. Their expertise has made this consultation document wiser and more focused, but work still lies ahead to resolve challenging issues. We encourage all readers to share perspectives to improve how the IRMA system can serve as a tool to promote greater environmental and social responsibility, and create value for improved practices, where mining and minerals processing happens.

The DRAFT Standard 2.0 is thus shared in its current form to begin to catalyze global conversation and stakeholder input. It does not represent content that has been endorsed by IRMA's multistakeholder Board of Directors. IRMA's Board leaders seek the wisdom and guidance of all readers to answer the questions in this document and inform this opportunity to improve the IRMA Standard for Responsible Mining.

IRMA is dedicated to a participatory process including public consultation with a wide range of affected people globally and seeks feedback, comments, questions, and recommendations for improvement of this Standard. IRMA believes that diverse participation and input is a crucial and determining factor in the effectiveness of a Standard that is used to improve environmental and social performance in a sector. To this end, every submission received will be reviewed and considered.

The DRAFT Standard 2.0 is based on content already in practice in the IRMA Standard for Responsible Mining Version 1.0 (2018) for mines in production, combined with the content drafted in the IRMA Standard for Responsible Mineral Development and Exploration (the 'IRMA-Ready' Standard – Draft v1.0 December 2021) and in the IRMA Standard for Responsible Minerals Processing (Draft v1.0 June 2021).

Disclaimer

Disclaimer on Mineral Supply Chain and Responsible Sourcing, and Conflict-Affected and High-Risk Area Due Diligence

In the final version of the 2018 IRMA Standard for Responsible Mining there is no chapter that specifically addresses the sourcing of raw materials, given the focus is primarily on the extraction of raw materials. However, a chapter on Mineral Supply Chain and Responsible Sourcing was proposed as Chapter 1.6 in the 2021 draft IRMA Standard for Responsible Mineral Processing, given the importance of raw material sourcing at the processing point of the supply chain. As part of the IRMA Standards revision process, a draft chapter was submitted for Board's approval (Chapter 1.XX). But the IRMA Board of Directors has not yet agreed on a set of criteria and requirements for such a chapter, and is proposing to convene an Expert Working Group to better elucidate current best practices and to help propose an approach that reflects those practices. The intention is that a draft chapter will be released separately for public consultation in the next few months.

Regarding Conflict-Affected and High-Risk Areas (CAHRA), the revised Chapter is also under development, but a first draft is made available (Chapter 3.4) and IRMA welcomes comments on it. The IRMA Board of Directors has mandated the IRMA Secretariat to convene an Expert Working Group on the subject. One of the issues that will be considered in that working group is the possibility of combining a Responsible Sourcing chapter with the CAHRA chapter (since management of risks in CAHRA is a component of responsible sourcing). While dependent on the outcomes of this Working Group (and informed by the comments received during this public-comment period), it is anticipated that a second draft of the Chapter on Conflict-Affected and High-Risk Area Due Diligence will then be released separately for public consultation in the next few months.

PARTICIPATE IN AN EXPERT WORKING GROUP ON THESE CHAPTERS

If you are interested in participating in an Expert Working Group on Mineral Supply Chain and Responsible Sourcing and/or Conflict-Affected and High-Risk Area Due Diligence, please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net).

Disclaimer on Language and Corrections

Although every effort has been made to verify the accuracy of translations, the English language version should be taken as the definitive version. IRMA reserves the right to publish corrigenda on its web page, and readers of this document should consult the corresponding web page for corrections or clarifications.

Preamble

Industrialized societies rely on mined materials to function. From household electronics to vehicles, from batteries to renewable energy systems, products that are used daily come from material mined from the Earth. Mining provides investment and financial opportunities for host countries, and important employment and income for local communities. However, the exploration, extraction, and processing associated with mined materials also can negatively impact human rights and the environment on which people depend.

The Initiative for Responsible Mining Assurance (IRMA) envisions a world where the mining industry respects the human rights and aspirations of affected communities; provides safe, healthy, and supportive workplaces; minimizes harm to the environment; and leaves positive legacies.

The IRMA DRAFT Standard for Responsible Mining and Minerals Processing 2.0 (DRAFT Standard 2.0) provides an internationally recognized shared definition of what constitutes best practices in social and environmental responsibility for mineral exploration, extraction, and processing. The Standard serves as the basis for a comprehensive system that is intended to create transparency into mining's impacts, and to improve practices across supply chains through independent verification.

The DRAFT Standard 2.0 has a broader scope than the IRMA Standard for Responsible Mining Version 1.0 (2018) which only covered operating mines. The DRAFT Standard 2.0 encompasses the following:

- Exploration and Development: mineral exploration and development, prior to the operational phase of a mine.
- Extraction: mining and related activities, such as construction of infrastructure or beneficiation that occur on the mine site, and includes requirements that pertain to different phases of the mining life cycle through post-closure activities.
- **Processing:** mineral processing operations at the mine site or beyond the mine gate such as smelters, refineries and other operations involved in the processing, separation and purification of minerals and metals derived from ores and concentrates.

The IRMA Standard seeks to define best practices. In the context of the DRAFT Standard 2.0, this has been interpreted to mean that the Standard should consist of a set of auditable requirements that reflects agreement of the multi-stakeholder IRMA process on the most

IRMA, Government, Mineral Supply Chains, and the Climate Emergency

IRMA does not envision that the Standard will replace the need for a range of tools and actions required to tackle the climate emergency, nor the long-rooted challenges in mineral supply chains. We strive to be a support and complement to the essential role of government, which must set strong rules that all operators need to follow. IRMA also joins the global challenge to ensure that solutions for an equitable energy transition do not include greater harm at the top of supply chains, nor do they focus only on new extraction. Climate solutions must include reduced consumption, reducing inequities in resource distribution, increasing efficiency in material use, reducing waste and disposability, creating a more level playing field for recycling, and increasing mass transit, among other important actions. Where mining and mineral processing are needed, IRMA provides guidance on best practices to reduce harm to environmental and social values, and recognition for those who lead.

effective way to achieve the agreed social and environmental objectives of each chapter of the IRMA Standard, given the current state of knowledge. The IRMA Standard is intended to specify levels of performance such that a minerals exploration or mine development project, mine, or minerals processing operation that is operating according to best practice could reasonably be expected to conform with the specified requirements of every chapter, and sites that are still developing best practices can be measured according to their current status.

How the IRMA Standard may be used

Stakeholders may use the IRMA Standard in the following ways:

- **Mining companies** can demonstrate through third-party assessments that they are improving practices over time, and differentiate their efforts to protect social and environmental values.
- **Purchasers** can get insight into the practices of their mineral suppliers and ask their suppliers to give preference to minerals that come from operations that have been independently assessed and are performing at higher levels of responsible practices.
- Communities, labor unions and NGOs/civil society organizations can hold companies accountable and ask for third-party assurance and transparent reporting to build trust between the mining operation and the communities in which they operate, and serve as a basis for setting shared priorities for improved practices.
- **Governments** can draw upon the IRMA Standard and its requirements to improve their expectations for the mining sector and use it as a blueprint for improved regulation.
- Financial institutions and investors can use the IRMA Standard to assess practices at the asset level, improve lending policies, or signal an intent or interest to invest in more responsible mining companies.

History of development of the IRMA Standard

Version 1.0 of the IRMA Standard was released in 2018 after a robust public consultation process that took place in 2014 and again in 2016 that resulted in more than 2,100 comments and recommendations that informed its content. The 2018 release of version 1.0 also was based on two field tests of the Standard, in Zimbabwe and in the United States.

This DRAFT Standard 2.0 is being developed by the IRMA Secretariat through a similar, although shorter, public consultation process that seeks to engage diverse stakeholders and Indigenous rights holders around the world. In preparing for this review and revision process, more than 20 different companies have already been piloting the draft requirements for exploration and development and also for mineral processing. Several others have been assisting with testing the draft expectations in a new draft Chain of Custody Standard that will support verification of responsible sourcing claims, from mine to end product. In addition, 139 diverse experts from 23 countries have engaged in 10 topical working groups to provide suggestions to inform and catalyze this revision process that now opens for broad public review and input.

An Integrated Standard for Responsible Practices

The IRMA DRAFT Standard 2.0 responds to stakeholders who have expressed that responsible practices at mine sites (the focus of Version 1.0), can and should be applied at other stages in the mineral and metals development life cycle and supply chain. For minerals processing, downstream stakeholders have articulated that customers and clients expect them to demonstrate that responsible practices are occurring throughout their minerals and metals supply chains. For exploration, stakeholders have expressed the need for responsible practices during mineral exploration and development, prior to the operational phase of a mine, and it is assumed these projects should then be better prepared to meet the requirements that apply to their operational stage. Therefore, the IRMA DRAFT Standard 2.0 incorporates the IRMA Standard for Responsible Mineral Development and Exploration (the <u>'IRMA-Ready' Standard – Draft v1.0 December 2021</u>) covering exploration, and the I<u>RMA Standard for Responsible Mineral Standard (IRMA DRAFT Standard (IRMA DRAFT Standard For Responsible Mineral Standard for Responsible Mineral Standard (IRMA DRAFT Standard for Responsible Mineral Standard (IRMA DRAFT Standard for Responsible Mineral Standard (IRMA DRAFT Standard for Responsible Mineral Standard for Responsible Mineral Standard (IRMA DRAFT Standard for Responsible Mineral </u>

Principles and Objectives

Principle 1—Business Integrity

INTENT: Entities conduct business in a transparent manner that complies with applicable host country and international laws, respects human rights and builds trust and credibility with workers, communities and stakeholders.

Chapter 1.1—Legal Compliance: To promote compliance with the laws and regulations of the country in which the project/operation takes place, and exceedance of host country laws in a manner consistent with best practices to protect human rights, health, safety, and the environment.

Chapter 1.2—Community and Stakeholder Engagement: To support entity decision-making and enable community members, individual and collective rights holders, and other stakeholders to participate in mining-related decisions that affect their health, well-being, safety, livelihoods, futures, and the environment.

Chapter 1.3—Human Rights Due Diligence: To respect human rights, and identify, prevent, mitigate and remedy infringements of human rights.

NEW Chapter 1.X—Gender Equality & Gender Protections: To achieve and maintain gender equality, gender mainstreaming, and gender protections in the workplace and communities where mining and mineral processing takes place.

Chapter 1.4— Complaints and Grievance Mechanism and Access to Remedy: To provide credible, effective, and accessible means for affected communities, individuals, and other stakeholders to raise and resolve grievances arising due to mining-related activities, while not limiting their ability to seek remedy through other mechanisms.

Chapter 1.5—Revenue and Payments Transparency: To increase transparency of payments made in relation to mining-related activities, projects and operations, and provide communities and the general public with the information they need to understand and assess the fairness and ethical nature of an entity's financial activities and arrangements

NEW (Under development) Chapter 1.XX—Mineral Supply Chain and Responsible Sourcing: Mineral processing operations know and engage with suppliers, and increasingly source input materials from suppliers that have strong environmental, social and governance performance.

Principle 2— Planning and Managing for Positive Legacies

INTENT: Entities engage with stakeholders from the early planning stages and throughout the mineral development life cycle to ensure that projects are planned and operations are managed to deliver positive economic, social and environmental legacies for entities, workers and communities.

Chapter 2.1—Environmental and Social Impact Assessment and Management: To proactively anticipate and assess potential adverse environmental and social impacts and manage them in accordance with the mitigation hierarchy; identify strategies for maximizing positive impacts; and continue to assess, monitor and adapt environmental and social management strategies in a manner that protects and benefits affected communities, workers and the environment throughout the entire mineral development life cycle.

Chapter 2.2—Free, Prior and Informed Consent (FPIC): To demonstrate respect for the dignity, aspirations, cultures, livelihoods, and rights (including the right to free, prior and informed consent) of Indigenous Peoples.

Chapter 2.3—Obtaining Community Support and Delivering Benefits: To obtain and maintain credible broad support from affected communities; and produce tangible and equitable benefits to communities that are in alignment with their needs and aspirations and sustainable over the long term.

Chapter 2.4—Resettlement: To understand past and potential land acquisition and displacement, avoid displacement and resettlement if that is the most protective option for people, and, when avoidance is not the best option, equitably compensate affected people and improve the livelihoods and standards of living of displaced people.

Chapter 2.5—Emergency Preparedness and Response: To work with communities and other stakeholders to plan for and be prepared to respond effectively to industrial emergency situations that may affect off-site resources or communities, and to minimize the likelihood of accidents, loss of life, injuries, and damage to property, environment, health and social well-being.

Chapter 2.6—Planning and Financing Reclamation and Closure: To protect long-term environmental and social values, and ensure that the costs of site reclamation and closure are not borne by affected communities or the wider public.

Principle 3— Social Responsibility

INTENT: Entities engage with workers, stakeholders and rights holders to maintain or enhance the health, safety, cultural values, quality of life and livelihoods of workers and communities.

Chapter 3.1—Fair Labor and Terms of Work: To maintain or enhance the social and economic wellbeing of workers and respect internationally recognized workers' rights.

Chapter 3.2—Occupational Health and Safety: To identify and avoid or mitigate occupational health and safety hazards, maintain working environments that protect workers' health and working capacity, and promote workplace safety and health.

Chapter 3.3—Community Health and Safety: To protect and improve the health and safety of individuals, families, and communities affected throughout the mineral development life cycle.

Chapter 3.4—Mining and Conflict-Affected or High-Risk Areas: To respect human rights and avoid contributing to conflict when operating in, transporting materials through, or sourcing minerals or metals from conflict-affected and high-risk areas.

Chapter 3.5—Security Arrangements: To manage security in a manner that protects operations, assets, and products without infringing on human rights.

Chapter 3.6—Artisanal and Small-Scale Mining: To avoid conflict and, where possible within the scope of host country law, foster positive relationships between entities managing large-scale mining and mineral processing operations and artisanal and small-scale mining (ASM) entities, and support the development of ASM that provides positive livelihood opportunities and is protective of human rights, health, safety, and the environment.

Chapter 3.7—Cultural Heritage: To protect and respect the cultural heritage of communities and Indigenous Peoples.

Principle 4—Environmental Responsibility

INTENT: Entities engage with stakeholders to ensure that mineral development is planned and carried out in a manner that maintains or enhances environmental values, and avoids or minimizes impacts to the environment and communities.

Chapter 4.1—Waste and Materials Management: To transport, handle, store, treat and dispose of materials and wastes in a manner that protects worker and community health and safety, and the environment.

Chapter 4.2—Water Management: To manage water resources in a manner that strives to protect current and future uses of water.

NEW Chapter 4.X—Management of Physical Stability: To manage wastes, materials and facilities in a manner that minimizes their short- and long-term physical risks, and protects workers as well as the human rights, health and safety of communities and future land and water uses.

Chapter 4.3—Air Quality: To protect human health and the environment from airborne contaminants.

Chapter 4.4—Noise and Vibration: To preserve the health and well-being of nearby noise receptors and the amenity of properties and community values, and to protect offsite structures from vibration impacts.

Chapter 4.5—Greenhouse Gas Emissions: To minimize contribution to climate change impacts through increased energy efficiency, reduced energy consumption, reduced emissions of greenhouse gases from direct and indirect sources, and increased capture of carbon already emitted to the atmosphere.

Chapter 4.6—Biodiversity, Ecosystem Services and Protected Areas: To protect biodiversity, maintain the benefits of ecosystem services and respect the values being safeguarded in protected areas.

NEW Chapter 4.XX—Land and Soil Management: To prevent contamination, mitigate and remediate soil pollution, and address degradation of land and soil to enable current and future beneficial uses of soil and land resources.

DELETED Chapter 4.7—Cyanide

DELETED Chapter 4.8—Mercury Management

Note on Proposed Chapter Additions and Deletions

As identified in the list above, we are proposing 4 new chapters: 1.X, 1.XX, 4.X and 4.XX. We have inserted the new chapters in the locations where we think they are most relevant and work best with the flow of the Standard. The notes at the beginning of each of the new chapters explain the rationale for their addition.

We are also proposing to delete two chapters: Chapter 4.7 on Cyanide Management and Chapter 4.8 on Mercury Management. There was significant overlap between these two chapters and requirements in the waste, water and air chapters. As a result, most of the requirements from those two chapters have been retained and integrated into other chapters (in particular, in the Chapters 4.1, 4.2 and 4.3), and the notes in those chapters reflect where the additions have been made.

Scope of the IRMA Standard

The IRMA Standard is intended to be applicable to all types of industrial- or large-scale mining (including surface, sub-surface and solution mining) and all mined materials (e.g., minerals, metals), in any land-based geography in the world. The IRMA standard is not intended for application to oil and gas, thermal coal and uranium. IRMA also has a current policy explaining why its Standard is not fit for application for extraction in the deep sea.

There is no defined minimum cut-off point for the scale of mine to which the IRMA Standard may apply, but it is not designed to be applicable to artisanal or the smallest scale mining done with little to no mechanization. Those types of mining do have impacts to people and the environment, and notably also provide more jobs in the world than large scale mining. IRMA collaborates with other organizations including the Alliance for Responsible Mining, Pact, IMPACT, Levin Sources and others working to reduce conflict and violence at the interface between large scale and artisanal scale mining, and to encourage programs between large-scale and small-scale mining that increase benefits sharing and access to market, and reduce harm to people and the environment.

The revised IRMA Standard and assessment program covers mining-related activities that occur throughout the entire 'mineral development life cycle', from exploration through to the 'mineral processing' and purification of

minerals/metals. The Standard and assessment program applies to both proposed 'projects', as well as existing 'operations' and their 'associated facilities' (see IRMA Glossary for definitions of identified 'terms', and also the Notes in Chapter 2.1 for more context).

The Standard does not apply to the manufacturing and assembly of products, or end product use and disposal. However, in 2023 IRMA has a new draft standard, on which we also welcome public review and comment, describing Chain of Custody for the tracking of materials sourced from mines and mineral processing operations, and claims that can be made about sourcing and carried down the supply chain to end products.

As a global standard, the IRMA Standard's requirements were drafted to balance a tension between consistent expectations for best practices around the world, wherever mining happens, and details sufficient to describe how achievement of best practices can be measured, with generality and flexibility that allows different actions to be taken at mine sites of different types, scales, and in different cultural and environmental contexts. For example, a quality stakeholder engagement plan in Zimbabwe may look very different than one in the United States, but the IRMA Standard describes elements that should be found regardless (e.g., people who live near the mine know it exists, they know how to participate, they feel safe to engage, they feel their input is responded to in timely meaningful ways, etc.).

We continue to develop new programs and tools to ensure the IRMA system fulfills the opportunity to drive value for improved environmental and social responsibility for diversity of sizes of operations, range of technologies, in differing global regions and cultural contexts. As necessary, we will develop further guidance to support adaptations and interpretation to fit emerging opportunities and challenges.

The subsections below provide more information on the applicability of the Standard under different conditions.

Where Operations Can't "Turn Back the Clock"

IRMA recognizes that there are some requirements within the Standard that cannot be met once a mining operation has reached a certain stage – in other words, an operator cannot "turn back the clock" to change actions that have already occurred, nor can it meet time-dependent requirements that did not take place at the appropriate time. For example, a mine already in operation that seeks to be assessed in the IRMA program but that did not obtain the free, prior and informed consent of Indigenous Peoples before it went into operation can no longer obtain the "prior" consent of Indigenous Peoples.

IRMA also recognizes that some of the best practices outlined in the IRMA Standard reflect changes in global practice and norms that have come to the fore only in recent years. For example, while there may have been an understanding that companies should respect human rights, the 2011 UN Guiding Principles on Business and Human Rights strengthened the expectation that companies do so. Similarly, while there may have been some understanding that companies should act responsibly when operating in conflict-affected or high-risk areas, it was not until 2011, and the release of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, that there was an internationally recognized and accepted due diligence framework for companies to follow. While newer mines may have implemented systems to meet these relatively new expectations, older mining operations may not have done so.

IRMA seeks to make its system available to any proposed or existing mining or mineral processing operation that is committed to improving environmental and social responsibility, using the Standard's principles and objectives as a guide. The fact that an existing operation did not fully comply with all requirements of the IRMA Standard during an early stage of its development should not exclude it from assessment, nor from reaching higher levels of achievement in IRMA's scoring system. As readers review the IRMA Standard's 2023 draft, they will see a range of ways that existing operations are encouraged to be assessed, provide context for challenging areas, improve social and environmental performance, and remedy impacts from past practices.

While IRMA encourages sites with any range of challenges to engage and use IRMA as a trusted starting point to benchmark current performance and demonstrate improvement over time, IRMA will also use caution to ensure that it is not being used a tool for "greenwashing" or cover for weak practices and past harms. IRMA has a draft Policy on Association under review in 2023 which describes when particularly serious actions by any organization

create a context where IRMA could refuse to associate or set conditions for association. In addition, IRMA is also exploring ways that any operator and the people concerned with impacts (local community members, Indigenous rights holders, purchasing customers, investors, government and others) might use IRMA's system to support discussion on remedy of past harm.

Application for all Phases of Mineral Development

One significant change from the 2018 IRMA Standard for Responsible Mining v 1.0 to the 2023 proposed revisions for version 2.0 is that the requirements are meant to apply at any phase of the mineral development life cycle (e.g., exploration, project development, permitting, construction, mining and processing operations, reclamation and closure, post-closure). The Standard recognizes that different aspects of some requirements will be assessed at different phases of the life cycle (for example, while requirements related to the planning of mine closure may be assessed even during the construction phase, effective implementation of those requirements cannot be assessed until closure is under way or completed).

The draft Standard version 2.0 currently offers some guidance on how expectations differ, but more details regarding the relevancy of specific requirements for specific phases will be enumerated when the final Standard has been approved. IRMA's self-assessment tool will enable operators to identify the subset of requirements applicable to each phase of mineral development, and we will continue to develop tools that make identifying these subsets of requirements, separated by phase of operation, easier for all users of the Standard.

Addressing Unique Needs of Small and Medium Sized Operators, and Economic Challenges

IRMA is paying particular attention to issues related to small-to-medium-sized companies that operate industrialscale mines. IRMA leaders understand that smaller companies may have less experience with some planning, monitoring, reporting and other formal processes than larger companies with more resources. IRMA wants to ensure its Standard is accessible to all companies wanting to demonstrate their commitment to greater social and environmental performance, and as a result, IRMA is evaluating potential barriers to smaller operators and is evaluating opportunities to reduce barriers while still maintaining a Standard that is protective of social and environmental values. Strategies being considered include longer timelines allowed to accomplish some tasks, adjusted fees for participation in IRMA, and technical and financial resources to support capacity building and training opportunities for smaller companies, especially those producing low-value commodities.

Chapter Structure

BACKGROUND

Each chapter has a short introduction to the issue covered in the chapter, which may include an explanation of why the issue is important, a description of key issues of concern, and the identification of key aspects of recognized or emerging best practice that the standard aims to reflect.

OBJECTIVES/INTENT STATEMENT

A description of the key objectives that the chapter is intended to contribute to or meet.

SCOPE OF APPLICATION

A description of the conditions under which the chapter may or may not be relevant for particular mines or mineral processing sites. If the entity can provide evidence that a chapter is not relevant, that chapter will not need to be included in the scope of the IRMA assessment. A

TERMS USED IN THIS CHAPTER

This is a list of the terms used in the chapter ■ Each term is separated with ■

Terms listed here are identified in the chapter with a <u>dashed underline</u>. And they are defined in the <u>Glossary</u> <u>of Terms</u> at the end of the chapter.

requirement is 'not relevant' if the issue to which a requirement relates is not applicable at the site. For example, requirements related to the use of cyanide would not be relevant at a site at which cyanide is never used.

Chapter Requirements

X.X.X. These are criteria headings

X.X.X.X. And these are the requirements that must be met for an IRMA assessment to be issued and subsequently maintained by a site. Most criteria have more than one requirement. All requirements must be met in order to comply fully with the criterion.

- a. Some requirements consist of hierarchical elements:
 - i. At more than one level.
 - ii. Operations may be required to meet all elements in a list, or one or more of the elements of such a list, as specified.

NOTES

Any additional notes related to the chapter and its requirements are explained here.

GLOSSARY OF TERMS USED IN THIS CHAPTER

Terms used in the chapter are defined here.

ANNEXES AND TABLES

Annexes or Tables are found here.

Language

The IRMA Standard follows ISO guidance in the use of the word 'shall' to indicate a requirement that must be met. For example, "There shall be an environmental impact assessment for the mine site."

The requirements of the IRMA Standard have been drafted taking account of the intent that conformity will be strictly assessed in accordance with the wording; practically speaking this means that where there are multiple sub-bullets in the requirements, all sub-requirements must be met to fully meet the requirement.

If flexibility is intended, for example, if sites can choose to implement one or more elements from a longer list, then this is specified in the wording of the requirement, typically by using the term "or" between the options.

Technical terms are defined in the Glossary. The definitions are considered to be normative for the purpose of interpreting the IRMA Standard. As mentioned above, defined terms are listed in a box at the beginning of the chapter, and terms are lightly underlined in the chapter text. Also, in this consultation version of the draft Standard the definitions for the terms used in each chapter are listed at the end of each chapter.

IRMA Achievement Levels and Continuing Improvement

The IRMA Standard aims to define, recognize and incentivize best practices for environmental and social responsibility in mining and mineral processing. IRMA recognizes that this is a high standard that has not been described in regulatory frameworks in many countries, and many mining and mineral processing companies may not have seen market value or market differentiation for going beyond a base level of performance. Consequently, IRMA has developed a scoring tool that allows for a richer sense of performance than simply "pass/fail", and furthermore allows for in-depth understanding of performance in each chapter of the IRMA Standard.

Foundational in this approach is value for continuing improvement. Mines at any point in their journey to improve environmental and social responsibility may engage, use an IRMA assessment as an independent way to set current performance, offer context on areas of challenge, make commitments to improve practices, and measure those improvements over time.

IRMA has also set a series of achievement levels that can be reached when projects undergo independent, thirdparty assessment by an approved certification body.

In describing these achievement levels, please note that in this Draft Version 2.0, IRMA no longer uses the word 'certification'. Mining's impacts can be significant and persistent for decades or even centuries. Society's mineral demands will continue to rely on many existing mines constructed decades ago without current expectations for best practice designs. In some cases, it will be a better social and environmental option to improve practices at existing mines rather than just incentivize new mines to be built in places not yet impacted by industrial scale extraction. It's counter-productive to either place a bar for "certified responsible" practices down to status quo harm or up to a level that many operators can't achieve in the near term. Rather, IRMA's Standard continues to describe currently-achievable best practices across a broad range of more than 20 chapters and offers an opportunity to score an operation's current performance, and demonstrate improvement over time.

Details are important for understanding performance and differentiating good practices from harm. Each of the chapters in the IRMA Standard is scored individually. Each of the requirements in the chapters is also scored. Even at the individual requirement level recognition is given for current effort and there is encouragement for improvement as scores are based on whether each requirement is fully met, substantially met, partially met or not met. Publicly released audit reports include this level of detail, at the requirement and chapter level, and support opportunities to improve.



The graphic above shows the ladder of recognized achievement levels in IRMA. Each These levels are calculated by taking the scores a company achieves in each of the chapters in the IRMA Standard and then averaging the chapters

in each of the four principles described above. When the scores for the chapters in all four principles meet or exceed 50, and a set of critical requirements are met (more on this below), an operator may describe their performance as IRMA 50. This means that a score of 100 in social chapters but a 0 in environmental chapters is not IRMA 50, as the scores in all four principles must be at least 50. The same logic is followed for IRMA 75.

By offering detailed assessment results in publicly shared audit reports that describe performance against all IRMA requirements people with differing perspectives can use the transparency there to seek different types of improvements and create value for leading practices. For example, a customer of a mining operation with their own corporate commitments to protect human rights and biodiversity can look at scores in those specific chapters and seek improvements on a focused set of issues. Similarly, an affected community, workers or Indigenous rights holders can find the issues of greatest concern to them – e.g., protection of safety, cultural heritage or emergency response – and engage in a more informed, trusted and transparent dialogue with the company on changes they seek.

This approach balances pragmatism and honest accounting for impacts of mining today with incentive for continuing improvement that doesn't shy away from expectation for best practices. Best practices in responsible mining don't need decades of research to achieve, leading companies are already practicing many of these – but the market and legal structures have not yet sufficiently valued that expectation to drive the majority to respond. This is IRMA's core work – to provide a tool and market support for companies, communities, governments, investors, Indigenous rights holders, purchasers, civil society and others to make clear the expectations that mining will not cause unnecessary harm. These higher expectations for best practices will continue to drive innovation in the field overall.

This approach to transparency and detailed understanding of impacts in the supply chain is foundational to meeting increasing global expectations for due diligence in responsible sourcing and investing. An end brand or investor does not relinquish their responsibility, nor do they give IRMA any proxy for their understanding, but rather is an active participant using the tools provided by IRMA and information shared by mining partners, and they join in a conversation that seeks to equally engage the people most affected by mineral supply chains.

Basis for Awarding Achievement Levels

The basis for IRMA achievement level recognition is that, to the best knowledge of the certification body, on the basis of the evidence reviewed during the independent, third-party assessment, the necessary scores have been achieved to reach a particular achievement level. However, it should be noted that:

- Auditing conformity with some requirements of the IRMA Standard for Responsible Mining will be based on sampling, and some level of failure within a sample may be accepted while the overall level of performance required to conform with the requirement may still be met. Where possible IRMA will aim to provide quantitative guidance, but in the absence of specific guidance decisions will be based on the professional judgment of the certification body.
- Occasional, temporary failures of conformity are inevitable when managing large, complex projects over time, and such temporary failures do not imply the automatic, immediate withdrawal or suspension of an IRMA achievement level. Sites are expected to take appropriate and timely actions and to correct identified failures and analyze and address the issues that caused failures so that they can be avoided in the future.

Consequently, and in line with other comparable global standard systems, IRMA expects that verified achievement levels may be awarded, and may subsequently be maintained, despite the existence of minor non-conformities with the requirements of the Standard.

Responsibility for ensuring that the requirements of the IRMA Standard are met rests with the entity that applies for assessment. Although the scope for the achievement level applies to a specific mining or mineral processing site, and ultimate responsibility for compliance rests with the entity that holds the achievement, compliance for some IRMA Standard requirements may require conformity by others. For example, as required in Chapter 1.1—Legal Compliance, the entity is responsible for ensuring that when work related to a project or operation is implemented by contractors, compliance with the IRMA Standard's requirements is still expected.

Additionally, there are chapters that include the potential for corporate-owner level actions and reporting (e.g., Chapter 1.5—Revenue and Payments Transparency and 4.5—Greenhouse Gas Emissions).

IRMA Critical Requirements

The 2018 IRMA Standard for Responsible Mining v. 1.0 includes a set of requirements identified as being critical requirements. Operations being audited in the IRMA system must at least substantially meet these critical requirements in order to be recognized as achieving the achievement level of IRMA 50 and higher, and any critical requirements not fully met would need to have a corrective action plan in place describing how the requirement will be fully met within specified time frames.

The 2023 updates to the 2018 Standard may edit some critical requirements in the process of revising and therefore there will be a further review specific to the language and implications of critical requirements that follows the overall Standard review.



Stakeholder input is welcome on any portion of this document. In the 2018 version of the IRMA Standard for Responsible Mining v. 1.0, IRMA used a tool called "flags" to identify areas where there was a difference in opinion between perspectives which posed particular challenge to define best practices to the satisfaction of diverse interests, and we actively sought input to resolve issues. With the 2023 draft version 2.0, we welcome feedback and suggestions on all areas of the Standard and have removed flags. However, we may include flags again in a final version if diverging opinions on any current issues make consensus on shared solutions challenging.

IRMA Decision Making Process

Final decision for requirements in the IRMA Standard for Responsible Mining and Mineral Processing v. 2.0 rests with the IRMA Board of Directors, with equal representation and equal governance from six stakeholder houses. The IRMA Board of Directors has an active, intentional and broad-reaching interest, and a detailed plan, to engage with diverse people around the world who share their interest to encourage greater environmental and social responsibility where mining happens, to seek feedback on this draft Standard. It is their intention that the updated Standard will create value and service for all. If IRMA Board members find that feedback they receive includes diverging opinions, and questions that are difficult to resolve, they are likely to again seek the guidance of expert working groups tasked to assist on particular issues and to recommend shared solutions to move the process forward.

Questions, Complaints and Grievances

While development of the IRMA system began 16 years ago, we are still learning from the first 20 independent audits, and the more than 80 mines using the IRMA self-assessment tool. IRMA's program is more comprehensive, expects greater transparency, and actively seeks community engagement than mining industry governed systems. This is a moment of learning for mining and mineral processing companies, for auditors reviewing performance, for workers and communities invited to engage, and for IRMA system leaders. We actively seek ways to improve the process to create accountability and earn the trust of all; only through this trust can a standard create value for all. To this end, IRMA encourages questions, expressions of concern and complaint, and has a process to respond to formal grievances. This input can be on the Standard's metrics, the audit process, audit report findings, or other topics. Please find <u>more on this on IRMA's website</u>,

Collaboration with Related Standards and Certification Systems

It is IRMA's intent to coordinate wherever possible with existing schemes in order to avoid duplication, maximize social and environmental impact across full product life cycles, and maximize the benefits for those using the IRMA Standard to drive greater environmental and social responsibility.

Many organizations and initiatives have developed guidance for different elements of responsible mining and mineral processing. Guidance exists for stakeholder relations, respect for Indigenous Peoples, the implementation of the UN Guiding Principles on Business and Human Rights, the use of cyanide, management of water, and for many other social and environmental issues. Some organizations have specialized in providing guidance for particular mining sectors such as gold, coal, bauxite or tin mining, or for particular groups, such as small-scale or artisanal miners. Purchasers of mined materials from jewelers to steel manufacturers have defined specific requirements for portions of their supply chains.

IRMA is committed to collaborating with these multiple initiatives, and to working with governments who are setting stronger laws that all operators need to follow. Where the content and objectives of these efforts have created positive consensus across diverse sectors and Indigenous rights holders, IRMA has sought to integrate this other work into the development of the Standard for Responsible Mining. IRMA's contribution is a multistakeholder definition of what constitutes more "responsible mining" in a system uniquely governed equally by six stakeholder houses: affected communities, mining companies, customers purchasing mined materials, investors, NGOs and labor unions. Together they are setting best practices expectations and rules for measuring achievement that can be applied and trusted globally.

IRMA proactively collaborates with colleagues forwarding more responsible artisanal-scale mining (ASM) and with others working on materials retrieval and recycling. We also collaborate with the Forest Stewardship Council on the overlaps between standard setting, multistakeholder accountability, overlaps in mining and forestry issues and other shared learning.

IRMA is also committed to working in partnership to develop supply-chain connections to ensure the sustainability and responsibility of products and services in such industries as jewelry, building, automotive, technology/electronics, household products, and others. Please see IRMA's draft Chain of Custody Standard for more context on these connections.

Associated Documents

Readers should note that in addition to this Standard, there are additional policies and guidance materials maintained in other IRMA documents, such as IRMA's Principles of Engagement and Membership Principles, IRMA Guidance Documents for the Standard or specific chapters in the Standard, IRMA Claims and Communications Policy and other resources. These can be found on the IRMA web site in the Resources section. Learn more at responsiblemining.net

Comment on the IRMA Standard

Comments on the IRMA Standard and system are always welcome.

They may be emailed to IRMA at: <u>comments@responsiblemining.net</u>

Additional information about IRMA is available on our website: responsiblemining.net

Chapter 1.1 Legal Compliance

NOTES ON THIS CHAPTER: Changes have been made to improve auditability, and to streamline requirements (by combining them).

Proposed additions and changes:

- Requirement to have a system in place to identify and track compliance (1.1.1.1)
- More details on contractor compliance (1.1.3.1)
- Addition that the provision of regulatory compliance information to stakeholders be included in a policy (1.1.4.2)

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Compliance with applicable host country laws is one of the most basic principles of operating a mine, or any activity, in a given jurisdiction. As an international best practice standard IRMA's requirements may also contain provisions that are more stringent or demanding than the minimum legal requirements specified at the national level in a particular country.

This chapter seeks to ensure that the IRMA Standard supports and complements compliance with international and national laws and regulations. It is based on five precepts:

- Compliance with host country laws and permits;
- Compliance with the IRMA Standard and requirements;
- Compliance with the most protective of host country or IRMA requirements;
- Compliance with the host country law when there is a direct conflict with an IRMA requirement; and

TERMS USED IN THIS CHAPTER

Associated Facility Confidential Business
 Information Contractor Entity NEW
 Exploration NEW
 Host Country Law
 Mining
 NEW
 Mineral Processing NEW Operation
 NEW
 Project NEW
 Root Cause Analysis
 NEW
 Stakeholder

These terms appear in the text with a <u>dashed</u> <u>underline</u>. For definitions see the <u>Glossary of Terms</u> at

• Maintenance of records to document and demonstrate compliance with host country requirements and the IRMA Standard.

OBJECTIVES/INTENT OF THIS CHAPTER

To promote compliance with the laws and regulations of the country in which the project/operation takes place, and exceedance of host country laws in a manner consistent with best practices to protect human rights, health, safety, and the environment.

NOTE ON OBJECTIVES: A few minor changes to the wording of the objectives.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and

operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The entity carries out business in a manner that complies with host country laws and protects human rights, health, safety, and the environment (1.1.1.2).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Legal Compliance Requirements

1.1.1. Compliance with Host Country Laws

1.1.1.1. A system is in place to:

- a. Identify and document all host country laws (including local, regional, and national regulations, permits, permit conditions, and licenses) that are applicable to the project/operation, including associated facilities;
- b. Identify and document all regulatory reporting and payment obligations (e.g., taxes, fees);
- c. Identify and document all regulatory and legal actions related to the project/operation including fines, penalties, notices of violation, legal disputes or lawsuits; and
- d. Monitor and document the status of compliance with host country laws, reporting obligations and legal actions.

NOTE FOR 1.1.1.1: NEW and integrates requirement 1.1.5.1 from 2018 Mining Standard.

We are proposing to add this requirement to make it clear that entities are responsible for demonstrating that they have systems in place to know their legal obligations and track if they are maintaining compliance with those obligations. It integrates the previous requirement 1.1.5.1. "The operating company shall maintain records and documentation sufficient to authenticate and demonstrate compliance and/or non-compliance with host country laws and the IRMA Standard" since such record-keeping is part of maintaining a compliance monitoring system.

1.1.1.2. (Critical Requirement)

Business is conducted in a manner that complies with all applicable <u>host country laws¹</u> and protects human rights, health, safety, and the environment. In the rare instances where complying with an IRMA requirement

¹ Host country law includes all applicable requirements, including but not limited to laws, rules, regulations, and permit conditions from any governmental or regulatory entity (e.g., federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where a project or operation is located).

would cause a breach of host country law, the entity meets the intent of the IRMA requirement to the extent feasible without violating the law.²

NOTE FOR 1.1.1.2: This requirement combines 1.1.1.1 and 1.1.2.1 from the 2018 Mining Standard. This was a critical requirement in the 2018 Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

This requirement makes it clear that legal compliance is expected both related to running the business (such as required financial filings, tax payments and reporting to the government) as well as carrying out the physical activities of the operation itself (environmental, land-use permissions, occupational health and safety, labor, human rights, social, etc.).

While adherence to laws should be a fundamental expectation of any business anywhere, we also recognize that large industrial mining and mineral processing operations are complex and subject to a large number of laws, regulations and permits. As a result, most mines and mineral processing facilities are likely to experience non-compliance with regulatory requirements at some point in time (e.g., failure to renew permits on time, or occasional exceedances of permit conditions for air or water quality). There will be some non-compliance issues that do not pose a significant threat, to health, safety, or the environment.

Thus, we have added that in addition to carrying out business in a manner that complies with host country law, entities also do so in a manner that protects human rights, health, safety and the environment. We added the latter language because we wanted to provide auditors with a way to distinguish between major and minor non-compliance issues.

The intent of this requirement is not to "fail" sites that have minor non-compliance issues. As a result, we are proposing that we clarify in the guidance that the rating of a site's performance on this requirement will depend on factors such as: 1) the number of non-compliance issues, 2) whether or not the non-compliance issues are serious (e.g., pose an imminent or acute threat to human rights, health and safety or the environment); 3) whether a breach of laws was intentional or accidental (e.g., the non-compliance was due to unplanned human error or malfunction, not due to operational decisions such as a decision to keep mining even though the treatment plant was down for maintenance).

Additionally, 1.1.1.2 now includes the information on what IRMA expects to see if in the rare instances where an IRMA requirement comes in conflict with a host country law. The IRMA Standard is a voluntary, best practice standard, so requirements in the Standard will go beyond the law in many countries, but in most cases, going beyond the law will not cause an entity to violate the laws of the host country. However, there may be isolated instances where this is the case, and if so, IRMA cannot require companies to break the law in order to meet its voluntary expectations. For example, if there are laws that strictly prohibit women from doing certain types of work,³ then that would be taken into account when the IRMA requirement related to equal opportunity is audited (in Chapter 3.1, requirement 3.1.2.1). However, an entity would need to show that it was still meeting the intent of the requirement (e.g., the entity could show that for jobs that women are legally permitted to do, they are given equal opportunity in hiring processes and/or the entity actively promotes these jobs for women since certain other jobs are not legally available to them).

1.1.2. Response to Non-Compliance

- 1.1.2.1. If non-compliance with a host country law occurs:
 - a. Timely and effective action is taken to resolve the non-compliance;
 - b. Root cause analysis for the non-compliance is undertaken; and
 - c. Measures are implemented to prevent recurrence of similar non-compliances.

² This is only relevant in cases where the entity claims that complying fully with an IRMA Standard requirement would require the entity to violate host country law. In such cases, the ability to meet the intent of the IRMA requirement will have to be determined on a case-by-case basis.

³ World Economic Forum. 2018. "104 countries that have law preventing women from working in some jobs." <u>https://www.weforum.org/agenda/2018/08/104-countries-have-laws-that-prevent-women-from-working-in-some-jobs/</u>

NOTE FOR 1.1.2.1: REVISED. This was 1.1.3.1 in the 2018 Mining Standard. Originally all expectations were contained in a single paragraph. We have separated them out into their components so that it is clear that all elements need to be met in order to fully meet this requirement.

Additionally, we have added sub-requirement (b), that the root causes of the non-compliance be identified, as this would be a typical step an entity would take to understand how recurrence might be prevented.

The entity's ratings on this requirement will take into consideration how quickly recent non-compliance

1.1.3. Contractor Compliance

NOTE FOR 1.1.3: REVISED. See note for 1.1.3.1, below.

CONSULTATION QUESTION 1.1-1

Background: We have received suggestions from stakeholders that IRMA include requirements that help incentivize the use and/or strengthening of local or in-country technical capacity. The hiring of people with local, regional and/or traditional knowledge not only benefits host countries, but can also help entities build trust with stakeholders.

We are aware, however, that in some regions there may not always be a sufficient cadre of local consultants or contractors with the expertise and experience needed to carry out the often complex and highly technical work involved in large scale mining and/or mineral processing operations.

In thinking about balancing these realities, we were considering a requirement such as:

"Efforts are made to hire appropriately qualified contractors and consultants that are based in the host country. If there are no in-country professionals with the necessary competency or experience, the entity investigates opportunities to support capacity building for local professionals."

Capacity building could involve mentoring programs, such as hiring local professionals who don't have the necessary years of experience as part of a crew, where they could gain experience that could eventually put them in a position to take on contracts in the future, etc.

Question: Would you support this type of requirement? Are there other elements IRMA should consider related to this topic? Do you have suggestions of other ways (or better ways) that entities might support the building of local or in-country technical capacity?

1.1.3.1. A system is in place to manage <u>contractor</u> compliance with <u>host country laws</u> and IRMA Standard requirements,⁴ including:

- a. Maintaining documentation on all contractors associated with the project/operation and associated facilities;⁵
- b. Verifying the competency, skills and capacity of all external contractors and consultants being hired to carry out work on the entity's behalf. This due diligence includes:
 - i. Validation of necessary level of education;
 - ii. Validation of relevant professional training and certifications;
 - iii. Review of previous relevant work, including references from previous clients; and
 - iv. Determination of skills and experience in the context of the work to be undertaken.

⁴ The definition of contractors includes relevant subcontractors (i.e., those involved in providing services to contractors as part of their services to the entity/operation) and contracted workers hired through contractors.

⁵ For example, contractor name, contact information, credentials, references, copy of contract, etc.

- c. Informing contractors that compliance with host country laws and relevant IRMA Standard requirements is expected, and, as necessary, providing them with the information and training necessary to meet that obligation;⁶
- d. Monitoring contractor performance; and
- e. When non-compliance with host country laws or applicable requirements of the IRMA Standard by contractors is discovered, working with the contractor to achieve timely resolution of the non-compliance and prevent recurrence of similar non-compliances.

NOTE FOR 1.1.3.1: REVISED. This was 1.1.4.1 in the 2018 Mining Standard. There was a similar requirement in the 2018 Mining Standard outlining that it was the entity's obligation to ensure that all activities related to the project/operation are carried out in a responsible manner, and, if contractors are hired to carry out work for the entity, then they must be held to the same high standards as the entity and its direct employees.

However, that previous requirement was very general, and as a result, it made it difficult to audit.

We are proposing here that explicit steps be taken with regard to contractor performance relative to both host country laws and IRMA's requirements. To make this a more auditable requirement we propose that:

- 1.1.3.1.a entities provide evidence that they have adequate documentation on their contractors (and the contractors' employees/subcontractors)
- 1.1.3.1.b there is a process implemented to verify competency. There are multiple chapters in the IRMA Standard that refer to the need for competent professionals to carry out work. In most cases, IRMA does not specify whether these are internal or external professionals. It could be a consulting firm hired to carry out the environmental and social impact assessment, or contractors hired to carry out tailings dam safety reviews, or entity employees responsible for water monitoring programs.
- 1.1.3.1.c convey to contractors the expectation that they must obey the law and adhere to relevant IRMA Standards (e.g., if contractors are hired to carry out work on behalf of or at the behest of the entity then they must be held to the same high standards as the entity and its direct employees).
- 1.1.3.1.c the entity performs some oversight activities to know if the contractors are meeting legal and IRMA-related obligations.
- 1.1.3.1.e Finally, if compliance is not occurring, then there needs to be consequences. We are proposing
 that there be evidence that steps are being taken to either facilitate compliance (e.g., training on the IRMA
 Standard or host country laws) or, if there is a serious enough breach, perhaps the termination of
 contracts.

This is something that is being done by some entities already.⁷ For example, expectations are being written into contracts to ensure that contractor work is not commenced all required plans, processes and procedures to adhere to the expectations are developed, or entities are creating manuals that outline in detail the obligations of contractors. Contracts also contain reporting expectations for contractors, and the entities themselves conduct oversight of contractor compliance.

There are proposed additional requirements that relate to contractors in some individual chapters, as well. For example, see requirement 3.2.1.3 in 3.2 'Occupational Health and Safety.' And see <u>CONSULTATION</u> <u>QUESTION 3.1-1</u> in Chapter 3.1. However, if contractors are used in relation to the work to support any other IRMA chapters, then this requirement would also be relevant in those chapters.

⁶ For example, contractors may need to be made aware of policies, procedures and/or training needed to understand expectations and help them meet those expectations. These may include health and safety policies and training (see Chapter 3.2), labor-related rights (see Chapter 3.1), hiring protocols to check ages, human rights policy (see Chapter 1.3), and then specific contractors may need to be made aware of policies related to security, waste, etc.

⁷ For example, see: Anglo American. 2020. The Social Way Toolkit. Section 4B.1. "About Contractor Social Management." <u>https://socialway.angloamerican.com/en/toolkit;</u> Freeport-McMoran. 2022. Contract Health, Safety and Environmental Manual. <u>https://www.fcx.com/sites/fcx/files/documents/suppliers/csm.pdf</u>

1.1.4. Disclosure

NOTE FOR 1.1.4: This criterion was 1.1.5 'Record-Keeping and Disclosure' in the 2018 Mining Standard, and the first requirement in the criterion (1.1.5.1) said, "The operating company shall maintain records and documentation sufficient to authenticate and demonstrate compliance and/or non-compliance with host country laws and the IRMA Standard."

The aspect of the requirement to related to record-keeping for authentication of compliance with host country laws is now integrated into the new 1.1.1.1, above. However, the concept of maintaining documentation to demonstrate compliance with IRMA requirements has been removed. Maintaining evidence of conformance with IRMA requirements is simply part of the IRMA system, since auditors need evidence in order to verify that IRMA requirements are being met.

1.1.4.1. Upon request, records and documents related to compliance and/or non-compliance with <u>host country</u> <u>laws</u>, including descriptions of non-compliance events, ongoing and final remedies, ⁸ and prevention strategies, are made available to IRMA auditors, subject to the following:

- a. Where the entity claims that records or documentation contain confidential business information:
 - i. Auditors are provided with a general description of the confidential material and an explanation of the reasons for classifying the information as confidential; and
 - ii. If a part of a document is confidential, only the confidential part is redacted, allowing for the release of non-confidential information to auditors.
- b. Where records or documents associated with the project/operation are related to a pending legal action, the existence of the legal action and the alleged regulatory non-compliance issues are disclosed, but detailed information may be treated as confidential business information.

NOTE FOR 1.1.4.1: This requirement combines 1.1.5.2 and 1.1.5.4 from the 2018 Mining Standard.

Also, a clarification (1.1.4.1.b) has been added to make it clear that detailed information related to pending legal actions need not be disclosed, but the existence of such actions does need to be shared with auditors.

1.1.4.2. A publicly available policy (or equivalent) is in place that commits the entity to providing <u>stakeholders</u>, upon request, with a summary of the project/<u>operation's</u> regulatory non-compliance issues, subject to the following:⁹

- a. Where the <u>entity</u> claims that non-compliance records or documents contain <u>confidential business</u> <u>information</u>, only the confidential part is redacted, allowing for the release of non-confidential information; and
- b. Where records or documents associated with the project/operation are related to a pending legal action, the existence of the legal action and the alleged regulatory non-compliance issues are disclosed, but detailed information may be treated as confidential business information.

NOTE FOR 1.1.4.2: REVISED. This requirement combines 1.1.5.3 and 1.1.5.4 from the 2018 Mining Standard.

There are two changes to this requirement. First, the original wording in the 2018 Mining Standard made the requirement very difficult to audit because it was only relevant if stakeholders requested such information. If no requests had been made then unless the company had an "access to information" or similar policy all that the auditor had to go on was the company representative's word that if requested, stakeholders would be provided with the requested information. The proposed wording addresses that by requiring the company to have a publicly available policy (or equivalent) – which could be a procedure or other documented

⁸ As used in this section, "records" includes, but is not limited to, any permit, regulatory, or relevant governmental actions whether pending or resolved. "Ongoing remedies" refers to situations where the entity is still working on achieving compliance to the satisfaction of the regulatory government entities/competent authorities.

⁹ As per Chapter 1.2, requirement 1.2.4.3, an access to information policy is proposed for requirement in the revised IRMA Standard. It is expected that this policy could include the relevant provisions related to stakeholder access to regulatory non-compliance information.

commitment in writing that is publicly available – so that stakeholders know (and auditors can verify) that there is a mechanism for providing this information, if requested.

A proposed new requirement in Chapter 1.2 specifically requires an access to information (or similar) policy, which would presumably be the primary policy where the commitment to provide regulatory non-compliance information would be made. (See <u>Note for requirement 1.2.4.3</u>)

Second, the previous requirement 1.1.5.3 said "Upon request, operating companies shall provide stakeholders with a summary of the mining project's regulatory non-compliance issues that are publicly available." The phrase "that are publicly available" was meant to convey that only those non-compliance events that were already in the public domain (i.e., not alleged regulatory violations that were subject to legal challenges) had to be disclosed to stakeholders. The wording/intent was not well understood by auditors or mining companies so we have removed it. Instead, we have added 1.1.4.2.b, which says that details of pending legal actions do not need to be made public, but if requested the entity would furnish some information about alleged regulatory violations that are subject to legal actions. This is based on the fact that laws in various countries already require that information on various legal issues be disclosed publicly.¹⁰

NOTES

This chapter balances the importance of compliance with host country laws with the recognition that laws can greatly vary between countries and regions. Therefore, this chapter establishes host country laws as the base expectation, and adherence to IRMA's best practice requirements as well. As a general rule, and particularly recognizing that participation in IRMA is voluntary, this chapter prioritizes IRMA requirements because IRMA seeks to raise the bar of mining practices globally - and not just codify existing practices (whether considered best or not).

The ratings awarded during and IRMA audit are based on the evidence reviewed by auditors, which may only constitute a sample of available records or documents. Thus, even if an <u>entity</u> receives a 'fully meets' rating on requirement 1.1.1.2 it is not a guarantee that the <u>entity</u> being audited complies with all the legal obligations associated with the project/operation, and such a rating may not be used to suggest otherwise or as a defense to claims regarding legal violations.

Where documents and records produced in satisfaction of legal requirements or other standards also meet the requirements of the IRMA Standard the <u>entity</u> is not required to duplicate these. An entity may choose to develop summaries and explanations of such documents and records in order to facilitate the IRMA audit process.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

¹⁰ E.g., in the United States, the Securities and Exchange Commission requires companies to file annual 10-K reports. In Part 1 of that report there is a section (Item 3) called "Legal Proceedings" that requires the company to include information about significant pending lawsuits or other legal proceedings, other than ordinary litigation. <u>https://www.sec.gov/oiea/investor-alerts-and-bulletins/how-read-10-k10-q</u>

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Root Cause Analysis

Root cause analysis seeks to identify the primary cause of a problem that allowed a non-compliance/nonconformity to occur. By identifying the root cause, the non-compliance/non-conformity can be more effectively addressed and recurrence can be avoided.

EXISTING DEFINITIONS

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities, construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Chapter 1.2 Community and Stakeholder Engagement

NOTES ON THIS CHAPTER: There are several proposed revisions in wording to improve clarity and numerous places where similar concepts have been combined.

Proposed additions and changes:

- The most notable proposed change to this chapter is a requirement that entities have an "access to information" policy (or something similar), to make it clear to stakeholders that they can request and obtain information on the environmental and social performance of the operation. The 2018 Mining Standard included multiple requirements where the entity needed to provide information "upon request", but those requirements were difficult to audit. See more discussion in the Note for requirement 1.2.4.3.
- There are several requirements where new content has been added. In 1.2.1.1, the previous requirement has expanded beyond merely identifying stakeholders to also carrying out mapping and analyses of stakeholders), in 1.2.1.2 more detail was added regarding what should be in a stakeholder engagement plan, to enable more consistency in auditing those plans, and an analysis of gender roles and dynamics was added in 1.2.1.1.d.
- One other notable change is that a requirement related to cultural awareness and sensitivity training was moved to this chapter from Chapter 3.7 'Cultural Heritage.'

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Large-scale mining developments have the potential to last for decades over their life cycle. Often mines are built in locations near existing communities; in other cases, new communities emerge because of mining activities. Mining projects have the potential to significantly impact the lives of people in those communities. Some changes may be beneficial, for example, through the provision of jobs, or through mining company investment in community development projects. But mining projects also have the potential to create adverse impacts and even be a source of social conflict within communities.

Increasingly, mining companies, host governments, and financial institutions are recognizing that building strong, lasting relationships with those affected by mining

TERMS USED IN THIS CHAPTER

Accessible = Affected Community = Collaborate = Consultation = Conflict Analysis = Confidential Business Information = Culturally Appropriate NEW = Entity NEW = Exploration NEW = Gender NEW = Grievance = Inclusive = Indigenous Peoples = Livelihoods = Mineral Processing NEW = Mining NEW = Mitigation = Operation NEW = Project NEW = Rights Holder = Stakeholder = Vulnerable Group

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

activities can improve the identification and management of risks, as well as the long-term viability of operations.¹¹

¹¹ Herbertson, K., Ballestaeros, A., Goodland, R. and Munilla, I. 2009. Breaking Ground: Engaging Communities In Extractive And Infrastructure Projects. (World Resources Institute). <u>https://www.wri.org/research/breaking-ground</u>

Meaningful stakeholder engagement that is proactive, inclusive, accountable, and transparent increases the potential for optimal outcomes for both communities and mining companies.¹²

OBJECTIVES/INTENT OF THIS CHAPTER

To support entity decision-making and enable community members, individual and collective rights holders, and other stakeholders to participate in mining-related decisions that affect their health, well-being, safety, livelihoods, futures, and the environment.

NOTE ON OBJECTIVES: The objectives have been revised to include the range of stakeholders, including community members and rights holders.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The entity fosters two-way dialogue and meaningful engagement with stakeholders (1.2.2.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Community and Stakeholder Engagement Requirements

1.2.1. Planning and Designing Stakeholder Engagement Processes

NOTE FOR 1.2.1: Removed requirement (1.2.1.4) from this criterion. It has been integrated into 1.2.1.1. See Note for 1.2.1.1, below.

1.2.1.1. Stakeholder mapping and analysis:

¹² For example, Principle 10 of the Rio Declaration of 1992 states that, "Environmental issues are best handled with the participation of all concerned citizens." (Source: United Nations. 1992. Report of the United Nations Conference on Environment and Development. Annex I. "Rio Declaration on Environment and Development." <u>http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm</u>)

- a. Identifies the range of groups and individuals, including community members, <u>rights holders</u>, and others (hereafter referred to collectively as "<u>stakeholders</u>") who are or may be affected by or interested in the <u>project/operation</u>, including those who may be opposed to the project/operation;¹³
- b. Identifies potentially marginalized or vulnerable groups for whom special outreach may be necessary;¹⁴
- c. Analyzes the relative interests and influence of each stakeholder/stakeholder group related to the project/operation, and the implications for engagement strategy;
- d. Analyzes gendered roles and power dynamics within households and communities, and their implications for inclusive engagement;
- e. Includes evaluation of pre-existing community dynamics and a <u>conflict analysis</u> to understand if the project/operation may create or has created intra-community, inter-community or interpersonal tensions or conflicts that warrant special engagement strategies; and
- f. Is updated when there are proposed changes to a project/operation or changes in the operational, environmental, or social context that may influence the number and/or breadth of affected stakeholders.

NOTE FOR 1.2.1.1: REVISED. We combined 1.2.1.1 with former 1.2.1.4 in the 2018 Mining Standard and we are proposing new content.

The version of this requirement in the 2018 Mining Standard referred to stakeholder identification, and we are proposing to expand the requirement to include stakeholder mapping and analysis. Stakeholder mapping is a requirement in other mining-related standards such as the Aluminum Stewardship Initiative and the Responsible Minerals Initiative's Risk Readiness Assessment.¹⁵

In sub-requirement (a), we specifically require identification of stakeholders who may be opposed to the operation, as this stakeholder group may be overlooked or avoided by entities proposing or operating mines and processing facilities, even though these stakeholders have the ability to influence projects/operations. This was in our guidance materials previously.

Also, we have added a footnote that explains that if Indigenous Peoples are identified, that the mapping and analysis of those communities needs to occur as per the expectations in 1.2.1.1, but that the performance on the requirement will be factored into the score in Chapter 2.2-Indigenous Peoples and Free, Prior and Informed Consent (See requirement 2.2.3.1.c). Previously, it was unclear how the two chapters overlapped.

We added a sub-requirement (b) because we refer to potentially vulnerable elsewhere, but the step of actually identifying those groups was missing.

We added a sub-requirement (c) as it is best practice to not just identify stakeholders, but also understand the perspectives, interests and priorities of individuals and groups of stakeholders. This is a concept that is integrated into the IFC Performance Standard 1,¹⁶ and other guidance materials.¹⁷

¹³ Note that if Indigenous Peoples groups or communities are identified, Chapter 2.2 requires that the entity perform stakeholder mapping and analysis according to requirement 1.2.1.1 for those communities. Therefore, the mapping and analysis of Indigenous Peoples will factor into the score in that chapter, too (see Chapter 2.2 – 'Indigenous Peoples and Free, Prior and Informed Consent,' requirement 2.2.3.1).

¹⁴ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate without particular considerations/accommodations; this often includes people with disabilities, socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices deter participation, etc. Additional guidance will be provided in the IRMA Guidance Document.

¹⁵ Aluminum Stewardship Initiative. 2023. Performance Standard 3.1. Requirement 9.1.c. <u>https://aluminium-stewardship.org/wp-content/uploads/2023/04/ASI-Performance-Standard-V3.1-April-2023.pdf;</u> Responsible Minerals Initiative. 2020. Risk Readiness Assessment. p. 2/21. <u>https://www.responsiblemineralsinitiative.org/media/docs/RRA/RBA%20-%20Risk%20Readiness%20Assessment%20Tool_MINING.pdf</u>

¹⁶ International Finance Corporation (IFC). 2012. Performance Standard 1. "Stakeholder Analysis and Engagement Planning" (paragraphs 26-28). Available at: https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards

¹⁷ For example, see IFC. Stakeholder Engagement: A Good Practices Handbook for Companies Doing Business in Emerging Markets. "Stakeholder Identification and Analysis," p. 13. <u>https://www.ifc.org/en/insights-reports/2000/publications-handbook-stakeholderengagement--wci--1319577185063</u>

Sub-requirement (d) is new. It is being proposed concurrent with a proposed chapter on Gender Equality and Gender Protections. We can add guidance to help entities understand the type of analysis that could be done to better understand gendered roles and power dynamics.¹⁸

Sub-requirement (e) integrates the former 1.2.1.4 because efforts to understand community dynamics (preexisting, and potential changes due to the project/operation) should be part of stakeholder analysis.

We added a sub-requirement (f) to update the mapping and analysis when there are proposed changes/major modifications that may affect more or different stakeholders or rights holders.

1.2.1.2. A <u>stakeholder</u> engagement plan is in place and implemented to guide the <u>entity's</u> engagement and communications with stakeholders.¹⁹ The plan:

- a. Is developed by competent professionals;
- b. Identifies a timetable of engagement activities for the year, and the purpose or goals for each engagement;
- c. Identifies how engagements will capture input from a diversity of stakeholders (including different genders, ages, ethnicities, and any potentially vulnerable groups);²⁰
- d. Identifies how engagement processes will avoid or minimize conflicts between stakeholders and/or communities that are being engaged;
- e. Identifies how, when and in what formats information relevant to engagements will be communicated to stakeholders; and
- f. Includes documentation of a budget and staff responsibilities for implementing the various engagement activities.

NOTE FOR 1.2.1.2: REVISED. The proposed changes add more specificity so that there is clarity on what stakeholder engagements plans need to include. These plans guide the work of stakeholder engagement, and so a plan that outlines the work should be developed and documented. Much of this content comes from IFC guidance on the sample contents for stakeholder engagement plans.²¹

1.2.1.3. The <u>stakeholder</u> engagement plan is reviewed annually and updated as necessary based on an evaluation of the effectiveness of the previous year's engagement processes, stakeholder input on engagement processes (1.2.1.4), and any updates to stakeholder mapping and analysis.

NOTE FOR 1.2.1.3: NEW. Requirement 1.2.1.2 in the 2018 Mining Standard included that the engagement plan be scaled to the project's risk, impacts and stage of development. That has been removed due to the subjectivity of the requirement, and lack of consistency that could result from one auditor to the next in determining if the plan is adequately scaled or not. Instead, we are proposing in sub-requirement (b) that entities demonstrate that they evaluate the effectiveness of the plan, which is something that auditors can verify.

¹⁸ For example, see OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractives Sector. Annex C. Table C.1 Understanding context when engaging with women. <u>https://www.oecd-ilibrary.org/docserver/9789264252462-</u> en.pdf?expires=1683993976&id=id&accname=guest&checksum=23C2E6E7AD3A11C16CD91D9D9A6BC3FD

¹⁹ If Indigenous Peoples are affected by a project/operation, they may be included in an integrated engagement plan that includes all stakeholders and rights holders and specifically addresses engagement with Indigenous Peoples, or a standalone engagement plan may be developed for Indigenous Peoples. Either way, the inclusion of Indigenous Peoples in an engagement plan (or failure to do so) will be reflected in the score for 1.2.1.2.

²⁰ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate without particular considerations/accommodations; this often includes people with disabilities, socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices deter participation, etc. Additional guidance will be provided in the IRMA Guidance Document.

²¹ For example, see IFC. Stakeholder Engagement: A Good Practices Handbook for Companies Doing Business in Emerging Markets. "Stakeholder Engagement Plans (Sample Contents)," Appendix 3. pp. 165-168. <u>https://www.ifc.org/en/types/insights-reports/2000/publications-handbook-stakeholderengagement--wci--1319577185063</u>

1.2.1.4. Periodically, the <u>entity consults</u> with <u>stakeholders</u> to gather input on potential improvements to the design of engagement processes (e.g., timing, accessibility, inclusiveness, cultural appropriateness, etc.).

NOTE FOR 1.2.1.4: REVISED. This was 1.2.1.3 in the 2018 Mining Standard. We removed the part of the requirement to "demonstrate that continuous efforts are taken to understand and remove barriers to engagement for affected stakeholders (especially women, marginalized and vulnerable groups)." Identifying barriers and taking action to remove them is now covered requirement 1.2.3.1.

1.2.2. Stakeholder Engagement Processes

NOTE FOR 1.2.2: Minor change to title of this criterion. Added the word Stakeholder.

Requirement 1.2.2.1 in the 2018 Mining Standard has been deleted. The former 1.2.2.1. said, "Stakeholder engagement shall begin prior to or during mine planning, and be ongoing, throughout the life of the mine." Part of the requirement, i.e., that engagement be ongoing, has been moved to the new 1.2.2.1. We are proposing to delete that engagement "begin prior to or during mine planning". There was already guidance to auditors to not score that element for existing mines because sites cannot turn back the clock to so something that was not initially done. Because this revised Standard represents all phases of the life cycle, we are instead proposing to require that there be evidence that stakeholder engagement has occurred and continues to occur for every project/operation, but we are proposing that we not rate sites on when engagement started.

1.2.2.1. (Critical Requirement)

The entity fosters two-way dialogue and meaningful stakeholder engagement by:²²

- a. Providing stakeholders with opportunities to contribute to meeting agendas and add topics of concern to them;
- b. Providing relevant information to stakeholders, including advance notice of proposed activities;
- c. Engaging in a manner that is free from manipulation, interference, coercion, or intimidation;
- d. Engaging with a broad spectrum of stakeholders representing a diversity in genders, ages, ethnicities, and members of any potentially vulnerable groups;²³
- e. Regularly soliciting feedback from stakeholders on issues relevant to the stakeholders;
- f. Including participation by site management and subject-matter experts when addressing concerns of significance to stakeholders; and
- g. Engaging on an ongoing basis, throughout the project/operation life cycle.

NOTE FOR 1.2.2.1: REVISED. This was 1.2.2.2 in the 2018 Mining Standard. It was a critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

There are a few sub-requirements that are either new or revised.

²² "Meaningful engagement" includes a two-way exchange of information between the company and stakeholders, with stakeholders' views being taken into account in decision-making; engagement is conducted in good faith (i.e., the company genuinely intends to understand how stakeholder interests are affected by their actions and address adverse impacts, and stakeholders honestly represent their interests, intentions and concerns); and companies are responsive to stakeholder input and follow through on commitments." (Source: OECD. 2017. *OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector*. p. 18. Available at: <u>http://www.oecd.org/publications/oecd-</u> due-diligence-guidance-for-meaningful-stakeholder-engagement-in-the-extractive-sector-9789264252462-en.htm)

²³ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate without particular considerations/accommodations; this often includes people with disabilities, socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices deter participation, etc. Additional guidance will be provided in the IRMA Guidance Document.

Sub-requirement 1.2.2.1.a is new. Allowing stakeholder to contribute to meeting was added because stakeholders have reflected that they often arrive at meetings with pre-set agendas, without time to discuss the issues that are of greatest concern or interest to them.

In sub-requirement 1.2.2.1.c, we have removed the words "in a timely manner" because this duplicates 1.2.4.1, below. But we have added in 1.2.4.1.b that advance notice of proposed activities be provided, because sharing information on proposed activities gives stakeholders an opportunity to potentially influence activities that may conflict with cultural or environmental values or livelihood activities. For example, there may be local knowledge about locations of sensitive species that might be disturbed by noise during certain time periods, and this input influence the nature or timing of proposed activities in a positive manner.

Otherwise, the requirement either incorporates elements related to meaningful engagement that were included elsewhere in the 2018 Mining Standard, or deletes elements that have been moved elsewhere in the chapter. For example, the need for engagement to be ongoing was in the previous 1.2.2.1.

The need to include participation by a broad spectrum of stakeholders including women, men, marginalized and vulnerable groups is now stated more clearly in 1.2.2.1.d. It was previously mentioned in 1.2.1.3 and 1.2.2.4 in the 2018 Mining Standard.

One sub-requirement was removed from 1.2.2.1 (providing stakeholders with feedback on how the company has taken their input into account). That expectation has been integrated into 1.2.2.6.

- 1.2.2.2. At least one permanent stakeholder engagement mechanism is in place that:
 - a. Is designed in collaboration with stakeholders, including representatives from affected communities; and
 - b. Facilitates regular and ongoing:
 - i. Stakeholder review of the project's/operation's environmental and social performance; and
 - ii. Input to the entity on issues of concern to stakeholders, including but not limited to grievances.

NOTE FOR 1.2.2.2: REVISED. The content in this requirement is the same as the 2018 Mining Standard, but has been re-organized so that there are two distinct sub-requirements to be audited.

Changed wording from "oversight" of performance, which could be interpreted as imparting a level of level of supervision, to "review of" and "input" on performance, which was the original intent of the requirement.

Added reference to grievances as concerns that could be discussed through the mechanism.

1.2.2.3. When <u>stakeholder</u> engagement processes depend substantially on community representatives speaking for the community:

- a. Efforts are made by the entity to confirm whether or not such people represent the views and interests of diverse affected community members and can be relied upon to reliably communicate relevant information back to the community, and from the community to the <u>entity</u>; and
- b. If either the representatives are not considered to represent the views of the community, or information from the engagement processes are not flowing back to the community, then the entity implements additional engagement processes to enable more meaningful input from and information sharing with the broader community.

NOTE FOR 1.2.2.3: REVISED. Renumbered (was requirement 1.2.2.4 in the 2018 Mining Standard) and restructured so that it is clearer to auditors and others that there are two parts to this requirement.

First, if the entity engages with community representatives that are supposed to be speaking for or on behalf of a community, it is the entity's responsibility to understand if this form of engagement is truly capturing the views and interests of a broad range of affected stakeholders, and if the broader community is subsequently being briefed by community representatives on their interactions with the entity.

Second, if that is not occurring, then it is up to the entity to implement additional engagement processes so that the broader community is more engaged, and their opinions, concerns and suggestions better reflected.

If there are no engagement processes that depend substantially on community representatives, but the engagement processes use other mechanisms to remain inclusive of the views and interests of a broad range of affected stakeholders, then this could be marked as 'Not Relevant'.

- 1.2.2.4. Engagement processes are documented, including, at minimum:
 - a. Names of participants;
 - b. Input received from stakeholders; and
 - c. Feedback provided by the entity to stakeholders.

NOTE FOR 1.2.2.4: This was requirement 1.2.2.6 in the 2018 Mining Standard.

1.2.2.5. The entity reports back to affected communities and individual stakeholders on:

- a. Input received during stakeholder engagement processes; and
- b. How stakeholder input and concerns were taken into account and addressed by the entity.

NOTE FOR 1.2.2.5: REVISED. This was 1.2.2.7 in the 2018 Mining Standard). We integrated reporting on how stakeholder input was taken into account (was previously included as 1.2.2.2.e in the 2018 Mining Standard).

1.2.3. Strengthening Capacity to Engage

NOTE FOR 1.2.2: Minor change to title of this criterion. Added the words "to Engage".

1.2.3.1. Efforts to build capacity for effective <u>stakeholder</u> engagement are implemented and documented, including:

- a. Periodic <u>consultations</u> with <u>stakeholders</u> from <u>affected communities</u> to assess stakeholders' capacity to effectively engage with the entity (e.g., to engage in dialogue, consultations, studies, impact assessments, the development of <u>mitigation</u> plans, monitoring programs, community development strategies, etc.);
- Periodic consultations with stakeholders to identify and understand potential barriers to participation in engagement processes that exist for different genders, ages, ethnicities, and any potentially vulnerable groups;²⁴
- c. Where barriers to participation or capacity gaps²⁵ are identified, <u>collaboration</u> with relevant stakeholders to agree on strategies to facilitate more effective engagement that include appropriate funding, training, or other forms of assistance;²⁶ and
- d. Periodic consultations with stakeholders to evaluate the effectiveness of strategies to remove barriers and build capacity, and updating of capacity building strategies, as necessary.

NOTE FOR 1.2.3.1: REVISED and combined with elements of 1.2.1.3 from the 2018 Mining Standard.

This requirement has been revised to make it clear that capacity building is a process of assessing barriers to participation and capacity needs, planning and providing assistance (with direction from the stakeholders themselves), monitoring to determine if efforts are being effective, and updating planned capacity building efforts if necessary.

²⁴ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate without particular considerations/accommodations; this often includes people with disabilities, socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices deter participation, etc. Additional guidance will be provided in the IRMA Guidance Document.

²⁵ Capacity gaps or needs may be legal, technical, process-oriented (e.g., negotiation skills), logistical, or other. Different assessment and consultation processes may need to take place over time, as the stakeholders involved in the development of mitigation strategies may not be the same ones engaged in monitoring, for example.

²⁶ Depending on the circumstances, appropriate assistance may include providing access to training, independent experts, capacity building, etc.

Sub-requirement (c) integrates the concept of understanding and removing barriers to participation, which had been covered in the former 1.2.1.3.

Also, added a footnote that, regarding the assessment, a number of assessments may need to take place over time, as the stakeholders involved in one aspect of the operation (e.g., studies or assessments) may differ from those who are engaged in other parts of the operation (e.g., the development of mitigation plans or monitoring), or those helping to developing community health-related mitigation strategies may be different than the stakeholders who are engaged in mitigation of impacts on biodiversity.

1.2.4. Communications and Access to Information

1.2.4.1. Communications with stakeholders and provision of information occur:

- a. In a timely manner.²⁷ If that is not possible, the entity provides stakeholders with a documented justification or explanation for the delay; and
- b. In a manner that is culturally appropriate and accessible to the stakeholders.²⁸

NOTE FOR 1.2.4.1: REVISED and combines 1.2.4.3 and 1.2.4.4 from the 2018 Mining Standard.

"Communications with stakeholders" could include providing updates on changes to the operation, reporting back on issues raised (see 1.2.2.5), and could be various forms such as written and verbal presentations, materials such as fact sheets, letters, emails and written responses meant specifically for stakeholders (e.g., responses to queries or complaints), while "provision of information" refers to providing copies of existing documentation such as policies, procedures, studies, reports or data that the site has already produced for other reasons. Provision of information may occur proactively or be a result of information requestions.

Previously, IRMA did not define "culturally appropriate," but instead included a footnote to provide some context. We are proposing to include the following definition and welcome any feedback on it.

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions and provision of information) being aligned with the cultural norms, practices and traditions of affected communities, rights holders and stakeholders.

1.2.4.2. Community engagement is conducted by <u>competent professionals</u> with demonstrated experience or training in cultural awareness and sensitivity.

NOTE FOR 1.2.4.2: NEW. It also integrates a requirement from Chapter 3.7 that referred to cultural awareness training. It has been included here instead of Chapter 3.7 to make it clear that training in cultural awareness and sensitivity should occur for any of the entity's staff who may interact with Indigenous Peoples or peoples from a different cultural background (not just those who may come into contact with cultural heritage resources that need to be protected).

We expect to elaborate in guidance that not all staff will need the same level of training – those with major roles should be more proficient, but those with incidental roles should also have intercultural awareness and engage in a culturally sensitive manner.

²⁷ "in a timely manner" will likely vary based on the entity's resources and procedures (e.g., some companies may have due diligence procedures in place for releasing data publicly) and also the size/nature of the request. Generally, however, requests should be fulfilled within 1 to 3 months, although for particularly large requests or requests made to companies with limited capacity to fulfill information requests, some flexibility may be needed. Also, some companies have stringent quality assurance procedures that must be followed in order to share data publicly, and so may require more time to prepare materials for release. (See also 1.2.4.3 for requests that are not responded to in what seems like a "timely manner.")

²⁸ Stakeholders can help to define for the entity what is considered culturally appropriate.

The requirement for training on cultural awareness is similar to an expectation in the Mining Association of Canada's Toward Sustainable Mining Communities protocol.²⁹

1.2.4.3. An access to information policy (or equivalent) is in place and implemented to guide the provision of information to stakeholders. The policy:

- a. Provides that requests for information related to the environmental or social performance of the project/operation will be met in full or, if caveats are added, they align with the following:
 - i. If requests are challenging to fulfill because of the large volume of information requested, the entity will provide stakeholders with summaries of requested information and a documented justification or explanation for why information is not being provided in full or according to the preferred timeline of the stakeholder; or
 - ii. If document contains some <u>confidential business information</u>, the <u>entity</u> will redact only the confidential information, allowing for the release of non-confidential information.
- b. Is communicated to stakeholders; and
- c. Is publicly available.

NOTE FOR 1.2.4.3: REVISED. As mentioned in the note for 1.2.4.1, above, this requirement combines elements of various requirements found in the 2018 Mining Standard (1.2.4.3.a integrates elements of 1.2.4.1 and 1.2.4.2).

We are proposing changes to the requirement because in numerous other chapters in the IRMA Standard there are expectations that certain information be provided to stakeholders "upon request". But those requirements have proven very difficult to audit as written, because if the auditee tells auditors that there were no requests for information then the auditor has two choices – mark it as fully meets (which isn't accurate, since there is no evidence, other than perhaps a verbal guarantee, that if asked the entity would provide the information) or mark it as not relevant (which is more accurate, since there were not requests, but is problematic because if stakeholders are not aware that they can request information, then there may never be any requests).

The proposal here is that instead of the approach in the 2018 Mining Standard, which was essentially a blanket statement saying, "information shall be made available," that entities have in place an "access to information" or similar policy that commits the entity to providing information to stakeholders if requests are made, and that this policy be communicated to stakeholders.

This new approach aims to make it clear to entities and stakeholders that IRMA expects that stakeholders have access to information about the environmental and social performance of a project or operation if they are so interested. It also still takes into consideration the fact that it may be difficult to fulfill all requests in full, and so we are proposing that at minimum, summaries of data or information are provided.

NOTES

To be determined. There were no notes in the 2018 Mining Standard.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved

GLOSSARY OF TERMS USED IN THIS CHAPTER

²⁹ Mining Association of Canada. 2021. Indigenous and Community Relationships Protocol. Pages 6 and 9-11. Toward Sustainable Mining. https://mining.ca/wp-content/uploads/dlm_uploads/2023/04/ICR-Protocol-English-2023.pdf
PROPOSED NEW DEFINITIONS

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Gender

Gender refers to the norms, responsibilities, and social structure enforcing pre-defined roles for women, men, girls, boys, and gender-diverse people. As a social construct, gender varies from society to society and can change over time. Regarding mineral development (i.e., exploration, mining, mineral processing), issues of gender equality often focus on women in particular because they face a heightened risk to adverse effects from mining-related activities, due in large part to patriarchal gender norms and differences in women's access to and control over resources relative to men.

Source: Adapted from World Health Organization, Health Topics: Gender, <u>https://www.who.int/health-topics/gender#tab=tab_1</u>

Major Modification

A proposed change in an existing operation that could create new risks or change the scale or scope of existing adverse impacts on the health or safety of workers or communities, human rights, the rights or interests of Indigenous Peoples, cultural heritage, livelihoods, or the environment.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

EXISTING DEFINITIONS

Accessible

In reference to grievance mechanism or engagement processes, accessible means these mechanisms or processes being known to all stakeholder groups for whose use they are intended, and providing adequate assistance for those who may face particular barriers to access.

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Conflict Analysis

The systematic study of the profile, issues, and stakeholders that shape an existing or potential conflict, as well as factors in the interaction between the three. It helps companies gain a better understanding of the environment in which they operate and their role in that context.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the company should take into account the concerns and views expressed by stakeholders in the final decision.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Inclusive

In the context of stakeholder engagement, means that engagement includes men, women, gender diverse, the elderly, youth, displaced people, and other potentially vulnerable, marginalized, or disadvantaged people or groups.

REVISED. Added the term gender-diverse.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce its extent, with any residual impact then requiring remediation.

Source: Adapted from UN Office of the High Commissioner for Human Rights. 2012. The Corporate Responsibility to Respect Human Rights: An Interpretive Guide.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected or protected.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 1.3 Human Rights Due Diligence

NOTES ON THIS CHAPTER: There are only a few proposed changes to this chapter. There have been some structural changes to try to make the requirements and expectations clearer.

Proposed additions and changes:

- We added a requirement for management plan, to be more consistent with other IRMA chapters (1.3.2.1)
- We added a requirement to evaluate the effectiveness of mitigation/management actions (1.3.4.2)
- We deleted one requirement that was informative, rather than an actual expectation.

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

In 1948, the United Nations General Assembly adopted the *Universal Declaration of Human Rights*, which, for the first time in history, enumerated the fundamental civil, political, economic, social, and cultural rights that all human beings should enjoy. Since that time, a series of core

international human rights conventions and treaties, along with other instruments, have established the international legal framework for individual and collective human rights.³⁰ For example, United Nations instruments have elaborated on the rights of Indigenous Peoples, women, national or ethnic, religious, and linguistic minorities, children, people with disabilities, and migrant workers and their families.³¹

In 2011, the UN *Guiding Principles on Business and Human Rights* (the 'Guiding Principles'), which were unanimously endorsed by the United Nations Human Rights Council, clarified the corporate responsibility to respect human rights, stating that all corporations "should avoid infringing on the human rights of others."³² Other frameworks have similarly emerged that outline specific due diligence under particular circumstances. For example, the *OECD Due Diligence Guidance for Mineral Supply Chains in Conflict-Affected and High-Risk Areas*³³ provides specific guidance

TERMS USED IN THIS CHAPTER

Actual Human Rights Impact
Adverse Human Rights
Impact
Business Relationships
Collaboration
Competent Professionals
Confidential Business
Information
Consultation
Corporate
Owner
Credible
Method
NEW
Entity
NEW
Exploration
NEW
Grievance
Grievance
Mechanism
Human
Rights
Defenders
Human
Rights
Risks
Indigenous
Peoples
Leverage
Project
NEW
Mineral
Processing
NEW
Mining
NEW
Potential
Human
Rights
Impact
Project
NEW
Remediation/Remedy
Rights
Compatible
Rights
Abuses
Site
NEW
Stakeholders
Vulnerable
Group

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

³⁰ For more information, see the United Nations website: "What are human rights." <u>https://www.ohchr.org/en/what-are-human-rights</u>

³¹ The Office of the High Commissioner for Human Rights (OHCHR) lists a number of United Nations human rights instruments that enumerate the rights of people belonging to particular groups or populations. See: OHCHR. 2012. The Corporate Responsibility to Respect – An Interpretive Guide. p. 38. www.ohchr.org/Documents/Issues/Business/RtRInterpretativeGuide.pdf

³² See: Ruggie, J. 2011. Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework. March 21, 2011. A/HRC/17/31. www.ohchr.org/Documents/Issues/Business/A-HRC-17-31_AEV.pdf

³³ OECD. 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) https://mneguidelines.oecd.org/mining.htm

for entities on what due diligence is required in such areas to address risks to human rights and other risks when operating in those areas (see IRMA Chapter 3.4).

OBJECTIVES/INTENT OF THIS CHAPTER

To respect human rights, and identify, prevent, mitigate, and remedy infringements of human rights.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

Note that the requirements outlined below are only applicable to the activities and <u>business relationships</u> that relate to the specific project/operation that is being audited, not all of an entity's activities and business relationships. (See note at the end of the chapter)

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The entity has a policy in place that acknowledges its responsibility to respect all internationally recognized human rights (1.3.1.1) and a process to assess potential and actual human rights impacts from mining-related activities and business relationships (to be determined). The entity is taking steps to mitigate human rights risks and remediate any known impacts on human rights caused by the project/operation (1.3.3.2).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard v.1.0 includes a set of requirements identified as being critical requirements. Projects/operations being audited in the IRMA system must at least substantially meet these critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need to have a corrective action plan in place describing how the requirement will be fully met within specified time frames.

INPUT WELCOME: The 2023 updates to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process of revision, and therefore there will be a further review specific to the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we would welcome your input on any of the existing critical requirements, as well as suggestions for those you think should be deemed critical. As always, a rationale for any suggested changes or additions would be appreciated.

We are seeking input on one of the critical requirements. See CONSULTATION QUESTION 1.3-1, below.

Human Rights Due Diligence Requirements

1.3.1. Policy Commitment

1.3.1.1. (Critical Requirement)

A human rights policy (or equivalent) is in place that an acknowledgement of the <u>entity</u>'s responsibility to respect all internationally recognized human rights.³⁴ The policy:

³⁴ IRMA recognizes that for some entities, a policy commitment may be made at the corporate level. In these cases, entities do not need to have developed their own policies, but they will be expected to demonstrate that they are operating in compliance with their corporate owner's policy

- a. Is approved at the most senior level of the entity;
- b. Is informed by relevant internal and/or external expertise;
- c. Stipulates the entity's human rights expectations of personnel, business partners, and other parties directly linked to the project/operation; and
- d. Is publicly available and communicated internally and externally to all personnel, business partners, and other relevant parties and <u>stakeholders</u>.

NOTE FOR 1.3.1.1: This requirement combines 1.3.1.1 and 1.3.1.2 from the 2018 Mining Standard. Both included elements of a policy, and in other chapters these elements are combined into a single requirement. 1.3.1.1 was a critical requirement, and so we are keeping 1.3.1.1 as a critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

We have also removed the element that stated that the policy would be reflected in the project/operation's policies and procedures. The rest of the chapter serves to integrate human rights responsibility expectations at the site level, and so this element is redundant.

1.3.2. Assessment of Human Rights Risks and Impacts

NOTE FOR 1.3.2: Two requirements have been changed in this section. Requirement 1.3.2.5 from the 2018 Mining Standard has been deleted. It required an entity to "demonstrate that steps have been taken to effectively integrate assessment findings at the mine site operational level." This is now redundant, because there are now explicit requirements asking for a management plan (1.3.3.1), and the plan is subject to monitoring and evaluation for effectiveness (1.3.4.1 and 1.3.4.2.).

Also, the original requirement 1.3.2.1 from the 2018 Mining Standard contained information that duplicated expectations in other requirements (i.e., to identify assess human rights issues), and also contained an expectation for updating the assessment. The requirement to update is now 1.3.2.4, and the original 1.3.2.1 has been deleted to avoid duplication.

CONSULTATION QUESTION 1.3-1: The original requirement 1.3.2.1 was a critical requirement. See the <u>Note on</u> <u>Critical Requirements</u>, above, for context on critical requirements. Because it contained expectations to identify, assess and update human rights assessments, it is not clear which of the following requirements should be the replacement critical requirement.

There are three options under consideration as a replacement critical requirement: 1) The integrity/robustness of the assessment process (new 1.3.2.1, below), the content of the assessment (new 1.3.2.2, below), or the updating of the assessment (new 1.3.3.3, below). Do you have an opinion on which of those three requirements should be the critical requirement? Any rationale to support your choice would be appreciated.

1.3.2.1. The entity identifies and assesses potential human rights impacts (hereafter referred to as human rights 'risks') and actual human rights impacts from mining-related activities and business relationships. The assessment, which is scaled to the size of the entity and severity of human rights risks and impacts:

- a. Documents and follow a credible methodology;35
- b. Is carried out by competent professionals;
- c. Draws on internal and/or external human rights expertise; and

⁽e.g., site-level management understand the policy, and have integrated it into the mine's procedures and dealings with business partners, contractors, etc.).

³⁵ A "credible" assessment process/methodology would typically include: scoping or identification of the salient human rights, stakeholder consultations; data collection; assessment of the severity of human rights risks and impacts; development of prevention/mitigation measures; and monitoring and evaluation of the effectiveness of implemented measures. This process should be ongoing/updated, as mentioned in 1.3.2.4. For more information see: https://www.humanrights.dk/projects/human-rights-impact-assessment

d. Is informed by <u>consultations</u> with potentially affected <u>rights holders</u>, including different genders, ages, ethnicities, and any potentially <u>vulnerable groups</u>,³⁶ and other relevant <u>stakeholders</u>.

NOTE FOR 1.3.2.1: REVISED. This was 1.3.2.1 and 1.3.2.2 in the 2018 Mining Standard. 1.3.2.1 was a critical requirement, and so we have kept that delineation (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

We separated language referring to including views of human rights experts from the consultations with stakeholders. These are now (c) and (d). Also added a specific reference to human rights defenders.

And we removed a requirement for periodic updating (that is now requirement 1.3.2.4).

1.3.2.2. The assessment includes, at minimum:

- a. An explanation of the assessment methodology;
- b. An analysis of the current human rights context in the country and project/operation area;
- c. An overview of relevant human rights laws and norms;
- d. An identification of rights holders;
- e. A comprehensive list of the <u>human rights risks</u> related to the entity's <u>mining-related</u> activities and <u>business</u> <u>relationships</u>, and an evaluation of the potential severity of impacts and probability of occurrence for each identified risk;
- f. Identification of any human rights impacts that have already occurred in relation to the project/operation;
- g. An analysis of the potential differential risks to and impacts on rights holder groups (including but not limited to human rights defenders, people of different genders, ages, ethnicities, and any potentially vulnerable groups³⁷), and a disaggregation of results by rights holder group; and
- h. Recommended actions or measures that can be taken by the entity to prevent, <u>mitigate</u>, and <u>remediate</u> identified risks and impacts, giving priority to the most <u>salient human rights</u> issues.

NOTE FOR 1.3.2.2: REVISED. This was requirement 1.3.2.4 in the 2018 Mining Standard. We added (d), the identification of rights holders, as this is necessary in order to be able to determine risks to them. We separated out former sub-requirement (e) into (e) and (f) for clarity. Also added a specific reference to human rights defenders in (g), as those individuals, if present, often face risks and must be included in the analysis.

1.3.2.3. <u>Stakeholders</u> and <u>rights holders</u> who participate in the assessment process have the opportunity to review draft key issues and findings that are relevant to them and are consulted to provide feedback on those findings.

1.3.2.4. Assessments are updated throughout the project/operation's life cycle when there are proposed changes to mining-related activities, or changes in business relationships or in the operational, environmental, or social context that may create new human rights risks or change the nature or degree of an existing impact.

NOTE FOR 1.3.2.4: REVISED. This was part of 1.3.2.1 in the 2018 Mining Standard. We are proposing to separate it out for consistency with other IRMA chapters.

³⁶ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who may be most vulnerable to the human rights risks identified throughout this chapter and the IRMA standard; for example, women, children, minorities, those living in a state of poverty, and those with higher levels of exposure to certain identified risk factors. Additional guidance will be provided in the IRMA Guidance Document.

³⁷ What stakeholders are important to include here will depend on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and considered. For this requirement in particular, special attention should be paid to demographics such as women, children, the elderly, people with disabilities, socially or geographically marginalized groups, groups occupying different places on the socio-economic spectrum, different ethnicities, etc. Additional guidance will be provided in the IRMA Guidance Document.

1.3.3. Management of Human Rights Risks and Impacts

1.3.3.1. A human rights management plan (or equivalent) is developed and implemented to prevent, <u>mitigate</u>, and <u>remediate</u> the most <u>salient human rights</u> risks and impacts identified in the human rights assessment (and/or from other sources of information).³⁸ The management plan:

- a. Is developed by competent professionals;
- b. Outlines the agreed specific actions to minimize, mitigate, or compensate for potential and actual adverse human rights impacts;
- c. Includes performance criteria and indicators (including gender- and/or rights-holder-disaggregated indicators where appropriate),³⁹ linked to adequate baseline data, to enable monitoring and evaluation of the effectiveness of actions over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁴⁰
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 1.3.3.1: NEW. We are proposing to add this requirement as the 2018 Mining Standard did not have an explicit requirement for a human rights impacts management plan. A requirement for a management plan is consistent with other IRMA chapters, as are the elements describing what needs to be in the plan.

1.3.3.2. (Critical Requirement)

Based on the outcome of the human rights assessment (and/or other sources of information),⁴¹ the following specific actions are included in the management plan and are implemented to prevent, <u>mitigate</u>, and <u>remediate</u> salient human rights risks and impacts:

- a. Where salient risks to human rights have been identified:
 - And the <u>entity</u> determines that the risk to human rights is related solely to its own actions, it prioritizes preventing impacts from occurring, and if this is not possible, designs strategies to <u>mitigate the human rights risks</u>. <u>Mitigation</u> measures are developed in <u>consultation</u> with potentially affected <u>rights holders</u>;
 - ii. And the entity determines that it is one of two or more entities that bears some responsibility for creating the risk to human rights, it develops actions to prevent or mitigate its contribution, and uses its leverage to influence other contributing parties to prevent or mitigate their contributions to the human rights risks; and/or
 - iii. If the entity determines that it is at risk of being linked to <u>adverse human rights impacts</u> through its <u>business relationships</u>, it uses its leverage to influence responsible parties to prevent or mitigate their risks to human rights from their activities.
- b. Where actual human rights impacts have been identified:
 - i. And the entity determines that it has caused the impact, it ceases or changes the activity responsible for the impact and in a timely manner and develops mitigation strategies and <u>remediation</u> in <u>collaboration</u> with affected <u>rights holders</u>. If mutually acceptable remedies cannot be found through dialogue, the <u>entity</u> attempts to reach agreement through an independent, third-party mediator or another means mutually acceptable to affected <u>rights holders</u>; and/or

³⁸ Other sources of information may include data from monitoring and evaluation, discussions with or grievances filed by stakeholders or workers, internal reviews of particular issues that relate to human rights, etc.

³⁹ Other disaggregation may be by age, vulnerability status, proximity to the operation, etc.

⁴⁰ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

⁴¹ Other sources of information may include data from monitoring and evaluation, discussions with or grievances filed by stakeholders or workers, internal reviews of particular issues that relate to human rights, etc.

- ii. And the entity determines that it has contributed to an <u>actual human rights impact</u>, it ceases or changes any of its activities that are contributing to the impact, <u>mitigates</u> and <u>remediates</u> impacts to the extent of its contribution, and uses its <u>leverage</u> to influence other contributing parties to cease or change their activities, and mitigate and remediate the remaining impact; and/or
- iii. And the entity determines that it is linked to an actual human rights impact through a <u>business</u> relationship, it uses its leverage to prevent or mitigate the impact from continuing or recurring; and
- iv. Where they exist, the entity cooperates with other legitimate processes such as judicial or statebased investigations or proceedings related to human rights impacts that the entity caused, contributed to, or was directly linked to through its business relationships.

NOTE FOR 1.3.3.2: REVISED. This combines requirements 1.3.3.2 and 1.3.3.3 from the 2018 Mining Standard. The requirement still outlines the different expected actions to be taken based on whether or not it is a human rights risk or actual impact, and whether or not the entity caused the risk/impact, etc. But we have tried to make it clearer that if risks or impacts come to light (either through the risk assessment or some other source, such as a grievance being filed) that the specified actions need to be incorporated into the management plan, and implemented.

In the 2018 Mining Standard, requirement 1.3.3.3, which outlined the response to human rights impacts (i.e., information in 1.3.3.2.b, above) was a critical requirement. We have now combined that requirement with the response to human rights risks. We are designating this entire requirement as critical (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

1.3.3.3. <u>Stakeholders</u> have access to and are informed about a <u>rights-compatible grievance mechanism</u> and/or other mechanisms through which they can raise concerns and seek recourse for <u>grievances</u> related to human rights.⁴²

NOTE FOR 1.3.3.3: This was 1.3.3.1 in the 2018 Mining Standard.

CONSULTATION QUESTION 1.4-2 (repeated from Chapter 1.4 – 'Complaints and Grievance Mechanism and Access to Remedy')

Background: Chapter 1.4 - 'Complaints and Grievance Mechanism and Access to Remedy' includes a range of requirements surrounding the existence of an accessible and effective operational-level grievance mechanism. It is not possible to score well on Chapter 1.4 if the mechanism does not have certain quality-related characteristics. Other chapters (i.e., human rights, gender, resettlement, security, ASM) also have requirements relating to the existence of a grievance mechanism.⁴³ however, the requirements in each of those chapters ask only that a mechanism is in place that allows grievances to be filed and addressed, but they do not speak to the overall quality of that mechanism. This is an approach proposed by IRMA to avoid too much repetition across chapters. However, this creates a situation in which an entity could theoretically score 'fully meets' on the grievance-related requirement in an individual chapter (which in most cases only asks that stakeholders have "access to" a grievance mechanism), even if the grievance mechanism as a whole is not an effective one (as reflected in the overall score for Chapter 1.4).

⁴² The operational-level grievance mechanism developed as per IRMA Chapter 1.4 (Complaints and Grievance Mechanism and Access to Remedy) may be used as the mechanism to receive all types of complaints, including those related to human rights, or a separate mechanism may be created to handle only human rights complaints and grievances. If a separate mechanism is developed, it shall be done in a manner that is consistent with Chapter 1.4. Also, there may be other mechanisms that are not operated by the company through with stakeholders or rights holders can seek recourse (e.g., administrative, judicial and non-judicial remedies), and these options should be mentioned to stakeholders who lodge human rights related grievances with the company.

^{&#}x27;Rights-compatible' means ensuring that outcomes and remedies accord with internationally recognized human rights.

⁴³ See: Chapter 1.3, requirement 1.3.3.3; proposed Chapter 1.X, requirement 1.X.3.2; Chapter 2.4, requirement 2.4.3.3; Chapter 3.5, requirement 3.5.6.3; and Chapter 3.6, requirement 3.6.2.1.d.

Question: Should an entity's score on grievance-related requirements within individual non-grievance-specific chapters be restrained or linked to the overall score that the entity gets on the grievance chapter (Chapter 1.4) as a whole?

For example, if a site scores 80% on Chapter 1.4, the most the site could receive for a grievance requirement in the other chapters would be a 'substantially meets,' but if a site scores 100% on Chapter 1.4 then, assuming the mechanism can handle grievances specific to the other chapters, they could possibly get a 'fully meets' rating on those grievance requirements.

1.3.4. Monitoring and Evaluation

NOTE FOR 1.3.4: REVISED. We are proposing to change the name of this criterion from 'Monitoring' to 'Monitoring and Evaluation' to better reflect the content and that the purpose of 'monitoring' is to evaluate the findings and make changes accordingly.

1.3.4.1. The <u>entity</u> monitors whether the prevention, <u>mitigation</u>, and <u>remediation</u> strategies developed to address salient <u>human rights risks</u> and impacts and included in the management plan are being effectively implemented. The monitoring:

- a. Includes documentation of actual performance in relation to indicators (see 1.3.3.1.b); and
- b. Includes feedback from internal and external sources, including affected rights holders.

NOTE FOR 1.3.4.1: REVISED. This was requirement 1.3.4.1 in the 2018 Mining Standard. We are proposing to add that it is the management measures (prevention, mitigation, and remediation) that are to be monitored, rather than generically referring to 'effectively addressing' human rights risks/impacts. We also separated out sub-requirement (a) and (b) from the original (2018) requirement for clarity.

1.3.4.2. Annually or more frequently, the <u>entity</u> reviews monitoring results and any human-rights-related grievances, and evaluates the effectiveness of its prevention, <u>mitigation</u>, and <u>remediation</u> strategies. Based on the review, the management plan is updated, if necessary, to improve the effectiveness of its actions.

NOTE FOR 1.3.4.2: NEW. We are proposing to add this requirement as a complement to the NEW requirement for a human rights impact management plan (1.3.3.1), and for consistency with other IRMA chapters.

1.3.4.3. External monitoring of the <u>entity's</u> human rights due diligence occurs if its due diligence efforts repeatedly fail to prevent, <u>mitigate</u>, or <u>remediate actual human rights impacts</u>; or if its due diligence activities fail to prevent the entity from unknowingly or unintentionally causing, contributing to or being linked to any <u>serious human rights abuse</u>.⁴⁴ Additionally:

- a. The entity funds the external monitoring; and
- b. The form of such monitoring, and selection of external monitors, is determined in <u>collaboration</u> with affected <u>rights holders</u>.

NOTE FOR 1.3.4.3: This was 1.3.4.2 in the 2018 Mining Standard.

1.3.5. Reporting

NOTE FOR 1.3.5: We have deleted a requirement (1.3.5.3) from the 2018 Mining Standard that related to the exclusion of confidential information because it was more informative than an actual requirement. Information from that requirement is now included as a footnote in both 1.3.5.1 and 1.3.5.2.

⁴⁴ This requirement does not apply if a company has knowingly or intentionally caused, contributed to or been linked to serious human rights abuses. (See Notes section at the end of Chapter 1.3 for more on serious human rights abuses).

1.3.5.1. The <u>entity</u> periodically reports publicly on the effectiveness of its human-rights due diligence activities.⁴⁵ At minimum, reporting includes the methods used to determine the <u>salient human rights</u> issues, a list of salient risks and impacts that were identified, and actions taken at the <u>site</u>-level to prevent, <u>mitigate</u> and/or <u>remediate</u> the <u>human rights</u> risks and impacts.

NOTE FOR 1.3.5.1: REVISED. This was 1.3.5.1 in the 2018 Mining Standard. That requirement specified that the entity's corporate owner could also do the reporting. We have moved that to a footnote and have clarified that if the reporting is done at the corporate level this requirement can only be fully met if all of the elements in 1.3.5.1, including the specific risks and impacts for the site under IRMA assessment, are reported.

1.3.5.2. If external monitoring is required per 1.3.4.3, the <u>entity</u> publishes a report on external monitoring findings and recommendations to improve its human rights due diligence,⁴⁶ and the <u>entity</u> reports to relevant <u>stakeholders</u> and <u>rights holders</u> on its plans to improve its due diligence activities as a result of external monitoring recommendations.⁴⁷

NOTE FOR 1.3.5.2: This was 1.3.5.2 in the 2018 Mining Standard.

NOTES

This chapter is based on the framework for corporate responsibility established in the UN *Guiding Principles on Business and Human Rights*, and includes best practice requirements to increase transparency regarding human rights impacts, and to increase the ability of rights holders to participate, in a meaningful way, in decisions that affect their lives.

This chapter does not specifically address cases where operating entities knowingly contribute to <u>serious human</u> rights abuses. As mentioned in the Preamble to this draft Standard, IRMA has a draft Policy on Association under review in 2023 that describes when particularly serious actions by any entity engaged in IRMA create a context where IRMA could refuse to associate or could set conditions for association with those entities. In addition, IRMA is also exploring ways that an entity engaged in the IRMA system and the people concerned with impacts (local community members, Indigenous rights holders, purchasing customers, investors, government and others) might use IRMA's system to support discussion on remedy of past harm.

In Chapter 1.3, criteria 1.3.4, the decision to initiate external monitoring may be made by an entity that recognizes (e.g., through its human rights due diligence processes, complaints filed through its operational-level grievance mechanism, observations made by a third party, or some other means) that it has repeatedly failed to prevent, mitigate or remediate human rights impacts, or that discovers its due diligence has failed to prevent it from causing, contributing to, or being linked to serious human rights abuses. External monitoring may also be suggested as a corrective action if an IRMA auditor discovers during an audit that the entity's due diligence has failed to prevent any of the situations listed above.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

⁴⁵ Public reporting referred to in 1.3.5.1 may exclude information that is politically sensitive, is <u>confidential business information</u>, or that may compromise safety or place any individual at risk of further victimization.

If the entity's corporate owner is responsible for human rights reporting, this requirement can only be fully met if the corporate owner reports on all of the elements in 1.3.5.1, including issues specific to the site undergoing the IRMA assessment.

⁴⁶ Public reporting referred to in 1.3.5.2 may exclude information that is politically sensitive, is <u>confidential business information</u>, or that may compromise safety or place any individual at risk of further victimization.

⁴⁷ This requirement is only relevant if external monitoring was required as per 1.3.4.3.

PROPOSED NEW DEFINITIONS

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Actual Human Rights Impact

An adverse impact that has already occurred or is occurring.

Adverse Human Rights Impact

When an action removes or reduces the ability of an individual to enjoy his or her human rights.

Business Relationships

Relationships a business enterprise has with business partners, entities in a value chain, and any other non-state or state entity directly linked to its business operations, products, or services. They include indirect business

relationships in its value chain, beyond the first tier, and minority as well as majority shareholding positions in joint ventures.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Corporate Owner(s)

The corporation(s) or other business institution(s) including any private or state-run enterprises that have complete or partial financial interest in or ownership of a project/operation.

REVISED. Changed wording from mining project to project/operation.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses, stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition., and added operation-level grievance mechanism to this definition.

Human Rights Defenders

Any person or group of people working to promote human rights and contributing to the effective elimination of all violations of human rights and fundamental freedoms of peoples and individuals. Defenders can be of any gender, of varying ages, from any part of the world and from all sorts of professional or other backgrounds, i.e., not only found within NGOs and intergovernmental organizations but might also, in some instances, be government officials, civil servants or members of the private sector, and individuals working within their local communities.

Human Rights Risks

Human rights risks are understood to be a business enterprise's potential adverse human rights impacts. (May also be referred to as potential human rights impacts).

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic ,or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Leverage

Leverage is an advantage that gives power to influence. In the context of Chapter 1.3, it refers to the ability to effect change in the wrongful practices of the party that is causing or contributing to an adverse human rights impact.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Potential Human Rights Impact

An adverse impact on human rights that may occur but has not yet done so. (May also be referred to as human rights risk).

Remediation/Remedy (including in relation to human rights impacts)

Remediation and remedy refer to both the processes of providing remedy for an adverse (human rights) impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

Rights-Compatible

In reference to grievance mechanism, means ensuring that outcomes and remedies accord with internationally recognized human rights.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights, and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected, or protected.

Salient Human Rights

Those human rights that are at risk of the most severe adverse impacts through an entity's activities or business relationships. They therefore vary from company to company.

Serious Human Rights Abuses

Includes: i) any forms of torture, cruel, inhuman and degrading treatment; ii) any forms of forced or compulsory labor, which means work or service which is exacted from any person under the menace of penalty and for which said person has not offered himself voluntarily; iii) the worst forms of child labor (as per ILO Convention 182); iv) other gross human rights violations and abuses such as widespread sexual violence; v) war crimes or other serious violations of international humanitarian law, crimes against humanity, or genocide.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality.

Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 1.X (NEW) Gender Equality & Gender Protections

NOTES ON THIS CHAPTER: This is a NEW chapter being proposed. We have assigned it a chapter number of 1.X, and have inserted it in the location in the Standard where it will likely be placed if the addition of this chapter is supported by IRMA stakeholders and approved by the IRMA Board.

This proposed chapter offers requirements that aim to advance gender equality and gender protections. Examples include understanding the social and political dynamics of the surrounding community, collecting genderdisaggregated data, and requiring companies to complete a Gender Impacts and Opportunities Assessment and create and implement a Gender Management Plan to address gender-related risks and to promote gender equity and empowerment within the workplace and community.

The chapter complements the commitment to gender equality and gender protections found throughout the IRMA Standard by requiring mining companies to develop a related policy and plan and to monitor and report on it.

If stakeholders generally support and the IRMA Board approves addition of this chapter, then we will incorporate the terminology in this chapter throughout the IRMA Standard and develop additional guidance to support companies in their implementation and auditors in their assessment of conformity with the chapter's expectations.

CONSULTATION QUESTION 1.X-1: Below are proposed definitions of key terms in this chapter. Do you have any comments or suggestions on these definitions and/or suggestions for references to other definitions we should review and/or incorporate?

Gender

Gender refers to the norms, responsibilities, and social structure enforcing pre-defined roles for women, men, girls, boys, and gender-diverse people. As a social construct, gender varies from society to society and can change over time. Regarding mineral development (i.e., exploration, mining, mineral processing), issues of gender equality often focus on women in particular because they face a heightened risk to adverse effects from mining-related activities, due in large part to patriarchal gender norms and differences in women's access to and control over resources relative to men.

Source: Adapted from World Health Organization, Health Topics: Gender, https://www.who.int/health-topics/gender#tab=tab_1

Gender Diverse

People whose gender identity, including their gender expression, is at odds with the gender norm, including those who do not place themselves in the male/female binary (non-binary) and people who identify with a different sex than the one assigned to them at birth.

Source: Adapted from United Nations Human Rights Office of the High Commissioner, The Struggle of Trans and Gender-Diverse Persons: Independent Expert on Sexual Orientation and Gender Identity, https://www.ohchr.org/en/specialprocedures/ie-sexual-orientation-and-gender-identity/struggle-trans-and-gender-diversepersons#:~:text=The%20term%20%22gender%2Ddiverse%22,binary%3B%20the%20more%20specific%20term

Gender Equality

The equal rights, responsibilities, and opportunities of women, men, and gender-diverse individuals. Equality does not mean that women and men will become the same, but that rights, responsibilities, and opportunities will not depend on a person's sex at birth. Gender equality implies that the interests, needs, and priorities of women, men, and gender-diverse individuals are taken into consideration. Gender equality is not a women's issue; it is an issue that should concern and fully engage men, women, and gender-diverse individuals. Equality between women, men, and gender-diverse individuals is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centered development.

Source: Adapted from UN Women, Gender Mainstreaming Concepts and Definitions, available at https://www.un.org/womenwatch/osagi/conceptsandefinitions.htm

Gender Mainstreaming

Integration of gender concerns into the design and management of business operations in order to improve business outcomes and identify areas where benefits, risks and impacts may be experienced differently for men, women, and gender-diverse individuals. This may include intersectional gender analysis, intersectional gender impact assessments, and consultation with gender experts.

Gender mainstreaming can better enable the successful development, implementation, and ongoing monitoring of gender-responsive strategies and measures designed to address issues of gender equality.

Gender Protections

Addressing and keeping people safe from gender-based discrimination, violence, and harm, e.g., sexual and gender-based violence (SGBV).

Source: Adapted from International Federation of Red Cross and Red Crescent Societies (IFRC), Protection, Gender and Inclusion, https://www.ifrc.org/our-work/inclusion-protection-and-engagement/protection-gender-and-inclusion#:~:text=Protection%20means%20addressing%20violence%20and,excluded%20people%20in%20our%20work

Intersectional

Discrimination based on one factor such as gender may intersect with other factors of discrimination such as ethnicity, socioeconomic status, disability, age, geographic location, gender identity and sexual orientation, among others.

Source: World Health Organization, Health Topics: Gender, https://www.who.int/health-topics/gender#tab=tab_1

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

CONSULTATION QUESTION 1.X-2: References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

BACKGROUND

Women and gender-diverse individuals are currently underrepresented in the mining workforce in jobs where they could access experience, training, and skills development and earn income to improve their lives and autonomy. There is vast untapped potential for leadership and employment of women and gender-diverse individuals in the mining sector that if realized could advance progress toward the United Nations Sustainable Development Goals (SDGs) and targets on gender equality while also contributing to company performance.⁴⁸

⁴⁸ P. A. Argenti et. al., *The Secret Behind Successful Corporate Transformations*, Harvard Business Review (2021), <u>https://hbr.org/2021/09/the-secret-behind-successful-corporate-transformations</u>. This study identifies six common attributes of company transformations, with three of these

Gender norms and discrimination must be addressed in recruitment processes, local procurement strategies, and workplace policies. Entities should also seek to understand traditional beliefs, gender norms, and power dynamics of

communities surrounding mine sites to ensure operations do not potentially exacerbate gender inequalities or increase risks of gender-based violence and discrimination, as well as to be aware of how these norms may limit opportunities and benefits for women and gender-diverse individuals.

Women, girls, and gender-diverse individuals in mining-affected communities are at an increased risk of social and economic marginalization, domestic and sexual- or gender-based violence (SGBV), and exclusion from community engagement and decisionmaking. Other factors such as ethnicity, Indigenous status, and marital status, can exacerbate these impacts. In some countries, women and genderdiverse individuals are excluded or discouraged from stakeholder meetings and participation in decisionmaking out of respect for, or because of, the community's customs and norms.⁴⁹

TERMS USED IN THIS CHAPTER

Business Relationships Competent Professionals Confidential Business Information Consultation Credible Methodology NEW Customary (Traditional) Laws NEW Entity NEW Exploration NEW Gender NEW Gender Diverse NEW Gender Mainstreaming NEW Gender Protections NEW Grievance Grievance Inform Intersectional Livelihood Mineral Processing NEW Mining NEW Mining-Related Activities Mitigation Operation NEW Project NEW Remediation/Remedy Rights-Compatible Rights Holder Stakeholders Vulnerable Group

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

These risks are heightened for Indigenous women and girls. Resettlement has the potential to disproportionately impact women who may lack formal property rights and are responsible for reproductive work such as unpaid care work and providing food and water for their families.

Impact assessments that focus on gender-differentiated impact and context analysis, as well as consultation with women, gender-diverse individuals, women's representatives, women's organizations, and/or gender experts, can significantly improve an entity's ability to identify and address issues of gender equality in the surrounding community caused or exacerbated by mining activity.

Women and gender-diverse individuals are more likely to report a lack of trust in grievance mechanisms often resulting from a lack of gender-balanced management, lack of timely resolutions, or lack of anonymity.

Collecting gender-disaggregated data, setting diversity targets, and conducting gender analyses can all help identify and address these issues.

The IRMA Standard offers requirements, guidance, and procedures throughout that aim to advance gender equality and gender protections. Examples include understanding the social and political dynamics of the surrounding community, collecting gender-disaggregating data, and requiring interviews with male and female workers and community members in the auditing process. This chapter complements the commitment to gender equality and gender protections found throughout the IRMA Standard by requiring mining companies to develop a related policy and plan and to monitor and report on it.

OBJECTIVES/INTENT OF THIS CHAPTER

attributes related to diversity and inclusivity, including the number of women employees and managers, finding that gender-diverse companies are more flexible and adaptable to change.

Likewise, a 2015 McKinsey report on 366 companies found that those in the top quartile for gender diversity are 15% more likely to have financial returns above the industry mean. While the study does not attribute direct causation, the presumed drivers for the higher returns in gender-diverse companies come from attracting the best talent, having a strong customer orientation, improved decision making, and increased employee satisfaction. D. Hunt, et. al, *Why Diversity Matters*, McKinsey & Co. (2015) <u>https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/why-diversity-matters</u>

⁴⁹ Eftimi, A., Heller, K. & Strongman, J. (2009) Gender Dimensions of the Extractive Industries: Mining for Equity. Extractive Industries and Development Series No. 8 (World Bank). <u>https://openknowledge.worldbank.org/handle/10986/18236</u>

To achieve and maintain gender equality, gender mainstreaming, and gender protections in the workplace and communities where mining and mineral processing takes place.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

Note that the requirements outlined below are only applicable to the activities and <u>business relationships</u> that relate to the specific project/operation that is being audited, not all of an entity's activities and business relationships. (See note at the end of the chapter)

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Gender Equality and Gender Protections Requirements

1.X.1. Policy Commitment

1.X.1.1. A gender policy (or equivalent) is in place that includes an acknowledgement of the <u>entity's</u> commitment to advance gender equality and gender mainstreaming and to ensure gender protections respect all internationally recognized human rights.⁵⁰ The policy:

- a. Is approved at the most senior level of the entity;
- b. Is informed by relevant internal and/or external expertise;
- c. Stipulates the entity's expectations of personnel, business partners and other parties directly linked to the project/operation to advance gender equality and gender mainstreaming and to ensure gender protections; and
- d. Is publicly available and communicated internally and externally to all personnel, business partners, and other relevant parties and stakeholders.

⁵⁰ IRMA recognizes that for some entities, a policy commitment may be made at the corporate level. In these cases, entities do not need to have developed their own policies, but they will be expected to demonstrate that they are operating in compliance with their corporate owner's policy (e.g., site-level management understand the policy, and have integrated it into the site-level procedures and dealings with business partners, contractors, etc.).

1.X.2. Gender Impact and Opportunities Assessment

1.X.2.1. The <u>entity</u> establishes an ongoing process to identify and assess their level of achievement of <u>gender</u> equality and <u>gender</u> protections, and to assess gender-related risks or actual impacts from <u>mining-related</u> activities and business relationships. Assessments:

- a. Follow a credible methodology;⁵¹
- b. Are carried out by competent professionals;
- c. Draw on internal and/or external gender expertise; and
- d. Is informed by <u>consultations</u> with potentially affected <u>rights holders</u>, including different genders, ages, ethnicities, and any potentially <u>vulnerable groups</u>⁵², and other relevant <u>stakeholders</u>.

1.X.2.2. As part of its assessment, the entity documents, at minimum:

- a. An explanation of the assessment methodology;
- b. An analysis of current gender norms and gender equality and gender protections context in the country and project/operation area, including norms and contexts that may have adverse impacts and those that may create opportunities;
- c. An overview of relevant gender equality and gender protection laws, including customary (traditional) laws;
- d. Assessment of the following gender-related factors, at a minimum:
 - Gender inequalities within the workplace including: 1) differences in remuneration (e.g., non-equal pay for equal work); 2) differences in retention; 3) differences in roles and responsibilities, including participation in senior leadership and management roles and responsibilities; 4) differences in benefits; and 5) differences in levels of health and safety;
 - ii. Gender-specific risks in the workplace including violence, sexual harassment, intimidation, and health and safety;
 - iii. Gender-specific barriers to employment including: 1) education level; 2) training opportunities; 3) accommodating family roles; 4) cultural norms; 5) legal status; and 6) health and safety;
 - iv. Gender-specific barriers to <u>stakeholder</u> engagement (e.g., participation in <u>consultations</u>, training, capacity building) including: accommodating family roles; cultural norms; and health and safety.
 - v. Gender-specific differences in or barriers to equitable community development and benefit sharing opportunities;
 - vi. Gender-specific differences in or barriers to restoration of <u>livelihoods</u> and in outcomes of <u>resettlement action plans</u>, if relevant;
 - vii. Gender-specific risks in the community including violence, sexual harassment, and intimidation; and
 - viii. Opportunities to <u>collaborate</u> with stakeholders to promote gender equity and empowerment in the community and workplace.

⁵¹ A "credible" assessment process/methodology would typically include: scoping or identification of the salient human rights, stakeholder consultations; data collection; assessment of the severity of human rights risks and impacts; development of prevention/mitigation measures; and monitoring and evaluation of the effectiveness of implemented measures. This process should be ongoing/updated, as mentioned in 1.X.2.4. For more information see: https://www.humanrights.dk/projects/human-rights-impact-assessment

⁵² What stakeholders must be included and what may constitute a 'vulnerable group' requiring specific focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement in particular, special attention should be paid to demographics such as women, children, the elderly, people with disabilities, socially or geographically marginalized groups, ethnic or religious minority groups, groups occupying different places on the socio-economic spectrum, different ethnicities, etc. Additional guidance will be provided in the IRMA Guidance Document.

- e. The identification of <u>rights holders</u>, an analysis of the potential differentiated risks to and impacts on rights holder groups such as different genders, ages, ethnicities, and any potentially <u>vulnerable groups</u>⁵³, and a disaggregation of results by rights holder group; and
- f. Recommended actions or measures that can be taken by the entity to prevent, <u>mitigate</u>, and <u>remediate</u> identified risks and impacts, giving priority to the most salient issues, and recommended actions or measures that can be taken to promote gender equity and empowerment.⁵⁴

NOTE FOR 1.X.2.2: If this chapter is added to the IRMA Standard, we will cross-reference the elements in 1.3.2.3.d in relevant chapters, e.g., 2.3, 2.4, 3.1, 3.2, 3.3. Also, we can add guidance to clarify and provide examples of gender-specific barriers.

CONSULTATION QUESTION 1.X-3: Do you have any comments on the set of minimum factors listed above and/or can you provide examples of common factors used in gender assessments (with reference to original source)?

CONSULTATION QUESTION 1.X-4: In some circumstances a person may prefer not to disclose their gender, e.g., when filing a grievance —including a grievance related to gender. Allowing a worker or community member to choose not to disclose this information can have the positive impact of protecting a stakeholder or stakeholder group in some cases and may also make assessing and addressing impacts and opportunities by gender more challenging. Should we include a requirement that allows a preference not to disclose one's gender? Why or why not? In what contexts might a preference not to disclose one's gender be necessary? In what contexts might this not be appropriate?

CONSULTATION QUESTION 1.X-5: We note that in some circumstances a person may prefer not to disclose sexual orientation, marital status, or other factors. Should we include a requirement to allow a preference not to disclose particular intersectional factor(s)? If so, what factors and why? In what contexts might a preference not to disclose the factor(s) you've identified be necessary? Are there any contexts in which a preference not to disclose the factor(s) may not be appropriate?

CONSULTATION QUESTION 1.X-6: This chapter aims to take an intersectional approach, promoting assessment of impacts by gender and understanding and addressing related factors of discrimination such as ethnicity, socioeconomic status, disability, age, geographic location, gender identity, sexual orientation, religion, or marital status, for example. Are there specific factors you recommend for intersectional assessments?

1.X.2.3. At minimum, stakeholders and rights holders who participate in the assessment process:

- a. Have the opportunity to review draft key issues and findings that are relevant to them, and
- b. Are <u>consulted</u> to provide feedback on assessment findings and proposed strategies to prevent, <u>mitigate</u>, and <u>remediate</u> identified salient risks and impacts and promote gender equity and empowerment.

1.X.2.4. The assessment is updated when there are proposed changes to <u>mining-related activities</u>, or changes in <u>business relationships</u> or in the operational, environmental, or social context that may create new risks or change the nature or degree of an existing impact.

⁵³ What stakeholders must be included and what may constitute a 'vulnerable group' requiring specific focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement in particular, special attention should be paid to demographics such as women, children, the elderly, people with disabilities, socially or geographically marginalized groups, ethnic or religious minority groups, groups occupying different places on the socio-economic spectrum, different ethnicities, etc. Additional guidance will be provided in the IRMA Guidance Document.

⁵⁴ IRMA's Glossary defines "Salient Human Rights" as: Those human rights that are at risk of the most severe adverse impacts through an entity's activities or business relationships. They therefore vary from company to company. This concept of saliency can also be applied to gender-related issues.

1.X.3. Management and Promotion of Gender Equity and Empowerment

1.X.3.1. A gender management plan (or equivalent) is developed and implemented to prevent, mitigate, and remediate the most salient gender-related risks and impacts, and promote gender equity and empowerment in its project/operation and in affected communities.⁵⁵ The plan:

- a. Is developed by competent professionals;
- b. Outlines specific actions that will be implemented to prevent, mitigate, and remediate identified salient risks and impacts and promote gender equity and empowerment;
- c. Identifies key indicators, and ensures that there is an adequate baseline for the indicators to enable measurement of the effectiveness of actions over time; and
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff,⁵⁶
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

1.X.3.2. <u>Stakeholders</u> have access to and are informed about a <u>rights-compatible grievance mechanism</u> and other mechanisms through which they can raise concerns and seek recourse for <u>grievances</u> related to gender-related impacts.

1.X.4. Monitoring and Evaluation

1.X.4.1. The <u>entity</u> monitors whether the prevention, <u>mitigation</u>, and <u>remediation</u> strategies developed to address salient gender risks and impacts and the efforts to promote gender equity and empowerment included in the management plan are being effectively implemented. The monitoring:

- a. Includes documentation of actual performance in relation to indicators (see 1.X.3.1.b); and
- b. Includes feedback from internal and external sources, including affected rights holders.

1.X.4.2. Annually or more frequently, the entity reviews monitoring results (1.X.4.1) and any related grievances and evaluates the effectiveness of its strategies. Based on that review, the management plan is updated, if necessary, to improve the effectiveness of its actions.

1.X.5. Reporting

1.X.5.1. The entity annually reports publicly on the effectiveness of its gender equality and gender protection activities.⁵⁷ At minimum, reporting includes the methods used to determine the salient gender issues, a list of salient gender risks and impacts that were identified, and actions taken at the site-level to prevent, <u>mitigate</u> and/or remediate the salient gender risk and impacts and promote gender equity and empowerment.⁵⁸

⁵⁵ IRMA's Glossary defines "Salient Human Rights" as: Those human rights that are at risk of the most severe adverse impacts through an entity's activities or business relationships. They therefore vary from company to company. This concept of saliency can also be applied to gender-related issues.

⁵⁶ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

⁵⁷ Public reporting referred to in 1.X.5.1 may exclude information that is politically sensitive, is <u>confidential business information</u>, or that may compromise safety or place any individual at risk of further victimization.

If the entity's corporate owner is responsible for gender-related reporting, this requirement can only be fully met if the corporate owner reports on all of the elements in 1.X.5.1, including issues specific to the site undergoing the IRMA assessment.

⁵⁸ IRMA's Glossary defines "Salient Human Rights" as: Those human rights that are at risk of the most severe adverse impacts through an entity's activities or business relationships. They therefore vary from company to company. This concept of saliency can also be applied to gender-related issues.

CONSULTATION QUESTION 1.X-7: Is the requirement to report 'annually' appropriate here? Do you recommend any other specific timeframe (e.g., bi- annually) and/or circumstance (e.g., major modifications to the mining or mineral processing operation, significant changes in technology, etc.) that should prompt a public report?

NOTES

This chapter is generally aligned with IRMA Chapter 1.3 – 'Human Rights Due Diligence,' which is based on the framework for corporate responsibility established in the UN Guiding Principles on Business and Human Rights.⁵⁹ It includes best practice requirements to increase transparency, the ability of rights holders to participate, in a meaningful way, in decisions that affect their lives.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Customary Law (or Traditional Law)

The law and related customs of Indigenous and Tribal Peoples and local communities, increasingly recognized by courts, lawmakers, and public administrative bodies. Even where national or subnational legislation is available that aims to protect Indigenous Peoples and local communities, their rights are frequently denied in practice. Recognition of customary traditional law can aid in fair and effective administration of justice that is necessary to foster reconciliation, peace, stability and development among Indigenous Peoples and local communities.

Source: UN Economic and Social Council Commission on Human Rights. 2004. Human Rights and Indigenous Issues. pp. 2-3, https://documents-dds-ny.un.org/doc/UNDOC/GEN/G04/105/28/PDF/G0410528.pdf?OpenElement and World Intellectual Property Assoc. 2016. Customary Law and Traditional Knowledge. https://www.wipo.int/publications/en/details.jsp?id=3876

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Gender

Gender refers to the norms, responsibilities, and social structure enforcing pre-defined roles for women, men, girls, boys, and gender-diverse people. As a social construct, gender varies from society to society and can change over time. Regarding mineral development (i.e., exploration, mining, mineral processing), issues of gender equality often focus on women in particular because they face a heightened risk to adverse effects from mining-related activities, due in large part to patriarchal gender norms and differences in women's access to and control over resources relative to men.

Source: Adapted from World Health Organization, Health Topics: Gender, <u>https://www.who.int/health-topics/gender#tab=tab_1</u>

⁵⁹ Ruggie, J. 2011. Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework. March 21, 2011. A/HRC/17/31. <u>www.ohchr.org/Documents/Issues/Business/A-HRC-17-31_AEV.pdf</u>

Gender Diverse

People whose gender identity, including their gender expression, is at odds with the gender norm, including those who do not place themselves in the male/female binary (non-binary) and people who identify with a different sex than the one assigned to them at birth (transgendered).

Source: Adapted from United Nations Human Rights Office of the High Commissioner, The Struggle of Trans and Gender-Diverse Persons: Independent Expert on Sexual Orientation and Gender Identity, <u>https://www.ohchr.org/en/special-</u> <u>procedures/ie-sexual-orientation-and-gender-identity/struggle-trans-and-gender-diverse-</u> <u>persons#:~:text=The%20term%20%22gender%2Ddiverse%22,binary%3B%20the%20more%20specific%20term</u>

Gender Equality

The equal rights, responsibilities, and opportunities of women, men, and gender-diverse individuals. Equality does not mean that women and men will become the same, but that rights, responsibilities, and opportunities will not depend on a person's sex at birth. Gender equality implies that the interests, needs, and priorities of women, men, and gender-diverse individuals are taken into consideration. Gender equality is not a women's issue; it is an issue that should concern and fully engage men, women, and gender-diverse individuals. Equality between women, men, and gender-diverse individuals is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centered development.

Source: Adapted from UN Women, Gender Mainstreaming Concepts and Definitions, available at https://www.un.org/womenwatch/osagi/conceptsandefinitions.htm

Gender Mainstreaming

Integration of gender concerns into the design and management of business operations in order to improve business outcomes and identify areas where benefits, risks and impacts may be experienced differently for men, women, and gender-diverse individuals. This may include intersectional gender analysis, intersectional gender impact assessments, and consultation with gender experts.

Gender mainstreaming can better enable the successful development, implementation and ongoing monitoring of gender-responsive strategies and measures designed to address issues of gender equality.

Gender Protections

Addressing and keeping people safe from gender-based discrimination, violence, and harm, e.g., sexual and gender-based violence (SGBV).

Source: Adapted from International Federation of Red Cross and Red Crescent Societies (IFRC), Protection, Gender and Inclusion, <u>https://www.ifrc.org/our-work/inclusion-protection-and-engagement/protection-gender-and-</u>inclusion#:~:text=Protection%20means%20addressing%20violence%20and,excluded%20people%20in%20our%20work

Intersectional

Discrimination based on one factor such as gender may intersect with other factors of discrimination such as ethnicity, socioeconomic status, disability, age, geographic location, gender identity and sexual orientation, among others.

Source: World Health Organization, Health Topics: Gender, https://www.who.int/health-topics/gender#tab=tab_1

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

EXISTING DEFINITIONS

Business Relationships

Relationships a business enterprise has with business partners, entities in a value chain, and any other non-state or state entity directly linked to its business operations, products or services. They include indirect business relationships in its value chain, beyond the first tier, and minority as well as majority shareholding positions in joint ventures.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the company should take into account the concerns and views expressed by stakeholders in the final decision.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism(s)

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level

grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Indigenous Peoples

An official definition of "indigenous" has not been adopted by the United Nations system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of "indigenous" includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic or political systems; maintain distinct languages, cultures and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as: tribes, first peoples/nations, aboriginals, Adivasi and Janajati. All such terms fall within this modern understanding of "indigenous."

Source: Adapted from United Nations Permanent Forum on Indigenous Issues, Fifth Session, "Fact Sheet 1: Indigenous Peoples and Identity."

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples, and could make it challenging to audit.

Inform

The provision of information to inform stakeholders of a proposal, activity or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce its extent, with any residual impact then requiring remediation.

Remediation/Remedy

Remediation and remedy refer to both the processes of providing remedy for an adverse (human rights) impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

Resettlement Action Plan

A plan designed to mitigate the adverse impacts of displacement by providing for the relocation of people. These plans typically involved: identifying livelihood restoration opportunities; developing a resettlement budget and schedule; and establishing the entitlements of all categories of affected people (including host communities). Such a plan is required when resettlement involves physical displacement of people.

Source: Adapted from IFC. 2012. Performance Standard 5, paragraph 19.

REVISED. We are proposing to add some details concerning what is typically included in a RAP to better align with relevant requirements within the Standard.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected or protected.

Rights-Compatible

In reference to grievance mechanism, means ensuring that outcomes and remedies accord with internationally recognized human rights.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (repeated from above): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 1.4 Complaints and Grievance Mechanism and Access to Remedy

NOTES ON THIS CHAPTER: Minor modifications were made to the 'Background' and 'Scope of Application' sections, and several requirements were moved into new criteria to be more consistent with other chapters.

Proposed additions and changes:

- We made it more explicit in the Scope of Application that while workers' grievances may be dealt with through the same mechanism that is used to deal with broader stakeholder (i.e., community members, NGOs, rights holders), they also may have a separate mechanism to deal explicitly with workplace grievances. Where the latter is the case, workers and workplace grievance procedures should not have bearing on the outcome of the requirements of this chapter, but rather be evaluated under Chapter 3.1.
- We added a requirement that entities proactively inform stakeholders of how to file a grievance, because if this is not shared with some stakeholders (e.g., those who are illiterate) and the entity only relies on the fact that its procedures are publicly available, it could be a barrier to their using the mechanism. See requirement 1.4.1.2.b.
- We changed a requirement that relevant personnel be informed of grievance procedures to demonstrating understanding of them and receiving training if necessary. This was done because if staff do not know about or understand the mechanism then they may not implement the procedures appropriately or effectively. See requirement 1.4.2.3.
- We changed the time-dependent requirement that stakeholders participate in the design of the grievance mechanism. Modified language to clarify that this does not have to occur when the mechanism is first created but can happen at any time to improve the design and make it more effective and accessible to the stakeholders. See requirement 1.4.3.3.
- Questions were received on whether the reporting requirement in the 2018 Mining Standard meant that companies had to report back to individuals on their own grievance, or report to stakeholders more generally on all of the grievances received and how they were handled. The intent was that both should be occurring, so we have separated the original requirement into two separate requirements. See criterion 1.4.4.

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Mining and other large development projects inevitably raise concerns and complaints from community members and stakeholders affected by these projects. It is now expected practice for mining entities to have in place site-level procedures for systematically receiving, tracking, resolving, and communicating with stakeholders, including workers and local communities, about their complaints or grievances. Combined, these various procedures are referred to as an "operational-level grievance mechanism".

The words 'grievance' and 'complaint' are sometimes used interchangeably, but this is not always the case. Often a complaint is seen as an isolated or event-based concern, while a grievance is a more complex or accumulated sense of wrong. Similarly, complaints are often seen as concerns that can be addressed through informal means, while

grievances require a more formal process. However, perceptions of this relationship can also be the reverse.⁶⁰ For the purposes of the IRMA Standard, a "grievance mechanism" is expected to be able to handle both complaints and grievances; however, for simplicity the term 'grievance' is used in the requirements, below.⁶¹

Having accessible and trusted procedures in place to receive stakeholder complaints can lead to the quick resolution of many issues before they escalate into serious grievances or conflicts. Stakeholders are more likely to trust grievance procedures if they have some say in their design.

Grievance mechanisms should not be considered a substitute for community and stakeholder engagement processes that allow for airing of concerns. The two are complementary and should be mutually reinforcing.⁶²

Additionally, operational-level grievance mechanisms are just one option for individuals to seek justice or remediation for damages that they believe have occurred as a result of entity activities. For example, traditional

TERMS USED IN THIS CHAPTER

Accessible = Affected Community = Contractor = Entity NEW = Equitable = Exploration NEW = Grievance = Grievance Mechanism = Inform NEW = Mineral Processing NEW = Mining NEW = Mining-Related Activities = Mitigate = Operation NEW = Project NEW = Remediation/Remedy = Rights Holder = Serious Human Rights Abuses = Stakeholder = Vulnerable Group

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

authorities may have conflict or dispute resolution systems in place; countries may have legal frameworks, such as court systems, to provide recourse to aggrieved parties; workers may have access to project- or corporate-level whistle-blower procedures; and remedies may be sought through national or international human rights bodies, labor tribunals or other non-judicial mechanisms. Operational-level grievance mechanisms should neither be used to undermine the role of legitimate trade unions in addressing labor-related disputes, nor preclude any stakeholder from accessing judicial or other non-judicial grievance mechanisms.⁶³

OBJECTIVES/INTENT OF THIS CHAPTER

To provide credible, effective, and accessible means for affected communities, individuals, and other stakeholders to raise and resolve grievances arising due to mining-related activities, while not limiting their ability to seek remedy through other mechanisms.

NOTE: REVISED. Changed reference to mine-related grievances. Refer instead to mining-related activities, since the definition for that term encompasses exploration, mining and mineral processing.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all <u>exploration</u>, <u>mining</u> and <u>mineral processing projects</u> and <u>operations</u>, as all have <u>stakeholders</u> who must be provided with a credible, effective, and inclusive means of raising <u>grievances</u> with the entity and who, if the grievances are not adequately addressed through the operational-level <u>grievance</u> mechanism, have the right to access <u>remedy</u> through other mechanisms or channels.

Workers employed by an entity also must have access to this grievance mechanism (in their capacity as community members, where applicable); however, they must also have access to a workplace-specific (project- or corporate-

⁶⁰ John F. Kennedy School of Government, Harvard Univ. 2008. Rights-Compatible Grievance Mechanisms: A Guidance Tool for Companies and Their Stakeholders. p. 12. Available at: <u>https://unglobalcompact.org/library/57</u>

⁶¹ It is also possible that other forms of stakeholder feedback such as solicitations and suggestions may also be managed through a centralized system to track stakeholder engagement that may be linked to or even constituent of the 'grievance mechanism'. These forms of stakeholder engagement are assessed under Chapter 1.2 (Community and Stakeholder Engagement). To the extent that there is overlap between the mechanisms utilized to receive grievances and those utilized to receive stakeholder feedback more broadly, auditors will consider the evidence as it applies to relevant requirements in both chapters.

⁶² IFC. 2009. Good Practice Note: Addressing Grievances from Project-Affected Communities. p. 6. <u>https://www.ifc.org/en/types/insights-</u> reports/2000/publications-gpn-grievances

⁶³ Ruggie, J. 2011. Guiding Principles on Business and Human Rights. A/HRC/17/31. Commentary for Principle 29. Available at: www.ohchr.org/Documents/Issues/Business/A-HRC-17-31_AEV.pdf

level) mechanism through which they can express grievances specifically relating to the workplace. Where these mechanisms are one and the same, evidence presented in this chapter can also be used to meet relevant criterion (3.1.5) in Chapter 3.1 - Fair Labor and Terms of Work'. Where these mechanisms are separate, workers and workplace grievance procedures should not have bearing on the outcome of the requirements of this chapter, but rather be evaluated under Chapter 3.1.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

Stakeholders, including affected community members, rights holders, and others have access to an operational-level mechanism that allows them to raise and seek resolution or remedy for the range of complaints and grievances that may occur in relation to the operation or the entity's actions (1.4.1.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Complaints and Grievance Mechanism and Access to Remedy Requirements

1.4.1. Access to Operational-Level Grievance Mechanism

1.4.1.1. (Critical Requirement)

<u>Stakeholders</u>, including affected community members, rights holders, and others (hereafter referred to collectively as "<u>stakeholders</u>") have access to an operational-level mechanism that allows them to raise and seek resolution or <u>remedy</u> for the range of complaints and grievances (hereafter referred to collectively as "<u>grievances</u>") that may occur in relation to the operation or the <u>entity</u>'s actions.

NOTE ON 1.4.1.1: We specified that both 'complaints' and 'grievances' would be referred to as grievances hereafter to reduce confusion about the relationship between the terms and IRMA's dealing with them. This is now also explained in the 'background' section at the outset of this chapter.

CONSULTATION QUESTION 1.4-1

Background: Requirement 1.4.1.1 was a critical requirement in the 2018 Mining Standard and is currently a critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

One of the issues that has arisen is that there may be a mechanism in place that allows grievances to be filed and addressed, but the mechanism may not be considered as entirely effective by some stakeholders.

Question: Should the critical element simply be that there is a mechanism that allows stakeholders to raise and seek remedy for their grievances, or should we add additional expectations to this critical requirement that speak to the quality and/or effectiveness of the mechanism? For example, we could add the content of (non-critical) requirement 1.4.2.1 to this (critical) requirement.

CONSULTATION QUESTION 1.4-2

Background: Chapter 1.4 - 'Complaints and Grievance Mechanism and Access to Remedy' includes a range of requirements surrounding the existence of an accessible and effective operational-level grievance mechanism. It is not possible to score well on Chapter 1.4 if the mechanism does not have certain quality-related characteristics. Other chapters (i.e., human rights, gender, resettlement, security, ASM) also have requirements relating to the existence of a grievance mechanism;⁶⁴ however, the requirements in each of those chapters ask only that a mechanism is in place that allows grievances to be filed and addressed, but they do not speak to the overall quality of that mechanism. This is an approach proposed by IRMA to avoid too much repetition across chapters. However, this creates a situation in which an entity could theoretically score 'fully meets' on the grievance-related requirement in an individual chapter (which in most cases only asks that stakeholders have "access to" a grievance mechanism), even if the grievance mechanism as a whole is not an effective one (as reflected in the overall score for Chapter 1.4).

Question: Should an entity's score on grievance-related requirements within individual non-grievance-specific chapters be restrained or linked to the overall score that the entity gets on the grievance chapter (Chapter 1.4) as a whole?

For example, if a site scores 80% on Chapter 1.4, the most the site could receive for a grievance requirement in the other chapters would be a 'substantially meets,' but if a site scores 100% on Chapter 1.4 then, assuming the mechanism can handle grievances specific to the other chapters, they could possibly get a 'fully meets' rating on those grievance requirements.

1.4.1.2. Stakeholders are informed, in a manner appropriate to their circumstances:

- a. Of the existence of the operational-level grievance mechanism and its procedures;
- b. How to file a grievance; and
- c. That using the operational-level grievance mechanism does not preclude them from seeking redress related to grievances through administrative, judicial, or non-judicial remedies.

NOTE ON 1.4.1.2: REVISED. We moved this requirement up from the 'communications' criterion (formerly criterion 1.4.5, which no longer exists) for consistency with the structure of other chapters.

The words "in a manner appropriate to their circumstances," were added to address the fact that affected communities may need to be informed in person, in local languages, etc., whereas regional NGOs or others may be fine receiving an email about the mechanism.

Sub-requirement (b) is NEW. It has been added so that proactive steps are taken to make sure stakeholders not only know that a mechanism exists but are informed of how to file a grievance. This would be especially important for stakeholders who are not literate (i.e., the public availability of written procedures required in 1.4.2.2 will not be useful to them).

Sub-requirement (c) is a modified version of requirement 1.4.5.2 in the 2018 Mining Standard. But we are proposing that the entity be required to actively inform stakeholders that they can use the operational-level mechanism and also make use of other mechanisms if they so choose. Instead of requiring entities to actively inform, this requirement in the 2018 Mining Standard simply prohibited the entity from telling stakeholders that they were not allowed to use other mechanisms, which was very difficult to audit as it required auditors to look for the absence, rather than the presence, of something.

⁶⁴ See: Chapter 1.3, requirement 1.3.3.3; proposed Chapter 1.X, requirement 1.X.3.2; Chapter 2.4, requirement 2.4.3.3; Chapter 3.4, requirement 3.4.2.4; Chapter 3.5, requirement 3.5.6.3; and Chapter 3.6, requirement 3.6.2.1.d.

1.4.2. Grievance Mechanism Procedures

1.4.2.1. The grievance mechanism is underpinned by a grievance procedure (or equivalent) that:

- a. Outlines how grievances and communications with those filing grievances are tracked, recorded, acknowledged, investigated, and equitably resolved, including general timeframes for each phase of the process;
- b. Explains how the confidentiality of a complainant's identity will be protected, if requested by the complainant;
- c. Outlines how complainants can file anonymous grievances;
- d. Explains how the entity will assist those who may face barriers to using the operational-level grievance mechanism, different genders, ages, ethnicities, and any potentially <u>vulnerable groups</u>,⁶⁵ and outlines how stakeholders can request such assistance;
- e. Explicitly states that participation in an operational level grievance mechanism does not preclude a complainant from seeking redress through administrative, judicial, or other non-judicial remedies, and that no remedy provided by an operational-level grievance mechanism requires or implies that complainants waive their right to seek recourse for the same grievance through other available mechanisms; and
- f. Lists options for recourse if a complainant does not find the resolution of their grievance satisfactory and/or if the mechanism is deemed inadequate or inappropriate for handling grievances relating to potential serious human rights abuses.

NOTE ON 1.4.2.1: REVISED. This was requirement 1.4.2.1 in the 2018 Mining Standard. We moved reference to the effectiveness criteria outlined in Principle 31 of the United Nations Guiding Principles on Business and Human Rights (which include the need for the mechanism to be: (a) Legitimate, (b) Accessible, (c) Predictable, (d) Equitable, (e) Transparent, (f) Rights-compatible, (g) A source of continuous learning, and (h) Based on engagement and dialogue, to the guidance notes, as the chapter itself has been designed to incorporate these effectiveness criteria.

We also removed the element that consultation had to occur in the design of the mechanism, because that implied that it would have needed to happen prior to or during the initial development of the mechanism itself. The primary intent is that stakeholders have a say in the grievance mechanism and its procedures to improve its effectiveness. We cover that by requiring that there are clear opportunities to improve the mechanism (1.4.3.2).

We combined previous sub-requirements (b) and (g) as they both referred to the administrative side of tracking and responding to grievances.

We added sub-requirement (e) with text explicitly requiring the entity to state in writing that participation in grievance processes does not require waiving rights to recourse elsewhere for the same grievance. In the 2018 Mining Standard it was stated in 1.4.3.1 that this must be the practice (and in 1.4.5.2. that the entity cannot state the contrary in communications with stakeholders), but absent evidence to the contrary (i.e., stakeholders reporting that they were told they could not seek recourse elsewhere) or evidence that recourse had been successfully sought (i.e., evidence that in practice it occurred), there was nothing to audit. Moreover, without an obligation to explicitly inform stakeholders of this option, they may have not known it was available and therefore not attempted to avail themselves of it for that reason, which again is difficult to identify and therefore audit.

⁶⁵ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate without particular considerations/accommodations; this often includes people with disabilities, socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices or household duties deter participation (i.e., women, elderly, children), etc. Additional guidance will be provided in the IRMA Guidance Document.

We added sub-requirement (f) that requires entities to explicitly inform stakeholders of their options for external resource, pursuant to sub-requirement (e).

CONSULTATION QUESTION 1.4-3: Stakeholder feedback suggested that an independent third-party should be involved in the assessment of more grievances to ensure that resolutions are unbiased, impartial, and fair to all parties involved. Is this considered best practice and, if so, is it applicable to only the most serious grievances or to all grievances?

1.4.2.2. <u>Grievance</u> procedures are publicly available in languages and formats that are understandable to stakeholders who may be affected by the project/operation.

NOTE ON 1.4.2.2: REVISED. We added language that this must be communicated in language and formats that are understandable to stakeholders.

1.4.2.3. Relevant personnel (including entity employees as well as <u>contractors</u>) who interact with <u>stakeholders</u> are informed of and understand the proper procedures for handling stakeholder <u>grievances</u>, and personnel directly involved in the operational-level mechanism receive training on the respectful and equitable handling of all grievances, including those that may appear frivolous.

NOTE ON 1.4.2.3: REVISED. This requirement was previously under criterion 1.4.5 "Communications" (in the 2018 Mining Standard). We are proposing to move it to this criterion ('Grievance Mechanism Procedures') to increase consistency with other chapters and changed language from relevant personnel being informed of grievance procedures to demonstrating understanding of, and receiving training on, these procedures.

1.4.3. Monitoring and Evaluation

NOTE ON 1.4.3: The previous criterion 1.4.3 "Access to Other Remedy Mechanisms" from the 2018 Mining Standard and requirement 1.4.3.1 (recourse to other mechanisms) are now part of requirement 1.4.1.1 and criterion 1.4.2.

1.4.3.1. Records are kept of:

- a. All grievances received, including those received verbally, anonymously, etc.;
- b. Communications with the complainant; and
- c. Final outcomes and any remedies.

NOTE ON 1.4.3.1: REVISED. This was requirement 1.4.4.1 in the 2018 Mining Standard. We divided it into subrequirements and added language to indicate that all grievances (including those submitted verbally and anonymously) must be documented. Also added that record of communications with complainants must also be kept.

We will add guidance notes on what we mean by outcomes versus remedies, i.e., outcome is the result of any investigation into the grievance (e.g., does the grievance have merit) and remedy is what occurs if the grievance is substantiated (i.e., the actions taken by the entity to resolve the grievance, which could be mitigation of some type, compensation, an apology, or another action to settle the matter). If the grievance is related to an infringement of human rights, the remedy must align with the remedy expectations in Chapter 1.3 (Human Rights Due Diligence).

1.4.3.2. The <u>entity</u> periodically monitors and evaluates the performance of the operational-level <u>grievance</u> mechanism over time to determine:

- a. If changes need to be made to improve its effectiveness as per 1.4.2.1.a;
- b. If changes in entity activities can be implemented to prevent or mitigate similar grievances in the future; and
- c. If outcomes and <u>remedies</u> provided through the mechanism accord with internationally recognized human rights.

NOTE ON 1.4.3.2: This was 1.4.4.2 in the 2018 Mining Standard.

- 1.4.3.3. Periodically, stakeholders are:
 - a. Provided with clearly communicated opportunities to provide input on how to make grievance mechanism(s) more effective, trusted, and accessible to all stakeholders; and
 - b. Receive feedback on how their input was taken into account.

NOTE ON 1.4.3.3: Added "periodically" so that it is not assumed this is a one-time solicitation for feedback. We also added sub-requirement (b) obligating entities to provide feedback to stakeholders on how their suggestions on improving the mechanism were taken into account.

1.4.4. Communication and Reporting on Grievances

1.4.4.1. Unless grievances are filed anonymously, stakeholders filing grievances are informed, either in writing or verbally with documentation of the exchange, how the grievance was addressed.

NOTE ON 1.4.4.1: REVISED. This was 1.4.6.1 in the 2018 Mining Standard. IRMA received feedback that it was not clear if that requirement referred to reporting back to individual stakeholders on their grievances or reporting to stakeholders on grievances more generally. Therefore, we specified in 1.4.4.1. that entities report back directly to the affected stakeholders and created a new 1.4.4.2, below, to address general reporting on grievances.

1.4.4.2. At least annually, relevant internal and external <u>stakeholders</u> are provided with reports on pertinent trends and lessons learned from <u>grievances</u> received and the responses provided. This is done in a manner that protects the confidentiality and safety of those filing grievances.

NOTE ON 1.4.4.2: NEW. See note for 1.4.4.1.

NOTES

The intent of this chapter is to incorporate requirements that align with and help entities meet the effectiveness criteria included in the UN Guiding Principles on Business and Human Rights, i.e., that a grievance mechanism be: (a) Legitimate, (b) Accessible, (c) Predictable, (d) Equitable, (e) Transparent, (f) Rights-compatible, (g) A source of continuous learning, and (h) Based on engagement and dialogue.⁶⁶

This chapter does not pertain to grievances related to IRMA. However, IRMA has developed its own grievance mechanism specific to the IRMA system, and IRMA's procedures outline actions to take to raise concerns about IRMA audits, the IRMA assessment process, and the IRMA system more generally.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

⁶⁶ Ruggie, J. 2011. Guiding Principles on Business and Human Rights. A/HRC/17/31. See Principle 31. Available at: www.ohchr.org/Documents/Issues/Business/A-HRC-17-31_AEV.pdf)

IRMA guidance for Chapter 1.4 of the 2018 Mining Standard elaborates on these concepts. (See: IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). Explanatory Note for 1.4.2.1. Available at: <u>https://responsiblemining.net/resources/#full-documentation-and-guidance</u>)

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

EXISTING DEFINITIONS

Accessible

In reference to grievance mechanism or engagement processes, accessible means these mechanisms or processes being known to all stakeholder groups for whose use they are intended, and providing adequate assistance for those who may face particular barriers to access.

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.
Equitable

In reference to grievance mechanisms, means seeking to ensure that aggrieved parties have reasonable access to sources of information, advice, and expertise necessary to engage in a grievance process on fair, informed, and respectful terms.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses, stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Inform

The provision of information to inform stakeholders of a proposal, activity, or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Remediation/Remedy (including in relation to human rights impacts)

Remediation and remedy refer to both the processes of providing remedy for an adverse (human rights) impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights, and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected, or protected.

Serious Human Rights Abuses

Includes: i) any forms of torture, cruel, inhuman and degrading treatment; ii) any forms of forced or compulsory labor, which means work or service which is exacted from any person under the menace of penalty and for which said person has not offered himself voluntarily; iii) the worst forms of child labor (as per ILO Convention 182); iv) other gross human rights violations and abuses such as widespread sexual violence; v) war crimes or other serious violations of international humanitarian law, crimes against humanity, or genocide.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 1.5 Financial Transparency and Anti-Corruption

NOTES ON THIS CHAPTER: We are proposing to change the name of this chapter (it was Revenue and Payments Transparency), to better reflect the breadth and intent of the requirements.

Proposed additions and changes:

- Combined a number of requirements related to payments transparency (see criterion 1.5.1)
- Expanded expectations related to anti-corruption policy and procedures (1.5.3.1, 1.5.3.2), and added some reporting requirements (1.5.3.4)

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

CONSULTATION QUESTION 1.5-1

Background: At this time, it does not appear that disclosures of revenues and payments to governments is a widespread best practice for stand-alone mineral processing facilities. The EU Accounting Directive, cited in the IRMA mining standard, does not appear to apply to smelters and refineries. The Directive applies to entities active in the extractive industry (or logging of primary forests), and extractive industry entities are defined as being involved in the exploration, prospection, discovery, development and extraction of minerals. . . "⁶⁷ Smelting and refining are categorized as Manufacturing under EU rules.

Similarly, Canada's disclosure law does not include payments related to mineral processing unless the activity is integrated into extractive operations.

Looking at EITI country reports, however, it does seem like companies that only carry out smelting (not mining) do report, which suggests that EITI <u>does not exclude</u> smelting and refining from its disclosure standard (although it is unclear if all EITI-implementing countries include mineral processing facilities in their implementation of EITI).

Question: Should IRMA require that standalone mineral processing facilities engaged with IRMA publicly report the revenues and payments paid to government?

BACKGROUND

Revenues derived from the extraction of a country's mineral resources can make a major contribution to funding public services and other valuable government activities; however, where citizens have limited knowledge of revenues paid by natural resource companies the chances of theft or inappropriate usage of revenues from extractives companies grows. Increased transparency of material payments to and revenues received by the host country government is an essential step toward addressing this matter.

⁶⁷ From Directive 2013/34/EU, Chapter 10, Report on Payments to Governments, Article 41, "•undertaking active in the extractive industry• means an undertaking with any activity involving the exploration, prospection, discovery, development, and extraction of minerals, oil, natural gas deposits or other materials, <u>within the economic activities listed in Section B, Divisions 05 to 08 of Annex I to Regulation (EC) No 1893/2006</u> of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 (20)..." [emphasis added]

The referenced Regulation (EC) No 1893/2006, Section B, Divisions 05 to 08 includes mining, but <u>does not include smelting and refining</u>, which are covered under Division 24 "Manufacture of Basic Metals (for further details, NACE Rev.2 Statistical classification of economic activities in the European Community, p. 154. <u>https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF</u>)

The Extractive Industries Transparency Initiative (EITI) is a global coalition of governments, companies and civil society working together to improve openness and accountable management of revenues from natural resources, allowing citizens to see for themselves how much their government is receiving from their country's natural resources. The EITI is complemented and extended by mandatory transparency regimes enacted into law in the European Union and other jurisdictions. The IRMA Standard is intended to support, without duplicating, the work of the EITI and mandatory transparency regimes.

Many payments, however, continue to be illegal and hidden from view. According to the OECD, "Corrupt behaviour can range from simple acts such as a cash payment to a border guard, or involve complex networks of enablers, corporate

TERMS USED IN THIS CHAPTER

Beneficial Owner
Confidential Business
Information
Contractors
Corporate Owner(s)
Corruption NEW
Entity NEW
Exploration NEW
Facilitation Payment NEW
In-Kind Payments
International Accounting Standards
Material
Payments
Mineral Processing NEW
Mining
NEW
Operation NEW
Payments
Project NEW
Stakeholder
Whistleblower NEW
Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

entities and sophisticated financial transactions across multiple jurisdictions. . .[and] Corruption risks may arise, for example, when companies enter into joint ventures, when a government awards or amends mining licenses, when companies subcontract during the exploration or extraction phases, during routine government inspection of mine sites, when minerals are shipped across borders, and in the collection of taxes. Companies or their agents are reported to offer bribes to public officials for favourable treatment, or conversely, public officials may solicit bribes from companies."⁶⁸

The International Monetary Fund (IMF) estimates that bribes, alone, annually amount to \$US1.5 - 2 trillion, while the "overall economic and social costs of corruption are likely to be even larger, since bribes constitute only one aspect of the possible forms of corruption."⁶⁹ The OECD estimates that one in five cases of foreign bribery occurs in the extractives sectors (mining, quarrying mining support services and oil and gas extraction).⁷⁰

Transparency of exploration and mining contracts, disclosure of beneficial ownership, and strong entity policies and action are all important steps at combatting the various forms of corruption.⁷¹

OBJECTIVES/INTENT OF THIS CHAPTER

NOTE: REVISED. Expanded beyond just mining-related payments, and also added reference to ethical nature of financial activities and arrangements to reflect the purpose of the anti-corruption requirements.

To increase transparency of payments made in relation to mining-related activities, projects and operations, and provide communities and the general public with the information they need to understand and assess the fairness and ethical nature of an entity's financial activities and arrangements.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level

⁶⁸ OECD. 2021. Frequently Asked Questions: How to address bribery and corruption in mineral supply chains. p. 5. <u>https://mneguidelines.oecd.org/faq-how-to-address-bribery-and-corruption-risks-in-mineral-supply-chains.pdf</u>

⁶⁹ IMF. 2016. Corruption: Costs and Mitigating Strategies. p. 5. <u>https://www.imf.org/external/pubs/ft/sdn/2016/sdn1605.pdf</u>

⁷⁰ OECD. 2014. OECD Foreign Bribery Report: An Analysis of the Crime of Bribery of Foreign Public Officials. pp. 21, 22. <u>https://www.oecd-ilibrary.org/governance/oecd-foreign-bribery-report_9789264226616-en</u>

⁷¹ See, for example: Transparency International. Accountable Mining." <u>https://www.transparency.org/en/projects/accountable-mining;</u> EITI. "Beneficial Ownership<u>." https://eiti.org/beneficial-ownership</u>; and OECD. 2021. Frequently Asked Questions: How to address bribery and corruption in mineral supply chains. <u>https://mneguidelines.oecd.org/faq-how-to-address-bribery-and-corruption-risks-in-mineral-supplychains.pdf</u>

information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

A policy is in place and implemented to prevent, detect, and address <u>corruption</u> (including bribery, extortion, embezzlement, money laundering and attempts to gain undue influence) by employees, <u>contractors</u> and business partners (1.5.3.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Revenue and Payments Transparency Requirements

1.5.1. Financial Transparency

NOTE FOR 1.5.1: This criterion combines several criteria from the 2018 Mining Standard, all of which contained elements related to financial transparency (1.4.1 'Disclosure of Country-Level Payments', 1.5.2 'Disclosure of Project-Level Payments', 1.5.4 'Operating Company Transparency'). We are proposing to simply this by listing all of the relevant requirements under this new criterion heading.

1.5.1.1. Annually, all <u>material payments</u> made by the entity and its <u>corporate owner</u> to the host country government are disclosed as follows:⁷²

- a. Reports are made public within 12 months after the end of each financial year in which payments occurred;⁷³
- b. Reports are readily accessible to the public;
- c. All material payments are broken down by recipient government body (where applicable), and payment type (see 1.5.1.1.c); and
- d. The types of payment disclosed shall include as a minimum, as applicable:
 - i. The host government's production entitlement;
 - ii. National state-owned enterprise production entitlement;

The European Union Accounting Directive 2013/34/EU is available at: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013L0034&qid=1524171176636 and the European Union Transparency Directive 2013/50/EU is available at: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013L0034&qid=1524171176636 and the European Union Transparency Directive 2013/50/EU is available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1415872329209&uri=CELEX:32013L0050.

⁷² Reports filed to meet regulatory requirements may provide the evidence of conformity with this requirement. Some examples of regulations that promote transparency of mining and minerals-related payments to governments include:

Equivalent transparency regimes include, for example: Government of Canada. 2015. Extractive Sector Transparency Measures Act. <u>http://laws-lois.justice.gc.ca/eng/acts/E-22.7/page-1.html</u>; Ministry of Finance. 2013. Regulations on country-by-country reporting. Available at: <u>http://www.publishwhatyoupay.no/en/node/16414</u>; and UK Government. 2014. The Reports on Payments to Governments Regulations 2014. <u>http://www.legislation.gov.uk/uksi/2014/3209/pdfs/uksi_20143209_en.pdf</u>

⁷³ The information may be made publicly available on the company and/or appropriate government website(s).

- iii. Taxes on income, production, or profits of companies;⁷⁴
- iv. Royalties;
- v. Dividends;
- vi. Bonuses, such as signature, discovery, and production bonuses;
- vii. License fees, rental fees, entry fees and other considerations for licenses and/or concessions;
- viii. Payments for infrastructure improvements; and
- ix. Any other significant payments and material benefits to government, including in-kind payments.⁷⁵

NOTE FOR 1.5.1.1: REVISED. Previously, criterion 1.5.1 was divided into four separate requirements. In an effort to simplify and add clarity to this requirement, all expectations related to the publication of a report on payments to host country governments have been consolidated into one requirement here.

Also, we removed references to the EU Accounting and Transparency Directives and other mandatory transparency regimes from the requirement text. The rationale is that instead of referring to a single regulatory approach to transparency, we are proposing to focus on the best practices for what information is expected to be published. The types of payments listed are consistent with what is in the EU directives and in other similar laws.

This new approach should not have any ramification for how the requirement is audited. For the 2018 Mining Standard, IRMA expected auditors to verify that the various types of information were being published, and the same will apply to this requirement.

1.5.1.1.d.iii has been revised slightly. In the 2018 Standard it referred to 'Profit Taxes', but as per EU Accounting Directive 2013/34/EU, Article 41, tax-related payments that should be reported include "taxes levied on the income, production or profits of companies, excluding taxes levied on consumption such as value added taxes, personal income taxes or sales taxes."⁷⁶

1.5.1.2. Annually, the following project-level information is disclosed as follows:⁷⁷

- a. Information is made public within 12 months after the end of each financial year in which activities and payments occurred;⁷⁸
- b. Information is readily accessible to the public; and
- c. Project-level information includes:
 - i. Production of minerals and/or metals, disaggregated by product type and mass;
 - ii. Revenues from sales, disaggregated by product type;
 - iii. Payments and other material benefits to government as listed in requirement 1.5.1.1.d, disaggregated according to the receiving government entity (e.g., national, regional, local entity; name of government department);

⁷⁴ This excludes taxes levied on consumption such as value added taxes, personal income taxes or sales taxes.

⁷⁵ Examples of "other significant payments" include transportation revenue or social expenditures. According to EITI Standard, Section 4.4, transportation revenue may include revenue from taxes, tariffs or other relevant payments related to transport of mined commodities). Social expenditures made by companies may be an example of material payments and/or benefits to governments (see EITI requirement 6.1).

⁷⁶ See European Union Accounting Directive 2013/34/EU. Article 41(5)(b). <u>http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013L0034&qid=1524171176636</u>

⁷⁷ As per EITI, a project is defined as operational activities that are governed by a single contract, licence, lease, concession or similar legal agreement, and form the basis for payment liabilities with a government. However, in some jurisdictions, projects may encompass a set of operationally and geographically integrated contracts, licenses, leases or concessions or related agreements with substantially similar terms that are signed with a government. Where this is the case, disclosures of payments may reflect this aggregation.

Alternatively, some jurisdictions may only require that payments be made at the entity level, rather than the project level. In such cases, disclosures may be made at the entity level.

For more information see: EITI. 2020. Guidance Note 29 "Project-level Reporting." Page 3. https://eiti.org/sites/default

⁷⁸ The information may be made publicly available on the company and/or appropriate government website(s).

- iv. Social expenditures, including the names and functions of beneficiaries;⁷⁹
- v. Taxes, tariffs, or other specific payments related to transportation of minerals to and from the project/operation;⁸⁰
- vi. Payments by the <u>entity</u> or its <u>corporate owner</u> to politicians' campaigns, political parties or related organizations in relevant project-level jurisdictions (i.e., the local, regional, and national level);
- vii. Facilitation payments made to public or government officials (when operating in countries where such payments are legal); and
- viii. Fines or other similar penalties.

NOTE FOR 1.5.1.2: The expectations in this requirement were found in criterion 1.5.2 in the 2018 Mining Standard. Two separate requirements in that criterion that have been consolidated here. The reference to EU Directive 2013/34/EU has been removed. Although that directive covers some site-level transparency issues, those adhering to that directive may need to disclose additional data to meet the IRMA requirement.

A footnote has been added to make it clear that "project-level," in some cases, may be defined more broadly than a single project or operation, depending on the host country's basis for how payments are made to the government. This aligns with EITI's approach.

Sub-requirement 1.5.1.2.c.i was 1.5.2.2.a in the 2018 Mining Standard. It required reporting of mine production, disaggregated by product type and volume. We are proposing to revise this to "production of minerals and/or metals" to make this also applicable to mineral processing sites. We have also replaced volume with mass, as that is the typical way that production is reported (e.g., as tonnes, ounces, pounds, carats, etc., rather than on a volume basis).

More detail was added to 1.5.1.2.c.vi (previously 1.5.2.2.f), to make it clear that these are payments in any relevant jurisdictions within the host country (local, regional, and national) where the project/operation is located.

1.5.1.2.c.vii is NEW. It has been added to align with ICMM's Performance Expectation 1.2, which requires that companies ". . .publicly disclose facilitation payments." We have clarified, however, that this be disclosed for countries where such payments are legal. Where such payments are illegal, it is unlikely that any entity is going to willing disclose such payments publicly, as it will incriminate them. If an auditor determines that illegal facilitation payments are occurring, then that should be reflected in the ratings in Chapter 1.1 Legal Compliance.

CONSULTATION QUESTION 1.5-2: Requirement 1.5.1.2.c.v. has been adapted for mineral processing sites; however, it is not clear if taxes on feed materials are paid by mineral processing sites or by the mines. Do you have any input on whether or not such taxes are paid?

1.5.1.3. The entity adheres to international accounting standards.

NOTE: This was 1.5.2.3 in the 2018 Mining Standard.

CONSULTATION QUESTION 1.5-3: Should IRMA require that financial statements be audited by credible thirdparty experts (e.g., certified public accountants) to provide added assurance that they entity is adhering to international accounting standards?

⁷⁹ Social expenditures include in-kind expenditures. Reporting of social expenditures does not include expenditures agreed upon with affected Indigenous Peoples' governing bodies, e.g., "impact and benefit" or similar agreements reached through the process of Free, Prior and Informed Consent (see Chapter 2.2). Those expenditures may be reported if agreed by the Indigenous Peoples.

⁸⁰ E.g., there may be tariffs paid on feed materials (minerals, metals) that are necessary in mineral processing, and there may be tariffs on products or byproducts after they leave the processing facility or mine.

1.5.1.4. The material terms for mineral <u>exploration</u>, development and production agreed between the <u>entity</u> or its <u>corporate owner</u> and government entities are freely and publicly available, with the exception of <u>confidential</u> <u>business information</u>,⁸¹ in the national language(s) of the country in which the <u>project/operation</u> is located.

- a. Where these terms are negotiated, rather than governed by law, the entity makes the relevant agreements, licenses, or contracts freely and publicly available; or
- b. Where these terms are governed by law, free, public access to the relevant statutory documentation is deemed sufficient to meet the IRMA requirement.

NOTE FOR 1.5.1.4: This was 1.5.4.1 in the 2018 Mining Standard.

1.5.1.5. Information on the <u>beneficial owners</u> of the <u>entity</u>(ies) that bid for, operate or invest in extractive assets, including the identity(ies) of their beneficial owner(s) are made publicly available, including:

- a. Names;
- b. Nationality;
- c. Country of residence; and
- d. The level of ownership and details about how ownership or control is exerted.

NOTE FOR 1.5.4.5: REVISED. This was 1.5.4.2 in the 2018 Mining Standard. We are proposing to revise the requirement to be more specific regarding the information on beneficial owners that is made publicly available, i.e., names, nationalities and country of residence. This addition is based on the requirements of the 2016 EITI Standard.⁸² It provides more clarity that the information published goes beyond just the names of the beneficial owners.

CONSULTATION QUESTION 1.5-4:

Background: IRMA's definition of beneficial owner aligns with both EITI and the FATF. However, the definition leaves room for interpretation, and has the potential to lead to disagreements between entities and auditors and stakeholders regarding whether all beneficial owners have been disclosed.

Where government regulations have elaborated on beneficial owners, or where an EITI multi-stakeholder process has agreed on what constitutes a beneficial owner for the purposes of disclosure, IRMA is considering recommending that entities use those definitions as the basis for their reporting. However, not all jurisdictions have laws that define beneficial ownership, and/or not all countries have EITI processes.

Thus, IRMA is seeking input on what ownership thresholds or other factors should be included to guide entities when there are no legal or multi-stakeholder-agreed criteria for what constitutes a beneficial owner.

Question: Do you have any suggestions on the criteria for who should be considered a beneficial owner, such as ownership thresholds (e.g., those who hold more than 10% of shares) or a certain % of voting rights, or those who have other means of exercising control over the entity such as appointing or firing members of governing bodies, etc.

1.5.2. Support for the Extractive Industries Transparency Initiative (EITI)

- 1.5.2.1. The entity supports the EITI in the following manner:
 - a. If the project/operation is located in a country without a mandated transparency regime, the entity publishes a clear public statement endorsing the EITI Principles on its external website; and

⁸¹ Confidential business information that is not material to the terms for mineral exploration, development and production may be excluded or redacted from the publicly accessible documentation as necessary.

⁸² Extractive Industries Transparency Initiative (EITI). 2016. Standard."2.5 Beneficial Ownership." <u>https://eiti.org/sites/default/files/attachments/the_eiti_standard_2016_english.pdf</u>. See also: EITI Factsheet. 2017. "Disclosing beneficial ownership" p.8. <u>https://eiti.org/sites/default/files/attachments/eiti_bo_factsheet_en_final.pdf</u>

b. If the project/operation is located in a country where EITI is active, the entity engages constructively with and supports implementation of the EITI consistent with the multi-stakeholder process adopted in that country.

NOTE FOR 1.5.2.1: REVISED. Requirements 1.5.3.1 and 1.5.3.2 from the 2018 Mining Standard have been combined. We removed reference to company forms.

1.5.3. Addressing Corruption and Unethical Behavior

NOTE FOR 1.5.3: Minor change in name from 'Anti-Corruption Measures' to 'Addressing Corruption and Unethical Behavior'.

We are proposing to define **corruption** as:

Any unlawful or improper behavior that seeks to gain a private advantage through illegitimate means. Any kind of bribery is a form of corruption; but corruption also includes abuse of power, extortion, fraud, deception, collusion, cartels, embezzlement, and money laundering.⁸³

1.5.3.1. (Critical Requirement)

An anti-corruption (or equivalent) policy:

- a. Outline's the <u>entity's</u> commitment to preventing, detecting and addressing <u>corruption</u> and bribery by the entity's employees, <u>contractors</u>, and third parties such as agents, intermediaries, suppliers, and joint venture partners (hereafter referred to as "business partners");
- b. Is approved at the most senior level of the entity; and
- c. Is communicated to all workers, contractors, and business partners.

NOTE FOR 1.5.5.1: REVISED. This was requirement 1.5.5.1 in the 2018 Mining Standard. We have revised the wording of this requirement. Instead of a requirement to prohibit bribery and corruption (which is addressed to some extent in 1.4.3.2.a), we are proposing that the policy be more comprehensive, and include a commitment from the highest level of the entity to prevent, detect and address bribery and corruption.

Sub-requirement (c) has been added because workers, contractors and business partners all need to be aware of the policy so that they understand the entity's approach to bribery and corruption, and any expected behavior on their part.

Also, in the 2018 Mining Standard the requirement included both policies and procedures. We are proposing to create two separate requirements – this one, which addresses the higher-level policy, and 1.5.3.2, below, on the procedures, which has much more detail that what was in the 2018 Standard. For now, we are keeping the policy as the critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

1.5.3.2. Anti-corruption procedures are in place and implemented that outline the internal controls to prevent, detect and address corruption, bribery, and other unethical behavior. At minimum, the procedures include:

- a. Prohibited actions (e.g., corruption, including bribery, extortion, money laundering, attempts to gain undue influence, illegal facilitation payments, etc.);
- b. Criteria for behaviors that may be deemed acceptable under certain circumstances, and approval processes related to:⁸⁴
 - i. The offer of and acceptance of financial and in-kind gifts, including hospitality, entertainment, and travel (to and from employees, contractors, third-parties and business partners);⁸⁵
 - ii. Political contributions;

⁸³ Source: Responsible Jewellery Council 2019. https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf

⁸⁴ These are from: OECD. 2010. Good Practice Guidance on Internal Controls, Ethics and Compliance. <u>https://www.oecd.org/daf/anti-bribery/anti-bribery/anti-briberyconvention/44884389.pdf</u>

⁸⁵ Third-parties may include government/public officials, politicians, auditors, or others with potential influence.

- iii. Charitable contributions and sponsorships; and
- iv. Legal facilitation payments;⁸⁶
- c. Protections including non-retaliation for <u>whistleblowers</u> and employees and contractors who raise concerns about suspected <u>corruption</u> or unacceptable behavior associated with the <u>project/operation</u>,⁸⁷ or who refuse to pay bribes even if such refusal results in the loss of business;
- d. Internal reporting and recording of:
 - i. Approved gifts, contributions and payments given to or received from employees, <u>contractors</u>, thirdparties and business partners;⁸⁸ and
 - ii. Unapproved or undue financial or other advantage given to or received from employees, contractors, third-parties and business partners;⁸⁹
- e. Investigation of alleged corruption or unacceptable behavior that contravenes the entity's anti-corruption policy or procedures; and
- f. Disciplinary actions to be taken if corruption or unacceptable behavior is confirmed.

NOTE FOR 1.5.3.2: REVISED. Combined 1.5.5.1 and 1.5.5.2 from the 2018 Mining Standard, as both requirements referred to procedures to combat corruption. The list of elements to include in the procedure has been expanded based on a gap analysis with other related standards – parts of sub-requirement (a), (b) and (c) are from ResponsibleSteel, parts of (b), (c), (d) and (e) are from Responsible Jewellery Council's Code of Practices.⁹⁰

1.5.3.3. Relevant employees and contractors receive training on the anti-corruption procedures.

NOTE FOR 1.5.3.3: REVISED. This was requirement 1.5.5.3 in the 2018 Mining Standard.

1.5.3.4. On an annual basis, the entity reports:

- a. Total number and nature of confirmed incidents of <u>corruption</u> or other unacceptable behavior related to the <u>project/operation</u>;
- b. Total number of confirmed incidents in which the project's/operation's employees were dismissed or disciplined for corruption or other unacceptable behavior;
- c. Total number of confirmed incidents where the project's/operation's contracts with contractors or business partners were terminated or not renewed due to violations of the entity's anti-corruption policy and procedures; and
- d. Public legal cases regarding corruption brought against the company or its employees during the reporting period and the outcomes of such cases.

NOTE FOR 1.5.3.4: NEW. In the 2018 Mining Standard, there were no expected reporting or disclosure requirements related to anti-corruption. We are proposing to add this to align with the Global Reporting Initiative's (GRI) requirements on reporting of corruption incidents.⁹¹

⁸⁶ Any legal facilitation payments are required to be publicly disclosed as per requirement 1.5.1.2.c.vii.

⁸⁷ Chapter 3.1 (Fair Labor and Terms of Work) includes a whistleblower mechanism for employees and contractors (see requirement 3.1.5.2).

⁸⁸ Third-parties may include government/public officials, politicians, auditors, or others with potential influence.

⁸⁹ Such payments or advantages could be paid or received by employees of the entity directly, or through contractors or business partners acting on the entity's behalf in order to garner some benefit for the entity.

⁹⁰ ResponsibleSteel. 2022. ResponsibleSteel Standard V.2.0. Requirement 1.1.1.d. <u>https://www.responsiblesteel.org/wp-content/uploads/2022/10/ResponsibleSteel-Standard-2.0.1.pdf</u>

Responsible Jewellery Council. 2019. Code of Practices. Requirement 11.1 and 11.2. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>

⁹¹ Global Reporting Initiative. 206. GRI 205: Anti-corruption. Disclosure 205-3 "Confirmed incidents of corruption and actions taken." <u>https://www.globalreporting.org/standards/media/1006/gri-205-anti-corruption-2016.pdf</u>

NOTES

The Extractive Industries Transparency Initiative (EITI) maintains the EITI Standard. The EITI scheme applies specifically to countries. Countries implement the EITI Standard to ensure full disclosure of taxes and other payments made by producing oil, gas and mining companies. These payments are disclosed in an annual EITI Report (to see all EITI Reports, go to: <u>eiti.org/countries/reports</u>). This report allows citizens to see for themselves the revenues that their government is receiving from their country's natural resources.

Requirement 1.5.1.1 in this IRMA chapter is based on EITI requirements but have been designed for application to entities reporting payments to governments (not the governmental reporting requirements). Requirement 1.5.1.2 aims to complement EITI's scheme by requiring entities to report corporate-level information about payments made by the entity or its corporate owner in the country where the project/operation is located, allowing country and corporate reporting to be compared.

Since IRMA assesses individual sites, most of the criteria apply specifically at the project/operation level, and the chapter includes requirements related to project/operation-level reporting of payments, other disclosures, and anti-corruption measures.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Corruption

Any unlawful or improper behavior that seeks to gain a private advantage through illegitimate means. Any kind of bribery is a form of corruption; but corruption also includes abuse of power, extortion, fraud, deception, collusion, cartels, embezzlement, and money laundering.

Source: Adapted from Responsible Jewellery Council 2019. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Facilitation Payment

Sums of money paid to get preferential treatment for something the receiver is otherwise still required to do—for example, paying an official to speed up, or 'facilitate', an authorization process.

Source: Responsible Jewellery Council. 2019. Code of Practices Guidance. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-Guidance-April-2019.pdf</u>

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Whistleblower

A person who raises concerns regarding the unlawful or unethical activity or behavior of a person or organization.

EXISTING DEFINITIONS

Beneficial Owner

The natural person(s) who ultimately owns or controls a company and/or on whose behalf a company is owned. It includes those people who exercise ultimate effective control over a legal person or arrangement. Reference to "ultimately owns or controls" and "ultimate effective control" refer to situations in which ownership/control is exercised through a chain of ownership or by means of control other than direct control.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Corporate Owner(s)

The corporation(s) or other business institution(s) including any private or state-run enterprises that have complete or partial financial interest in or ownership of a project/operation.

REVISED. Changed wording from mining project to project/operation.

In-Kind Payments

Payments made to a government (e.g., royalty) in the form of the actual commodity (mineral processing products or by-products) instead of cash.

International Accounting Standards

Several accounting standards are commonly recognized as an international accounting standard; for example, the International Financial Reporting Standards (IFRS), which are set by the International Accounting Standards Board (IASB).

Material Payments

If not defined in a mandatory transparency regime or through an EITI country-specific multi-stakeholder process, material payments are those that exceed US\$100,000 (or its equivalent in other currencies). Payments may occur as a single installment or be the aggregate of a series of related payments that are made in the same fiscal/financial year. Material payments may be monetary or in-kind.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Suppliers

Those who provide goods, services or materials to the operation.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Chapter 1.XX (NEW) Mineral Supply Chain and Responsible Sourcing

NOTES ON THIS CHAPTER: In the IRMA 2018 Mining Standard there is no chapter that specifically addresses the sourcing of raw materials. A chapter on Mineral Supply Chain and Responsible Sourcing was proposed as Chapter 1.6 in the 2021 draft IRMA Mineral Processing Standard.⁹²

CHAPTER NOT YET OPENED FOR PUBLIC COMMENT

The IRMA Board of Directors has not yet agreed on a set of criteria and requirements for such a chapter, and is proposing to convene an Expert Working Group to better elucidate current best practices and to help propose an approach that reflects those practices.

As part of the working group, there will also be some exploration of whether or not a chapter on mineral supply chain and responsible sourcing should be combined with the current chapter 3.4 on Conflict-Affected and High-Risk Areas (CAHRA), given that CAHRA due diligence is a component of responsible sourcing. (See proposed revisions to Chapter 3.4)

The intention is that a draft Chapter 1.XX will be released separately for public consultation in the next few months.

PARTICIPATE IN AN EXPERT WORKING GROUP ON THIS CHAPTER

If you are interested in participating in an Expert Working Group on Mineral Supply Chain and Responsible Sourcing, please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net).

BACKGROUND

Responsible sourcing in the minerals sector was initially focused on minerals and metals produced in or transported through conflict-affected and high-risk areas (CAHRAs) and the need to ensure the purchase of these minerals and metals did not contribute to conflict and high-risk areas (CAHRAs) and the need to ensure the purchase of these minerals and

metals did not contribute to conflict and human rights abuses (see Chapter 3.4 for IRMA requirements for entities that know or suspect inputs to their mineral processing operations are sourced from or travel through CAHRAS). From this starting point, responsible sourcing has expanded to include other environmental, social and governance (ESG) issues, driven by downstream supply chain members and end-users of products containing minerals and metals. Increasingly, responsible sourcing is addressed in standards and systems applicable to the minerals and metals sector, including mineral processing sites.

IRMA Chapter 1.XX intends to align and achieve consistency with other relevant systems and standards, while driving the ongoing development of best practice in a way that

TERMS USED IN THIS CHAPTER

Affected Community
Artisanal and Small-Scale
Mining (ASM)
Business Relationships
ConflictAffected and High-Risk Area
Entity NEW
Environmental, Social and Governance (ESG) NEW
Legitimate ASM NEW
Mineral Processing
Operation NEW
Primary Input Materials NEW
Project NEW
Serious Human Rights Abuses
Site NEW
Suppliers
Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

does not shift unachievable or burdensome expectations onto mineral processing operations in terms of defining and managing the ESG performance of their suppliers. In this context, the focus of this chapter is on primary input materials, which are central to mineral processing activities and (in most cases) will be the most significant materials purchased from suppliers. By requiring mineral processing sites to screen and undertake due diligence on suppliers

⁹² IRMA. 2021. Standard for Responsible Mineral Processing. Draft version 1.0. <u>https://responsiblemining.net/wp-</u>content/uploads/2021/06/IRMA-Mineral-Processing-Standard-DRAFT-14June2021.pdf

of primary input materials, IRMA expects to contribute to driving improved ESG performance in the upstream supply chain and provided added assurance to downstream supply chain members and end-users that mineral processing sites are considering ESG in their sourcing of primary input materials.

OBJECTIVES/INTENT OF THIS CHAPTER

Mineral processing operations know and engage with suppliers, and increasingly source input materials from suppliers that have strong environmental, social and governance performance.

SCOPE OF APPLICATION

RELEVANCE: This chapter is only applicable to mineral processing operations (not mining operations or exploration, mining or mineral processing projects).

And the sourcing policy and due diligence requirements are only applicable to the sourcing of "primary input materials" (i.e., minerals/metal-bearing ores or concentrates) to their facilities, and not sourcing of goods and services that are more peripheral to mineral processing. Note that IRMA Chapter 2.3 now addresses procurement of goods and services (see requirements 2.3.3.6 and 2.3.3.7).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

Mineral Supply Chain and Responsible Sourcing Requirements

NOTE: Under development. See the note at the beginning of the chapter.

Principle 2: Planning for Positive Legacies

Chapter 2.1 Environmental and Social Impact Assessment and Management

NOTES ON THIS CHAPTER: The chapter has notable changes compared to the 2018 Mining Standard. We are proposing to remove the flag from this chapter. The flag related to the potential to be audited against the IFC Performance Standard 1, which addresses the assessment and management of environmental and social risks. We did not receive any comments from self-assessing mines, mines going through independent assessment, or stakeholders that they would prefer to see entities assessed against the IFC's requirements.

Proposed additions and changes:

- Given that this standard aims to cover expectations from exploration through post-closure, we are proposing to add some exploration-specific requirements in particular, a new criterion related to screening for exploration projects only (see 2.1.1). The Scope of Application section outlines the different expectations for different types of projects and operations.
- The process of environmental and social impact assessment (ESIA) is often mandated by host country regulatory agencies, but the regulatory requirements may vary greatly from one jurisdiction to the next. In this chapter, IRMA aims to outline best practice expectations for ESIA. We have added a requirement that where regulatory requirements exist, that entities compare the regulatory expectations with IRMA requirements, so that they understand where the gaps are, and can work to fill them (2.1.2.2).
- We have added in requirements that require entities to consider nature-based solutions, opportunities for circularity and climate adaptation when developing strategies to mitigate social and environmental risks and options to promote positive impacts (2.1.3.2.c and 2.1.5.1.e).
- We are proposing to remove the requirement for a formal Environmental and Social Management System (See discussion in 2.1.9. See CONSULTATION QUESTION 2.1-6)
- In this version, we are proposing to include stakeholder engagement requirements within the individual criteria (i.e., ESIA components), so that it is clear within the flow of the ESIA process when stakeholder engagement is expected. This also is more consistent with other IRMA chapters.

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

In many jurisdictions, companies are required to conduct environmental impact assessments (EIA) or environmental and social impact assessments (ESIA) prior to development of major industrial facilities such as mineral processing operations and large-scale mines. Some also require assessments prior to the commencement of exploration activities. An ESIA process enables regulators and other stakeholders to participate in the identification and review of predicted impacts associated with a proposed project before the project is finalized and regulatory approval (or denial) takes place.

As part of an ESIA process, strategies for maximizing the potential positive impacts associated with a project are explored with affected stakeholders, so that their needs and interests are prioritized.

Stakeholders also have input into strategies to mitigate potential adverse impacts. The use of a mitigation hierarchy to avoid, or where avoidance is not possible, minimize, restore, and as a last resort, compensate for adverse impacts to workers, communities and the environment is widely considered a best practice approach to managing environmental and social risks and impacts.⁹³

Prevention and mitigation strategies for adverse impacts developed during the ESIA process are integrated into management plans and adverse impacts are monitored for the early detection of negative trends and to gauge the effectiveness of mitigation measures. As necessary, mitigation measures are improved and management plans are are updated throughout the operation's life cycle.

The importance of stakeholder involvement throughout the ESIA process, from the identification of potential impacts to the management and monitoring of environmental and social issues, is increasingly recognized as best practice, as it improves the quality of the impact assessments, and the involvement of local stakeholders in decisions related to mitigation and management of risk and impacts can help to build community confidence and support for a project.

TERMS USED IN THIS CHAPTER

Affected Community
Area of Influence
Associated
Facility
Baseline
Closure
Competent
Professionals
Consultation
Credible Methods NEW
Culturally Appropriate
Cumulative Impacts
Direct Impacts NEW
Indirect Impacts NEW
Inform
Entity NEW
Exploration NEW
Facility
Inform
Major Modification NEW
Mineral Development Life
Cycle NEW
Mineral Processing NEW
Mining NEW
Mining-Related Activities
Mitigation
Mitigation
Hierarchy
Post-Closure
Project NEW
Operation
NEW
Reclamation NEW
Rights Holder
Scoping
NEW

These terms appear in the text with a dashed underline. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

OBJECTIVES/INTENT OF THIS CHAPTER

To proactively anticipate and assess potential adverse environmental and social impacts and manage them in accordance with the mitigation hierarchy; identify strategies for maximizing positive impacts; and continue to assess, monitor and adapt environmental and social management strategies in a manner that protects and benefits affected communities, workers and the environment throughout the entire mineral development life cycle.

NOTE ON OBJECTIVES: changed wording from mine life cycle to mineral development life cycle.

SCOPE OF APPLICATION

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

There are several new terms being proposed for use in this chapter (and the Standard as a whole), to distinguish between "projects" and "operations" as there are different levels of expectation for each category. We are proposing the following:

"Project" refers to the development phases before a mining or mineral processing operation can begin (e.g., exploration, pre-feasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and fieldbased activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

⁹³ International Finance Corporation (IFC). 2012. Guidance Note 1: Assessment and Management of Environmental and Social Risks and Impacts. GN62, pp. 20, 21. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

"Operation" refers to the set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

"Mining-Related Activities" refer to any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

"Mineral Development Life Cycle" refers to all of the stages from cradle to grave required to produce a saleable mineral/metal product. Includes exploration, project development, permitting, construction, mining and mineral processing operations, reclamation and closure, and post-closure stages.

"Major Modification" refers to a proposed change in an existing operation that could create new risks or change the scale or scope of existing adverse impacts on the health or safety of workers or communities, human rights, the rights or interests of Indigenous Peoples, cultural heritage, livelihoods, or the environment.

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations, but not all requirements are relevant in all cases.

HOW THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) REQUIREMENTS APPLY TO PROJECTS AND OPERATIONS:

Exploration projects: These projects are not always associated with significant adverse environmental or social risks. Entities are expected to demonstrate that they have gone through a screening process to identify the potential adverse impacts associated with proposed exploration activities (2.1.1), and when new exploration activities are proposed, the proposed components would need to go through a new screening process. Depending on the outcome of that screening process, the additional ESIA process requirements in the chapter may or may not be relevant (2.1.2 through 2.1.8). Entities that undertake an IRMA assessment will provide auditors with a rationale for why they believe certain requirements in the chapter are or are not relevant to their project.

Mining and/or mineral processing projects: These <u>projects</u> are expected to carry out an ESIA process (i.e., assess the project's risks, and include <u>stakeholders</u> in the process) even if there is no legal requirement to do so, given that there will always be significant environmental and/or social impacts associated with such developments. All of the ESIA process requirements starting with 2.1.2 through 2.1.8 are applicable for projects that have commenced or are soon to commence seeking host country regulatory approvals and permits for a proposed mine and/or a <u>mineral processing</u> facility. If these projects are very early in their development process, project details may not yet be developed sufficiently to warrant a full ESIA process. Entities that undertake an IRMA assessment will provide auditors with a rationale for why they believe certain requirements in the chapter are or are not relevant to their project's particular stage of development.

Mining and/or mineral processing operations: ESIA processes are typically undertaken to predict potential impacts from proposed <u>projects</u>. For IRMA's purposes:

- **Operations without a proposed major modification** are not required to be audited against 2.1.2 through 2.1.8, but they are expected to be audited against criterion 2.1.9 (to demonstrate the ongoing assessment of risks, and implementation of environmental and social management plans and monitoring programs). <u>Operations</u> without a proposed <u>major modification may choose to be</u> audited against 2.1.2 through 2.1.8 (e.g., if they want to demonstrate that best ESIA practices were followed).
- Operations with proposed major modifications (e.g., proposed new facilities or infrastructure, significant changes in processes, expansion of pits, etc.) will be expected to complete an ESIA for the proposed modification

(2.1.2 through 2.1.8) and will also be audited against 2.1.9.

CONSULTATION QUESTION 2.1-1: Do you agree with the proposed approach for operations? Or do you think <u>all</u> operations should be assessed against the entirety of this chapter and transparently release their scores? The challenge with auditing all operations against the ESIA requirements (2.1.2 - 2.1.8) is that these requirements apply to actions that have taken place in the past. Therefore, if no ESIA was conducted (e.g., in jurisdictions that do not have ESIA requirements), or if the ESIA process followed regulatory requirements that were not a robust as the IRMA chapter, the site will not score well or ever be able to fully meet the chapter's expectations. This chapter is different than other IRMA chapters where scores can increase over time as additional actions to improve or correct deficiencies are taken by an entity.

CRITICAL REQUIREMENTS THIS CHAPTER

The <u>entity</u> identifies the full scope of potential social and environmental impacts of proposed <u>projects</u> and <u>operations</u> (2.1.3.1, 2.1.9.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Environmental and Social Impact Assessment and Management Requirements

2.1.1. Environmental and Social Impact Screening for Exploration Projects

NOTE FOR 2.1.1: This is a NEW criterion. Given that this standard aims to cover expectations from exploration through post-closure, we are proposing to add some exploration-specific requirements. These will not be relevant for mineral development projects or operating sites. The potential impacts related to some exploration projects, especially those at their earliest stages, may not be significant enough to warrant an in-depth ESIA, but some analysis of potential impacts should still be done. Thus, we are proposing a screening process for exploration projects.

Depending on the outcome of the screening process (2.1.1.2), an exploration project may or may not have to proceed to a more comprehensive ESIA process (2.1.2 - 2.1.8).

Note that exploration is underway, and new/additional exploration activities are proposed then the screening process would be expected to take place again. (See 2.1.1.1.c)

2.1.1.1. A screening process is undertaken to determine if a proposed <u>exploration project</u> is likely to have adverse environmental or social impacts that warrant undertaking an environmental and social impact assessment (ESIA). The screening process:

- a. Commences after an exploration plan for the project has been sufficiently developed (see Annex 2.1-A);94
- b. Is completed prior to commencing proposed exploration activities; and
- c. Is repeated or updated should the exploration plan be significantly revised.

⁹⁴ A well-developed plan is necessary to enable a reasonable estimation of potential impacts related to the project.

2.1.1.2. The documented screening process includes:

- a. Identification of all potential adverse environmental and social impacts likely to be associated with the proposed <u>exploration project</u>; (see <u>Annex 2.1-B</u> for list of potential impacts to scope)
- b. Evaluation, based on a <u>credible methodology</u>, to determine which potential impacts are likely to be significant, or whether proposed activities are likely to have minimal or no impacts; and
- c. A defensible rationale as to why an ESIA is or is not warranted for the proposed exploration project.95

NOTE FOR 2.1.1.2.a: We are proposing that the types of issues to be screened during exploration are the same as those that would be scoped for a mineral development project. These are listed in <u>Annex 2.1-B</u>. And <u>Annex 2.1-C</u> provides an example for how a site might determine if further assessment is needed.

2.1.1.3. If a decision is made that an ESIA for the exploration project is not warranted:

- a. The rationale is made available to interested stakeholders;⁹⁶ and
- b. An environmental and social management plan (or equivalent) is developed and implemented. The plan:
 - i. Is developed by competent professionals;
 - Outlines the specific <u>mitigation</u> actions that will be carried out to address the adverse environmental and social impacts, and the specific actions that will be taken to optimize positive environmental and social impacts;
 - iii. Includes appropriate performance criteria and indicators to enable evaluation of the effectiveness of mitigation measures over time;⁹⁷
 - iv. Assigns implementation of actions, or oversight of implementation, to responsible staff,⁹⁸
 - v. Includes an implementation schedule; and
 - vi. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 2.1.1.3.b.i: In some countries, the availability of suitably qualified and competent professionals may be extremely limited with respect to some adverse environmental and social impacts. IRMA expects the entity to undertake due diligence of the professionals it uses and have a plan for addressing any significant gaps in the professionals' capacity (which in some cases may mean bringing in international experts).

At the same time, IRMA wishes to prioritize the use of local (in-country) professionals wherever this is possible and promote the development of local capacity in the effective management of potential environmental and social issues. A potential trade-off therefore exists between developing local capacity and ensuring high quality studies to support effective environmental and social management.

CONSULTATION QUESTION 2.1-2: How should IRMA balance the benefits of developing the capacity of local professionals (which may take much longer than the screening process for exploration projects) with the need to ensure the plan developed can effectively mitigate adverse environmental and social impacts? Should this be done by creating a new requirement related to local sourcing and capacity building in the context of the provision of goods and services by local (in-country) professionals and companies?

⁹⁵ See <u>Annex 2.1-C</u> for an example of a rationale for why an ESIA may or may not be required for a project.

⁹⁶ The absence of a legal requirement, alone, is not sufficient justification for not doing an ESIA.

⁹⁷ Appropriate performance criteria and indicators must include those required by host country law (e.g., regulator maximum concentrations of certain chemicals in air or water), and, as relevant, those associated with external standard (e.g., IRMA water quality criteria in Chapter 4.2), those agreed with stakeholders, or indicators that are tied to an identified baseline (e.g., annual GHG emissions do not exceed emissions measured in an agreed baseline year).

⁹⁸ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

2.1.2. Environmental and Social Impact Assessment Planning

2.1.2.1. An Environmental and Social Impact Assessment (ESIA) process for a proposed <u>exploration project⁹⁹</u> or a proposed <u>mining</u> or <u>mineral processing</u> project (hereafter referred to as "project" or "proposed project"), or a proposed <u>major modification</u> to an existing operation¹⁰⁰ (hereafter referred to as "modification" or "proposed modification"):

- a. Is completed prior to commencing any of the proposed site-disturbing activities; and
- b. Is undertaken again should the plans for a proposed project or proposed major modification be significantly revised.

NOTE FOR 2.1.2.1: This combines two requirements from the 2018 Mining Standard (2.1.1.1 and 2.1.1.2).

2.1.2.2. In jurisdictions where an ESIA or similar process is government-prescribed and/or led by the government, the entity:

- a. Determines if the government process meets the requirements in this chapter; and
- b. Where the IRMA chapter goes beyond regulatory requirements, additional steps extraneous to the government process are taken by the entity to meet IRMA requirements unless expressly prohibited by host country law.

NOTE FOR 2.1.2.2: This is a NEW requirement. In some jurisdictions ESIA processes are prescribed by governments or even led by them. We have heard from stakeholders that when this is the case, it is not clear whether entities also need to meet IRMA requirements that go beyond what the government requires.

As per Chapter 1.1, IRMA expects that entities meet the laws in the jurisdictions where they are operating, and, in cases where IRMA Standard goes beyond host country law, entities are expected to meet those IRMA requirements (unless doing so is prohibited by law). So, for example, if IRMA describes content of an ESIA that is more comprehensive than what is being asked through host country regulations (e.g., perhaps the government only requires environmental assessment, and not an assessment of social impacts), IRMA would expect the entity to carry out the additional work to meet the IRMA requirements. The results of this additional work would not need to be included in the assessment completed to meet government regulations, but could be prepared as a complementary report or addendum to the host country report.

We are therefore proposing that in such situations the entity carry out a comparison between the governmental requirements and IRMA's requirements, so that they can either demonstrate to auditors the IRMA expectations are being met through their regulatory requirements, or, where IRMA requirements go beyond, that actions have been taken to meet those IRMA requirements.

2.1.2.3. The entity develops and implements a system to:

- a. Record all stakeholder comments received throughout the ESIA process; and
- b. Document how stakeholder comments are taken into account.

NOTE FOR 2.1.2.3: This was 2.1.9.5 in the 2018 Mining Standard.

⁹⁹ As per requirement 2.1.1.2, screening may indicate that an ESIA for an exploration project is necessary. If it is, then this requirement and the ones that follow are applicable.

¹⁰⁰ Guidance: We will add guidance on what might constitute a major modification. For example, a major modification could be a proposed change to the operation (that: 1) requires a new permit or amendment to a permit; 2) is significant enough to require a decision to be taken at the Board or senior leadership level; 3) has the potential to affect the rights of certain groups (e.g., workers, water rights holders, land rights holders, Indigenous Peoples); 4) may result in the economic or physical displacement of people; 5) may result in impacts to important biodiversity; etc.

Major modifications could include but are not limited to: development of new pits or underground workings, change or expansion of processing capacity, new waste streams or waste facilities, water treatment plants, energy installations, linear infrastructure, etc.

2.1.3. ESIA Scoping

NOTE FOR 2.1.3: For IRMA's purposes, we are proposing to use the following definition of scoping, however, if this term is confusing, we are open to reverting back to screening, or adopting another term altogether:

Scoping

A process of determining potential issues and impacts and producing information necessary to inform decisionmaking regarding whether additional evaluation and actions are necessary.

2.1.3.1. (Critical Requirement)

A process is undertaken to define the scope of the ESIA in terms of the environmental and social impacts and risks to be considered and appropriate temporal and spatial boundaries, which includes:

- a. Description of the proposed project/modification, including the geographic location, nature and duration of all on-site and off-site mining-related activities, including those at associated facilities;
- b. Stakeholder mapping to identify stakeholders and rights holders (hereafter, collectively referred to as "stakeholders") who may be interested in and/or affected by the proposed project/modifications;
- c. A review of existing environmental and social baseline data for the project's potential area of influence;
- d. Determination of the applicability of all the potential social and environmental impacts listed in <u>Annex 2.1-</u> <u>B</u>;
- e. A preliminary overview of potential environmental and social impacts and consideration of which impacts are likely to occur at the different stages of the proposed project life cycle, from pre-construction through closure, reclamation and post-closure);
- f. Consideration of whether the potential impacts are adverse or positive, <u>direct impacts</u> or <u>indirect impacts</u>, or if the project may contribute to <u>cumulative impacts</u> in its area of influence;
- g. Consideration of climate change within the life of the proposed project/modification (or longer, if relevant to post-closure risks related to waste disposal <u>facilities</u> and water management),¹⁰¹ including whether increasing temperatures and changing location, frequency, duration or severity of weather events, might affect the scope or magnitude of project-related social and environmental impacts;
- h. Consideration of legal requirements for closure and reclamation, and the preferences of <u>affected</u> communities regarding post-closure end-uses of <u>facilities</u> and affected lands (as established in 2.1.3.2.d);¹⁰²
- i. Consideration of differential impacts of the proposed project/modification on potentially vulnerable members of affected communities;
- j. Preliminary stakeholder engagement using reasonable and <u>culturally appropriate</u> efforts to <u>inform</u> potentially affected and interested stakeholders about the proposed project/modification. In particular, stakeholders to be informed include:
 - i. Those who may be supportive of the proposed project/modification and those who may not be; and
 - ii. The full range of those potentially affected and interested by the proposed project/modification (e.g., different genders, age groups, socio-economic backgrounds, ethnic and religious affiliations, degree of vulnerability)
- k. Definition of a plan of study for the ESIA (approved by the regulator, if there is a legal requirement for an ESIA), including a description of the main steps of the ESIA process that will be carried out, the estimated timeline for the process, and the range of opportunities for stakeholder participation in the process.

NOTE FOR 2.1.3.1: REVISED. The requirement combines five requirements from the 2018 Mining Standard (i.e., 2.1.2.1, 2.1.2.2, 2.1.3.1, 2.1.3.2 and 2.1.3.3). 2.1.3.1 was previously considered a critical requirement,

¹⁰¹ A changing climate may affect physical/biological environments (result in new hazards, or exacerbate existing ones), or create social, financial, political, regulatory or reputational risks. The risks and potential impacts may be direct or indirect, and may change over time.

¹⁰² See Chapter 2.6 (Planning and Financing Reclamation and Closure) requirement 2.6.1.1.a, where the post-exploration or post-mining end uses are expected to be incorporated into the reclamation and closure plan.

and so we have retained that distinction here (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above). Other changes in 2.1.3.1 include:

- In 2.1.3.1.a, we added that the description includes the locations of mining-related activities (off-site as well as on-site).
- In 2.1.3.1.c we now refer to <u>Annex 2.1-B</u>, which contains a draft proposed list of social and environmental issues that need to be considered in the scoping process (see <u>CONSULTATION QUESTION 2.1-3</u>, below).
- In 2.1.3.1.f we added that identification includes potential positive impacts as well as adverse.
- 2.1.3.1.g replaces a previous sub-requirement to identify "potential impacts of extreme events." Note that while 2.1.3.1.g focuses on how a changing climate might affect the breadth, magnitude and duration of project-related social and environmental impacts, <u>Annex 2.1-B</u> also includes scoping of the project's contributions to climate change (i.e., what are the energy use requirements and greenhouse gas emissions of the proposed project).
- 2.1.3.1.h. We added here that in the determination of potential impacts the entity takes into consideration legal requirements and affected community preference related to the post-closure end-uses for mining/mineral processing-affected lands. The requirement to engage with stakeholders to obtain feedback on preferred post-closure end-uses is found in 2.1.3.2. In the 2018 Mining Standard and current standard there was/is an expectation in the reclamation and closure plan in Chapter 2.6 that the post-mining end-uses will have been discussed with stakeholders, but there was no requirement that laid out how and when such discussion should occur. This proposed addition, along with the requirement in 2.1.3.2.d, addresses that gap.
- 2.1.3.1.i is new. In the 2018 Mining Standard differential impacts was mentioned in the guidance notes for this chapter, and this element is a requirement in other chapters (e.g., Chapter 1.3, 3.3), so we are proposing to include it here, as well.
- 2.1.3.1.j was 2.1.2.1 in the 2018 Mining Standard. Previously, it said to inform potentially affected and
 interested stakeholders in potentially affected communities. We have added clarification that efforts
 should be made to reach a wide diversity of stakeholders, including those who may not be directly
 impacted but may have an interest in the development (e.g., NGOs such as environmental or human rights
 organizations, potential downstream purchasers, company shareholders), and those who may not appear
 to be supportive of the proposal. As per expectations in IRMA Chapter 1.2, all outreach efforts are
 expected to be culturally appropriate. However, we have reiterated that here, to ensure that it is noted
 and included in audits.

We are proposing the following definition of **culturally appropriate**:

Refers to methods, formats, languages, and timing (e.g., of communications, interactions and provision of information) that are aligned with the cultural norms, practices and traditions of affected communities, rights holders and stakeholders.

CONSULTATION QUESTION 2.1-3

Background: We are proposing that all projects demonstrate that they have considered a comprehensive list of potential impacts during their scoping process. We posted a consultation question in the IRMA-Ready draft standard, and received support for the suggestion that we include such a list of issues that, at minimum, should always be considered during scoping. As a result, we developed a draft list of scoping questions based on the range of potential impacts included within the IRMA Standard (<u>Annex 2.1-B</u>). Every issue will not be relevant at every site, but the intention is that all should be considered during the scoping process, because if the questions are not asked, then it is possible that some potential impacts will be overlooked.

Question: Do you agree with the minimum list of issues that should be scoped for mineral development projects in <u>Annex 2.1-B</u>? If not, are there particular issues/scoping questions that should be added or removed? Please provide a rationale for your suggestions.

2.1.3.2. As part of the scoping process, stakeholders are provided the opportunity to:

- a. Review and comment (for a period of at least 60 days) on the proposed project/modification and preliminary list of potential impacts considered by the entity;
- b. Provide input on the potential impacts (adverse and positive) that are of greatest concern or significance to them;
- c. Provide input on options to avoid/prevent or <u>mitigate</u> potential adverse impacts and options to promote positive impacts;¹⁰³ and
- d. Provide input on their preferences for post-closure end-uses of facilities and affected lands should the project/modifications go forward (feeds into 2.1.3.1.h).

NOTE FOR 2.1.3.2: REVISED. Elements of this requirement were found in 2.1.9.1 (a) and (d) of the 2018 Mining Standard. They were moved here to keep all scoping-related requirements together.

Sub-requirement 2.1.3.2.c includes a first opportunity for stakeholders to discuss their thoughts on possible mitigation measures and strategies for optimizing positive impacts.

Sub-requirement 2.1.3.2.d was added to align better with Chapter 2.6 (requirement 2.6.1.1.a)., which mentions that affected communities' preferred post-mining end uses of facilities and affected lands inform the reclamation and closure plan. The ideal time to have these discussions is when there is still an opportunity to influence mine designs and mitigation strategies, so we have made it explicit that those discussions happen during the ESIA process.

2.1.3.3. Scoping results in the identification and documentation of:

- a. The potential significant environmental and social impacts that require further assessment;
- b. The technically feasible alternatives to avoid or prevent significant adverse impacts (e.g., through changes in project designs, technologies, processes, siting of facilities),¹⁰⁴ avoiding *a priori* assumptions about the alternatives;
- c. Options to <u>mitigate</u> significant adverse impacts in a manner that aligns with the <u>mitigation hierarchy</u> and aligns, to the extent possible, with <u>affected communities</u>' preferences for <u>post-reclamation</u> end-uses of affected areas, and takes into consideration measure that:¹⁰⁵
 - i. Provide nature-based solutions;
 - ii. Incorporate concepts of circularity; and
 - iii. Address adaptation to climate change (e.g., enhance adaptive capacity, strengthen resilience, and reduce vulnerability of human, biological, and physical systems to climate change);
- d. Any existing social and environmental baseline data relevant to the area potentially affected by the proposed project/modification, and a gap analysis and plan, with timelines, to collect additional baseline data and conduct any additional studies or investigations needed to further understand and assess the potential impacts.

NOTE FOR 2.1.3.3: REVISED. This was requirement 2.1.3.4 in the 2018 Mining Standard.

In 2.1.3.3.b, we added that when scoping options to prevent impacts, "a priori" assumptions¹⁰⁶ should not be made regarding the alternatives. The Impact Assessment stage will go into greater analysis of the potential

¹⁰³ This is the first opportunity to hear from stakeholders. They will also be provided the opportunity to give feedback later in the process.

¹⁰⁴ As per proposed Chapter 4.XX, alternative locations such as brownfield sites may be feasible for mineral processing facilities. For mines, some facilities such as open pits, will necessarily be tied to a specific location due to the location of the ore, however, there should be options to move other facilities and infrastructure to alternative locations, some of which may already have been developed/brownfields.

¹⁰⁵ See NOTE for 2.1.3.3. If this concept is supported by stakeholders and approved by the IRMA Board we will develop additional guidance on nature-based solutions, circularity and climate adaptation.

¹⁰⁶ An *a priori* assumption is an assumption that is presumed to be true without any assessment of the facts or without further proof. *A priori* is a Latin term that refers to a theoretical deduction made on a subject without a precise and detailed observation of the objective elements at hand. (Source: <u>https://www.law.cornell.edu/wex/a priori assumption</u>)

options to mitigate impacts after more information on the nature and scale of impacts is known. The options at this stage should be technically feasible, but factors such as cost should not automatically narrow the range of alternatives under consideration. As outlined by the World Bank Inspection Panel, alternatives should be "laid out in a systematic way, along with their economic, social, and environmental benefits and costs, so that judgments on optimal alternatives could be made with a full understanding of the trade-offs involved."¹⁰⁷

Sub-requirement 2.1.3.3.d was added to ensure that a plan is in place to document, in a comprehensive manner, all the necessary data collection and additional studies to be undertaken.

CONSULTATION QUESTION 2.1-4

Background: In 2.1.3.3.c, we are proposing to expand the evaluation of measures to mitigate adverse impacts and optimize positive impacts to include several concepts, which are already being implemented to some degree at some sites. These are described below.

Nature-based solutions: In the past couple of years, IRMA has been engaged in discussions with the IUCN and other standards organizations on the topic of nature-based solutions. Nature-based solutions are actions taken to protect, sustainably manage and restore natural and modified ecosystems in a manner that addresses societal challenges, and benefits people and nature.

This approach is compatible with the approach taken throughout the IRMA Standard. No matter what the topic area, the IRMA Standard outlines the expectation that mitigation strategies be developed in collaboration with affected communities and relevant stakeholders, with the intention that the outcomes will be more beneficial to those affected communities than if the entity were to act alone.

The IUCN has developed an entire standard devoted to nature-base solutions. Rather than duplicate those requirements, we are proposing as part of this revision to at least integrate the concept of nature-based solutions as something to be considered. Interested entities or those already incorporating nature-based solutions have the option to be assessed against the full IUCN standard. For more on nature-based solutions and the IUCN Standard see: https://www.iucn.org/our-work/nature-based-solutions

<u>Circularity</u>: IRMA convened a working group on circularity, and through those discussions it was suggested that while concepts related to circularity can be applied throughout the life cycle, the most appropriate time to begin investigating circularity options is during feasibility studies (which typically overlap with and are connected to the ESIA through the ongoing exchange of data and analysis between the project engineers and environmental and social specialists), so that necessary technical elements can be incorporated into the project design. Because we do not have a chapter regarding feasibility studies, we are proposing to add a requirement here that options to incorporate circularity be examined at the ESIA stage.

Circularity, in the context of mineral development, can embody many different things, from striving for zero waste or zero pollution systems, and closed-loop water and chemical management, to finding ways to re-use, recycle or re-purpose materials that might otherwise become waste (i.e., they become raw materials for other purposes), re-mining waste materials, creating energy from wastes, utilizing renewable energy sources, capturing carbon dioxide from wastes, sequestering carbon in wastes, prioritizing quality equipment to minimize turnover; etc. (see also the discussion of circularity in materials and waste management in Chapter 4.1, Note for 4.1.2, and CONSULTATION QUESTION 4.1-4).

<u>Climate Adaptation</u>: IRMA has a chapter on greenhouse gas emissions and energy use (Chapter 4.5), which is focused on reduction of both emissions and energy use as a means to minimize a projects/operations' contributions to climate change. However, there is currently a gap in the IRMA Standard related to proactive measures to understand and respond to climate change impacts that are already occurring and will continue to change over time. We have added requirements to scope the potential impacts of a changing climate in

¹⁰⁷ World Bank Inspection Panel. 2017. Emerging Lessons Series No. 3. Environmental Assessment. p. 7. <u>https://www.inspectionpanel.org/sites/inspectionpanel.org/files/publications/Emerging%20Lessons%20Series%20No.%203%20-%20Environmental%20Assessment.pdf</u>

2.1.3.1.g and 2.1.3.3.c. Sub-requirement 2.1.5.1.d.iii, below, is a complementary requirement to develop mitigation strategies that address climate change impacts identified in the scoping exercises.

We could, of course, develop an entire new chapter on this; however, at the present time, we believe that we can integrate it into the existing chapters.

Question: Do you agree that the mitigation strategies investigated as part of the ESIA should include: 1) nature-based solutions; 2) circularity; 3) climate change/climate adaption? Why or why not? Do you have suggestions for other ways or places in the IRMA Standard that we might incorporate these concepts?

2.1.3.4. The entity prepares a report that:

- a. Summarizes the scoping findings from 2.1.3.1 to 2.1.3.3;
- b. Includes the description of the main steps of the ESIA process that will be carried out, the estimated timeline and the range of opportunities for stakeholder participation in the process;
- c. Contains the contact details for the person or team responsible for management of the ESIA; and
- d. Is publicly available electronically via the entity's external web site, and in any other <u>culturally appropriate</u> formats, including local languages.

NOTE FOR 2.1.3.4: REVISED. This was 2.1.2.2. We added that this information not just be available on the company's external web site but also in culturally appropriate formats (which may be hard copy) and locations. We also added that the report be in relevant local languages, as these may differ from official national languages.

2.1.4. Baseline Data Collection

2.1.4.1. <u>Baseline</u> data describing the prevailing social context (e.g., legal, socio-economic, human rights, political) and environmental context, and any additional studies identified during <u>scoping</u> (e.g., comprehensive field or laboratory testing programs) are collected or carried out: ¹⁰⁸

- a. By competent professionals;
- b. Using credible methods; and
- c. With an appropriate level of detail to understand and assess the potential impacts of the proposed project/modification.

NOTE FOR 2.1.4.1: REVISED. This combines 2.1.4.1 and 2.1.4.2 from the 2018 Mining Standard.

We have added the sub-requirements (a) and (b) to be more consistent with other chapters (i.e., the expectation that all data collection and studies be carried out by competent professionals, using credible methods). Sub-requirement (c) was part of the original 2.1.4.1.

Note that existing baseline data are required to be reviewed as part of scoping (see requirement 2.1.3.1.c). The collection of primary baseline data by the entity may start as early as the exploration phase. Given that several years of data may be necessary to establish certain baseline conditions (e.g., water quality and quantity), beginning early can reduce delays in the ESIA process.

2.1.4.2. The entity invites and, where possible, facilitates stakeholder participation in the collection of data for the ESIA.¹⁰⁹

NOTE FOR 2.1.4.2: This was 2.1.9.2 in the 2018 Mining Standard.

¹⁰⁸ For example, collection of ore and waste rock samples, and subsequent geochemical assessment to understand contaminants of potential concern (COPCs) (See Chapter 4.1), or studies to evaluate potential for revenue streams for waste products, mineral by-products, or other opportunities to maximize mineral circularity.

¹⁰⁹ As per IRMA guidance, the wording "where possible" reflects that it might not be possible to engage stakeholders because stakeholders may not be interested in participating in data collection. It might also not be possible to always engage stakeholders because some studies may involve collection of confidential or sensitive information on individuals or groups of affected people.

2.1.5. ESIA Impact Analysis

CONSULTATION QUESTION 2.1-5

Background: Impact and risk assessments both typically begin by considering the range of potential impacts (or risks) posed by a project or activity. These potential impacts/risks are initially defined by the scoping process and refined during the ESIA process. For each potential impact, an evaluation of the significance is undertaken. Historically, risks were often not considered in the ESIA process, or were only briefly discussed in a qualitative narrative. In line with developing good practice, the significance of risks is now often evaluated in a similar way to potential impacts, and IRMA expects both impacts and risks to be considered in detail.

Typically, the significance (or level of risk) is based on two elements: 1) the probability of occurrence (also sometimes referred to as likelihood) and 2) the severity of the consequences associated with each potential impact (or risk). Other factors such as magnitude, duration and spatial scale are often considered when defining severity of the consequences.

A scale is created to reflect the range of probabilities and consequences. For example, probability might range from 'very unlikely to occur' to 'certain to occur' (with other levels in between), and consequences might range from 'negligible' to 'severe' (with other levels in between).

The probability of occurrence and severity of consequences are usually set out in a matrix, the determination of the significance (or level of risk) is based on the combination of the ratings for the two elements, and usually results in an assigned significance (or risk level) such as: low, moderate, substantial, high (or low, medium, high, very high, extreme). See table below as an example.¹¹⁰

		Likelihood of occurrence				
		Very unlikely	Not expected	Likely	Almost Certain	Common
Consequence	Severe	Moderate	Substantial	High	High	High
	Major	Low	Moderate	Substantial	Substantial	High
	Medium	Low	Moderate	Moderate	Moderate	Substantial
	Minor	Low	Low	Moderate	Moderate	Moderate
	Negligible	Low	Low	Low	Low	Low

Both how the ratings are assigned for probability and consequences, and the level at which a potential impact (or risk) is significant enough to warrant avoidance or mitigation/control actions can vary based on those carrying out the assessment, and this subjectivity concerns some stakeholders.

Sometimes the rationales for assigning certain levels of significant (risk) or taking or not taking action are not transparent. Or sometimes stakeholders disagree with the ratings being assigned by the entity, for example an entity might think the potential consequences are moderate, while the stakeholders perceive the consequences as high.

Question: What might be some ways to reduce stakeholder concerns about the subjectivity of impact/risk assessment processes? Is it enough to be transparent about how the ratings are assigned? Should stakeholders be invited to play a larger role in determining the methodology used and assigning ratings?

2.1.5.1. An assessment appropriate to the nature and scale of the proposed <u>project/modification</u> and commensurate with the level of environmental and social risks and impacts, is carried out that:

¹¹⁰ Table adapted from: IUCN. 2020. Environmental and Social Impact Assessment (ESIA). <u>https://www.iucn.org/sites/default/files/2022-05/esms-</u> environmental-and-social-impact-assessment-esia-guidance-note.pdf

- a. Evaluates and predicts in detail the characteristics of the significant environmental and social impacts identified during scoping, including differential impacts on different groups of stakeholders and rights holders;¹¹¹
- b. Evaluates options to optimize potential positive impacts;
- c. Evaluates the technically feasible alternatives to avoid/prevent significant adverse impacts (e.g., through changes in project designs, technologies, processes, siting of <u>facilities¹¹²</u>), avoiding *a priori* assumptions about the alternatives;
- d. Evaluates options to <u>mitigate</u> predicted significant adverse impacts that cannot be avoided/prevented in a manner that aligns with the reminder of the <u>mitigation hierarchy</u>, i.e., giving priority consideration to strategies that minimize impacts, followed by strategies available to restore conditions if impacts occur;¹¹³
- e. Includes evaluation of strategies that:¹¹⁴
 - i. Provide nature-based solutions;
 - ii. Incorporate concepts of circularity; and
 - iii. Address adaptation to climate change (e.g., enhance adaptive capacity, strengthen resilience, and reduce vulnerability of human, biological, and physical systems to climate change);
- f. Identifies significant adverse <u>residual impacts</u> that cannot be avoided, <u>mitigated</u> and for which restoration is not an option, and evaluates whether compensatory measures will be required to address the residual impacts and the nature and scope of such measures.

NOTE FOR 2.1.5.1: REVISED. There are three new sub-requirements being proposed:

- 2.1.5.1.b was added to clarify that ESIA look at positive impacts of proposed developments, as well as adverse impacts.
- 2.1.5.1.c was added for the same reasons it was added in scoping. See note for 2.1.3.3.
- 2.1.5.1.4 was added to incorporate emerging concepts of nature-based solutions, circularity and adaptation to climate change (see discussion in note for 2.1.3.3, and <u>CONSULTATION QUESTION 2.1-4</u>).

2.1.5.2. The entity consults with potentially affected stakeholders in the development of options to mitigate the potential impacts of the project/modification (2.1.5.1).

NOTE FOR 2.1.5.2: This was 2.1.9.1.d in the 2018 Mining Standard.

2.1.5.3. Prior to the release of a final ESIA report (2.1.6.1), stakeholders are provided the opportunity to review and provide feedback on (at a minimum):

- a. The draft impact assessment; and
- b. Conclusions and recommendations derived from the draft ESIA report, including the <u>entity</u>'s recommended strategies to prevent or otherwise <u>mitigate</u> impacts.

¹¹¹ Characteristics of impacts will vary, but may include: nature (positive, adverse, direct, indirect, cumulative); magnitude (severe, moderate, low); extent/location (area/volume covered, distribution); timing (during construction, operation, closure and reclamation; immediate, delayed, rate of change); duration (short or long term; intermittent or continuous); reversibility/irreversibility; likelihood (probability, uncertainty or confidence in the prediction); and extent (local, regional, global).

¹¹² Alternative locations such as brownfield sites may be feasible for mineral processing facilities. For mines, some facilities such as open pits, will necessarily be tied to a specific location due to the location of the ore, however, there should be options to move other facilities and infrastructure to alternative locations, some of which may already have been developed/brownfields.

¹¹³ The typical mitigation hierarchy prioritizes, in the following order: First, avoidance or prevention of impacts (e.g., through changes to project designs, choice of equipment and technologies, etc.); second, minimization of impacts; third, restoration back to the original state; and finally, offsetting or compensation for residual impacts. The waste hierarchy (see Chapter 4.1), or the hierarchy of controls for occupational health and safety (see Chapter 3.2) have slightly different approaches. In all approaches, however, avoidance or prevention of impacts is the top priority.

¹¹⁴ See NOTE for 2.1.3.3. If this concept is supported by stakeholders and approved by the IRMA Board we will develop additional guidance on nature-based solutions, circularity and climate adaptation.

NOTE FOR 2.1.5.2 and 2.1.5.3: Requirements 2.1.5.2 and 2.1.5.3 were 2.1.9.1.d and e, respectively, in the 2018 Mining Standard.

2.1.6. ESIA Reporting and Disclosure

2.1.6.1. A draft and final ESIA report is prepared that includes, at minimum: ¹¹⁵

- a. A description of the proposed project/modification;
- b. Description of the alternatives considered to avoid/prevent all significant adverse impacts from the project, and alternatives to optimize positive impacts, along with a rationale (e.g., economic, technical, social and environmental) for recommending or rejecting certain alternatives;
- c. A description of baseline conditions and results of additional evaluations and studies;
- d. Detailed description of the <u>direct impacts</u>, <u>indirect impacts</u>, and <u>cumulative impacts</u> likely to result from the proposed project;
- e. Identification of the significant potential adverse impacts and significant opportunities for positive impacts;
- f. Description of the alternatives considered to avoid/prevent all significant adverse impacts from the project, and alternatives to optimize positive impacts, along with a rationale (e.g., economic, technical, social and environmental) for recommending or rejecting certain alternatives;
- g. Recommended measures to avoid/prevent and mitigate adverse impacts and optimize positive impacts;
- h. A summary of the public consultation process that was followed;
- i. A summary of the views and concerns expressed by <u>stakeholders</u> and how the concerns were taken into account;
- j. Names and affiliations of ESIA authors and others involved in technical studies;
- k. Appendices containing detailed and complete information on baseline conditions, evaluations and studies;¹¹⁶ and
- I. In the final report only, an addendum (or appropriate alternative) showing how feedback from stakeholders has been accommodated (or if not, the reason why).

NOTE FOR 2.1.6.1: REVISED. This incorporates material from 2.1.6.1 and 2.1.10.1 in the 2018 Mining Standard.

We added positive impacts to sub-requirements (e), (f) and (g).

Also, 2.1.6.1.b includes a requirement that the report include rationale/explanations for why certain alternatives that might prevent significant impacts have not been recommended/prioritized. The addition was made because IRMA has received input related to this particular requirement from various stakeholder sectors, including that: 1) entities should at least be required to justify why alternatives to prevent impacts were not selected, and 2) that selection of mitigation measures not be subject to cost considerations.

Given that this chapter explicitly requires that the mitigation hierarchy be followed (i.e., that sites prioritize avoidance of impacts, and only if that is not possible, are other mitigation options of minimization, restoration and compensation considered), it is reasonable that entities be required to justify why certain impact avoidance/prevention operations were not selected.

Although we have not fully incorporated the suggestion that the selection of mitigation measures should not be subject to cost considerations, we have added in the scoping (2.1.3.3.b) and in ESIA impact assessment (2.1.5.1.c) that the consideration of the range of alternatives to prevent impacts not be narrowed due to "a priori" assumptions about those alternatives (see the note for 2.1.3.3.b for more information).

¹¹⁵ Draft and final ESIA reports are expected to have the same structure and general content, but the draft version will be revised in line with feedback from stakeholders.

¹¹⁶ Detailed assessments of some issues and impacts may be reported as stand-alone documents, but the ESIA report presents results of the full analysis in an integrated manner.

When it comes to the final section of a mitigation option, cost is only one factor that should be taken into consideration when evaluating mitigation approaches. The technical feasibility, and the environmental and social costs/benefits of different approaches must also be considered. We have added those elements to 2.1.6.1.f, as well.

2.1.6.2. The following are made public, and the means of accessing the information is communicated to stakeholders:

- a. ESIA final report;
- b. ESIA supporting data and studies; and
- c. An anonymized version of the stakeholder comments received during the ESIA process, and the entity's responses to the comments.¹¹⁷

NOTE FOR 2.1.6.2: This incorporates material from 2.1.10.1, 2.1.10.2, and 2.1.10.5 in the 2018 Mining Standard.

2.1.7. Environmental and Social Impact Management

2.1.7.1. A relevant management plan or plans are developed and implemented to address all significant environmental and social impacts identified during the ESIA process.¹¹⁸ Any stand-alone environmental and social management plan:

- a. Is developed by competent professionals;
- Outlines the specific mitigation actions that will be carried out to address the adverse environmental and social impacts (including compensatory measures if required) and the specific actions that will be taken to optimize positive environmental and social impacts;
- c. Includes appropriate performance criteria and indicators to enable evaluation of the effectiveness of mitigation measures over time;¹¹⁹
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;¹²⁰
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 2.1.7.1: REVISED. This aligns with 2.1.7.2 in the 2018 Mining Standard, which requires that mitigation actions be incorporated into a management plan.

The elements to be included in the management plan have been expanded and to be more consistent with requirements in other IRMA chapters that refer to management plans.

We also allow that there can be a stand-alone management plan that contains all environmental and social issues, or the mitigation options can be integrated into the management plans referred to in other IRMA Standard chapters.

¹¹⁷ If host country law requires the listing of stakeholder names, then, as per IRMA Chapter 1.1, the entity is not required to contravene the law to meet this IRMA requirement.

¹¹⁸ A relevant management plan may be a single, standalone management plan that addresses all environmental and social impacts, or, alternatively, mitigation measures pertinent to specific chapter(s) in the IRMA Standard are integrated into issue-specific management plans.

¹¹⁹ Appropriate performance criteria and indicators must include those required by host country law (e.g., regulator maximum concentrations of certain chemicals in air or water), and, as relevant, those associated with external standard (e.g., IRMA water quality criteria in Chapter 4.2), those agreed with stakeholders, or indicators that are tied to an identified baseline (e.g., annual GHG emissions do not exceed baseline emissions measured in 2002).

¹²⁰ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

2.1.8. Environmental and Social Impact Monitoring

2.1.8.1. All significant environmental and social impacts identified during the ESIA process are incorporated into a relevant monitoring program.¹²¹ Any stand-alone environmental and social monitoring program:

- a. Is developed and implemented to determine:
 - i. The magnitude of impacts over time; and
 - ii. The effectiveness of mitigation measures based on performance against key criteria or indicators;
- b. Is designed and carried out by competent professionals; and
- c. Uses credible methods.

NOTE FOR 2.1.8.1: REVISED. This was 2.1.8.1 and 2.1.8.2 in the 2018 Mining Standard.

The language has been adapted to be more consistent with the language in other chapters. We also added that the methods used must be credible (see proposed new definitions at the end of the chapter).

2.1.8.2. The entity provides for timely and effective stakeholder consultation, review and comment on the scope and design of the environmental and social monitoring program.

NOTE FOR 2.1.8.2: This was 2.1.9.3 in the 2018 Mining Standard.

2.1.8.3. The entity encourages and, where possible, facilitates stakeholder participation in the implementation of the environmental and social monitoring program.¹²²

NOTE FOR 2.1.8.3: This was 2.1.9.4 in the 2018 Mining Standard.

2.1.8.4. If requested by relevant <u>stakeholders</u>, the entity facilitates the independent monitoring of key impact indicators by <u>competent professionals</u> who have received appropriate site-specific health and safety orientation and training.¹²³

NOTE FOR 2.1.8.4: REVISED. This was 2.1.8.3 in the 2018 Mining Standard.

The previous version added the caveat that independent monitoring be allowed "where this would not interfere with the safe operation of the project." Given that all monitoring programs are to be designed by competent professionals, using credible methodologies, it is unlikely that any monitoring program would interfere with the safe operation of a mine or processing facility. However, the greater concern is that if those carrying out the independent monitoring are qualified to do so, and that they understand the site-related health and safety risks so that they can carry out their monitoring in a safe manner.

2.1.9. Ongoing Environmental and Social Due Diligence

NOTE FOR 2.1.9: REVISED. Criterion 2.1.7 in the 2018 Mining Standard required that there be an Environmental and Social Management System (ESMS) and an environmental and social management plan in place. Management plans are addressed in 2.1.7, above.

We are proposing in this version of the Standard to remove the requirement for a formal ESMS. The rationale for doing so is that it is not clear that a prescriptive requirement for an ESMS will result in better outcomes

¹²¹ A relevant monitoring program may include indicators and monitoring plans for all environmental and social impacts, or, alternatively, impacts that are pertinent to specific chapter(s) in the IRMA Standard may be integrated into those issue-specific monitoring programs.

¹²² Facilitation of participation may include, e.g., provision of: capacity building or training on monitoring methods, community access to the mine site to participate in company monitoring activities or community-based independent monitoring activities; funding to enable community participation, etc.

Also, it should be noted that stakeholders may not be interested in participating in monitoring activities. In such cases, the entity should be able to produce evidence that good faith efforts that were made to provide stakeholders with opportunities to fully participate.

¹²³ Entities may facilitate independent monitoring by providing funding to stakeholders to hire experts, allowing independent experts to have access to sites for monitoring social or environmental indicators, and by allowing access to relevant operations-related monitoring records, reports or documentation.

than what can be achieved by adhering to the requirements in the IRMA Standard as a whole. Also, developing and maintaining ESMS involves the investment of significant time and resources and can therefore present a barrier for smaller entities.

We believe that on an issue-by-issue basis, the important elements of ESMS are integrated into each IRMA chapter. For example, most chapters include ongoing assessment of risks/impacts, development of mitigate measures, management plans, monitoring programs, and evaluation of effectiveness to ensure continuing improvement. Additionally, beyond most ESMS, IRMA chapters also require stakeholder engagement and external reporting/disclosure.

We are still providing the option for mines and mineral processing operations to have overarching environmental and social management plans (see 2.1.7) and overarching environmental and social monitoring programs (see 2.1.8) if that works better for their organization; however, in order to meet the expectations of other IRMA chapters, such overarching plans and monitoring programs would need to be quite detailed and comprehensive.

CONSULTATION QUESTION 2.1-6: Do you agree with the proposal to remove ESMS as a requirement in the IRMA Standard? If not, what are the specific benefits that you believe result from having ESMS in place?

2.1.9.1. (Critical Requirement)

An ongoing process is in place to identify and address environmental and social risks related to the <u>operation</u> throughout its life cycle as follows:

- a. When there are major modifications proposed to operations (e.g., new processes, facilities, extraction zones, etc.) a new ESIA process is initiated (go to 2.1.2); and
- b. Annually, a review of the social and environmental risks (<u>Annex 2.1-B</u>) associated with the current operation is undertaken. The review considers:
 - i. Any minor changes to the operation (e.g., changes in management personnel, minor modifications to technologies or processes);
 - ii. Any changes in operating context (e.g., legal, social, political, human rights, economic, environmental) that have occurred in the past year; and
 - iii. Any updated knowledge related to climate change, including increased frequency, duration, or severity of weather events in the operating area.

NOTE FOR 2.1.9.1: NEW. This replaces requirement 2.1.7.1 from the 2018 Mining Standard, which required that a system (e.g., an environmental and social management system) be developed and maintained to manage environmental and social risks and impacts throughout the life of the mine.

As mentioned in the note for 2.1.9, above, we are proposing in this draft update to the IRMA Standard to remove the requirement for a formal ESMS. However, we are retaining the expectation that entities need to understand and manage their social and environmental risks and impacts on an ongoing basis, over the life of the project/operation. Just as human rights due diligence is an ongoing process (see Chapter 1.3), environmental and social due diligence should also be an ongoing process.

We are proposing that risks be evaluated every year. We do not envision that this review process will be onerous, once the first assessment is done (which may have been conducted as part of an ESIA).

The annual or periodic assessment of some risks is already expected in numerous IRMA chapters, so it would simply be consolidating all risks into an operation-wide risk register (see 2.1.9.2).

In 2018 Mining Standard, IRMA developed a guidance note for the ESIA chapter, and a critical requirement was that, "The operating company shall demonstrate that it has undertaken a comprehensive evaluation of potential environmental and social impacts associated with the mining operation."¹²⁴ This requirement aligns

¹²⁴ IRMA Guidance Note. 2020. "Auditing the ESIA Chapter." <u>https://responsiblemining.net/wp-content/uploads/2021/07/Chapter-2.1-ESIA-Guidance-Final-2020.pdf</u>

with the intent of that requirement, and so we are proposing that it be a critical requirement in this proposed update to the Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

2.1.9.2. A risk register (or equivalent) that documents the environmental and social risks associated with the operation and the measures in place to mitigate the risks is developed and updated on an annual basis.

NOTE FOR 2.1.9.2: NEW. This was added because there needs to be a way to record and track the risks and mitigation/management measures.

2.1.9.3. When new social or environmental risks are identified, or there is the potential that the magnitude of risks to worker or community health, safety, human rights, or the environment have changed:

- a. Risks are further evaluated, using a credible methodology, to determine if they are significant enough to require mitigation;
- b. If necessary, additional baseline or other data are collected to inform the evaluation process;¹²⁵ and
- c. If risks are deemed significant, mitigation strategies are developed and integrated into relevant management plans,¹²⁶ and monitoring programs are updated accordingly.¹²⁷

NOTE FOR 2.1.9.3: This aligns with 2.1.7.2 and 2.1.7.3 in the 2018 Mining Standard, which require that mitigation actions be incorporated into a management plan, and that the mitigation actions be monitored for effectiveness.

Requirement 2.1.9.1, above, outlines an annual review process to inform the entity's understanding risks or changes to existing. Then, as necessary, new mitigation options are developed to address those risks as per 2.1.9.3. Rather than <u>requiring</u> an overarching plan for addressing new risks, we are allowing that the relevant risks be integrated into the management plans already required in the relevant IRMA chapters. For example, if new risks to water are identified, those could be integrated into the mine's adaptive management plan for water as per Chapter 4.2.

Re: 2.1.9.3.b, if new risks emerge, it is possible that additional baseline or other data may need to be collected – especially if an ESIA was carried out in the distant past.

NOTES

Many jurisdictions have legal requirements for undertaking ESIA. Similarly, ESIA are often mandated by organizations that provide funding for projects (e.g., International Finance Corporation (IFC)/World Bank). The requirements of Chapter 2.1 are meant to align with the good practice requirements described by IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts.

The chapter does not list all the issues and impacts that are likely to be significant, as these will vary greatly depending on the scale, nature, duration and location of the particular project and the nature and sensitivity of potential receptors. It is the responsibility of the entity, in consultation with interested and affected <u>stakeholders</u>, to ensure that all relevant issues and impacts are identified and considered. Issues/impacts to be considered may include (but are not limited to) those noted in <u>Annex 2.1-B</u>.

¹²⁵ During ESIA, the collection of baseline data is required (See 2.1.4). After mines or mineral processing facilities become operational, even if baseline data were not collected at the appropriate time, entities can still attempt to collate data to provide the best possible picture of baseline conditions in order to better understand the magnitude of impacts caused by their activities. For example, in Chapter 4.2 (Water Management) entities are expected to establish background water quality conditions even when project baseline water quality data were not collected (see Chapter 4.2, requirement 4.2.1.1).

¹²⁶ A relevant management plan may be a single, standalone management plan that addresses all environmental and social impacts, or, alternatively, mitigation measures pertinent to specific chapter(s) in the IRMA Standard are integrated into issue-specific management plans.

¹²⁷ A relevant monitoring program may include indicators and monitoring plans for all environmental and social impacts, or, alternatively, impacts pertinent to specific chapter(s) in the IRMA Standard may be integrated into those issue-specific monitoring programs.

An ESIA that meets the requirements of this chapter is a critical step in informing interested and affected stakeholders and rights holders including Indigenous Peoples, where applicable, about a proposed project/modification and its potential impacts, prior to decision-making. The fact that an effective ESIA has been designed and implemented does not imply that a project should necessarily proceed. With effective engagement of stakeholders, however, it should provide a sound basis for consideration as to whether a project should or should not proceed.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Credible Method

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Direct Impacts

Direct impacts are those caused by activities that are undertaken and facilities that are owned and managed by an entity, and occur at the same time and in the same place that the action is occurring. See also 'Indirect Impacts'.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Indirect Impacts

Impacts that are caused by a project or operation but occur later in time or are farther removed in distance than a direct impact. See also 'Direct Impacts'.

Major Modification

A proposed change in an existing operation that could create new risks or change the scale or scope of existing adverse impacts on the health or safety of workers or communities, human rights, the rights or interests of Indigenous Peoples, cultural heritage, livelihoods, or the environment.

Mineral Development Life Cycle

All of the stages from cradle to grave required to produce a saleable mineral/metal product. Includes exploration, project development, permitting, construction, mining and mineral processing operations, reclamation and closure, and post-closure stages.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Reclamation

The process of achieving stability, hydrologic balance and converting disturbed land and/or water resources to a productive post-mining (or post-mineral processing) land use, or establishing the potential for productive use. Components of reclamation may include: removal or isolation of hazardous material and waste, decommissioning and removal of buildings and other structures, removal and disposal of polluted soils, adjustment and stabilization of landforms (e.g., earthwork including backfilling, grading, recontouring, stormwater controls), creation of suitable conditions for the introduction of desired flora and fauna (topsoil placement, revegetation, ecological restoration), and any other planned mitigation (e.g., wetlands construction, water diversion, other).

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.
Source: Adapted from IFC 2012. Performance Standard 1. <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u> and USAID. 2017. Construction Sector Environmental Guidance. Glossary. <u>https://2017-2020.usaid.gov/sites/default/files/documents/1860/SectorEnvironmentalGuidelines_Construction_2017.pdf</u>

REVISED. Streamlined - removed examples.

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities, construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the company should take into account the concerns and views expressed by stakeholders in the final decision.

Cumulative Impacts

Additive, synergistic, interactive or nonlinear outcomes of multiple development or disturbance events that aggregate over time and space." Examples of cumulative impacts (or effects) may include: reduction of water flows in a watershed due to multiple withdrawals; increases in sediment loads to a watershed over time; interference with migratory routes or wildlife movement; or more traffic congestion and accidents due to increases in vehicular traffic on community roadways.

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste

disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Inform

The provision of information to inform stakeholders of a proposal, activity or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce its extent, with any residual impact then requiring remediation.

Mitigation Hierarchy

The mitigation hierarchy is a set of prioritized steps to alleviate environmental (or social) harm as far as possible through avoidance, minimization, and restoration of adverse impacts. Compensation/offsetting are only considered to address residual impacts after appropriate avoidance, minimization, and restoration measures have been applied. The biodiversity mitigation hierarchy is as follows (but the steps can be applied for any environmental or social impacts, although waste management has its own hierarchy. For waste, see definition of Waste Mitigation Hierarchy):

- i. *Avoidance:* measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure in order to completely avoid impacts on certain components of biodiversity. This results in a change to a 'business as usual' approach.
- ii. *Minimization:* measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided, as far as is practically feasible.
- iii. Restoration: measures taken to assist the recovery of ecosystems that have been degraded, damaged, or destroyed. Involves altering an area in such a way as to re-establish an ecosystem's composition, structure, and function, usually bringing it back to its original (pre-disturbance) state or to a healthy state close to the original.
- iv. Offset: measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse impacts on biodiversity arising from project development after appropriate prevention and mitigation actions have been taken. The goal of biodiversity offsets is no net loss or a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function, and people's use and cultural values associated with biodiversity.

REVISED. Added reference to waste mitigation hierarchy, which is slightly different.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring

to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Residual Impacts

Impacts that remain after on-site mitigation measures (avoidance, minimization, restoration) have been applied.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected or protected.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

ANNEXES AND TABLES

ANNEX 2.1-A: Exploration Plan

Exploration plans contain detailed information on, as relevant:

- 1. License details (if relevant, e.g., number, application date, duration/expiry date, location map, boundary coordinates);
- 2. Necessary legal permits;
- 3. Permissions from, and agreements with, Indigenous and local communities, landowners, and surface rights holders (as relevant);
- 4. Topographical map showing principal environmental, social and infrastructure features (potential sensitive receptors);
- 5. Expected geology and mineralogy (to the extent known);
- 6. Location, size and nature of existing roads and tracks;
- 7. Location, size and nature of proposed new temporary and permanent access roads;
- 8. Location, size and nature of proposed temporary and permanent worker accommodation and facilities;
- 9. Location, size and nature of proposed staging/laydown areas;
- 10. Location, size and nature of proposed drill pads;
- 11. Location, size and nature of any other areas that will be directly disturbed;
- 12. Construction methods and transport of materials to site;
- 13. Number of workers (including during different phases of exploration if relevant);

14. Description of exploration method(s) to be employed, e.g.:

- Aerial/airborne surveys¹²⁸
- o Ground-based geophysical surveys
- o River and stream sediment sampling
- o Soil sampling
- Surface pitting and trenching;
- o Drilling
- Sources of potable and non-potable water
- 15. Proposed water management methods (including surface runoff);
- 16. Volume and nature of solid and liquid wastes expected to be generated;
- 17. Proposed waste management methods;
- 18. Vehicle types, numbers and number of journeys;
- 19. Plant types and numbers;
- 20. Exploration program schedule (timing and duration of different activities); and
- 21. Proposed site reinstatement/restoration activities.

ANNEX 2.1-B: Potential Social and Environmental Issues To Be Screened/Scoped

CONSULTATION QUESTION 2.1-3 (repeated from above)

Background: In requirement 2.1.3.1.c, we are proposing that all projects demonstrate that they have considered a comprehensive list of potential impacts during their scoping process. <u>Annex B</u> includes a draft list of scoping questions based on the range of potential impacts included within the IRMA Standard. Every issue will not be relevant at every site, but the intention is that all should be considered during the scoping process, because if the questions are not asked, then it is possible that some potential impacts will be overlooked.

Question: Do you agree with the minimum list of issues that should be scoped for exploration, mining and mineral processing projects in <u>Annex 2.1-B</u>? If not, are there particular issues/scoping questions that should be added or removed (please provide a rationale for your suggestions).

TOPIC	ISSUES	CHAPTER X-REF
Indigenous Peoples	Are there any Indigenous Peoples who live in or use or have a right to resources in the area of influence?	2.2
	Are there any Indigenous Peoples outside the direct area of influence whose rights may be affected (e.g., those living downstream, or along proposed transportation corridors)	2.2, 1.3
	Will any natural resources owned, used or valued by Indigenous Peoples be affected by the proposed project/modification?	2.2
	Will cultural heritage owned, used or valued by Indigenous Peoples be affected by the proposed project/modification?	2.2, 3.7
	Are there any risks to Indigenous Peoples due to the legal framework in the host country (e.g., where the host country has not ratified ILO 169 or expressed support for UNDRIP, or does not recognize Indigenous Peoples) ¹²⁹	2.2

¹²⁸ Extensive desktop studies can be undertaken using existing data, but these are assumed to have no associated environmental or social impacts and so would we did not include them in this list, which is meant to inform the environmental and social impact assessment

¹²⁹ "The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) was adopted by the General Assembly on Thursday, 13 September 2007, by a majority of 144 states in favor, 4 votes against (Australia, Canada, New Zealand and the United States) and 11 abstentions

TOPIC	ISSUES	CHAPTER X-REF
Communities	Are there any communities not identified as Indigenous Peoples' communities present in the area of influence?	2.3
	Are there any communities that will receive or have received people displaced as a result of the proposed project/modification (i.e., host communities)?	2.4
Community Health, Safety	Are there potential traffic-related hazards created by the proposed project/modification that pose a risk to people, wildlife hunted for sustenance, or livestock?	3.3, 2.5, 3.2,
and Quality of Life ¹³⁰	Is there the potential that the proposed project/modification will increase the prevalence of water-borne, vector-borne, airborne or sexually transmitted infectious diseases (e.g., through transmission from mine to community or vice versa)?	3.3
	Is there a potential for pollution of water resources that provide communities with sustenance or livelihoods?	3.3, 4.2, 1.3
	Is there a potential for a decrease in the amount of water available for community use?	3.3, 4.2, 1.3
	Is the potential for air emissions or dust that may impact people's health or quality of life?	3.3, 4.3, 1.3
	Is the potential for degradation or pollution of lands used by affected communities (e.g., for farming, livestock grazing, food sources, medicinal plants, cultural purposes)?	3.3, 4.1, 4.2, 4.XX, 4.6
	Will the proposed project/modification affect natural ecosystems that provide provisioning, regulating, cultural or supporting ecosystem services to communities?	3.3, 4.6
	Is there a potential that noise from facilities, blasting, equipment, machinery, vehicles may affect nearby residents, commercial or institutional facilities?	2.4, 3.3, 4.4
	Is there the potential that vibration may affect peoples' health or quality of life, or the integrity of structures/property?	2.4, 3.3, 4.4
	Is there the potential for industrial accidents or incidents, including spills or releases of chemicals or hazardous materials, that could put communities at risks or affect the natural resources or ecosystem services used by them?	2.5, 3.2, 3.3, 4.6
	Is the potential for catastrophic failure of tailings or other waste impoundments that could put communities at risk or affect the natural resources used by them?	3.3, 4.X, 1.3
	Is there a potential that availability of energy sources may change (e.g., become less available or more expensive; or become more available and less expensive)?	3.3, 4.5, 2.3
	Will there be security forces used in relation to the project/operation (e.g., directly employed security guards, private security forces, public security forces) that could interact with community members?	3.3, 3.5
	Do any of the risks to community health, safety or quality of life create greater risks for certain genders?	3.3, 1.X

(Azerbaijan, Bangladesh, Bhutan, Burundi, Colombia, Georgia, Kenya, Nigeria, Russian Federation, Samoa and Ukraine). Years later the four countries that voted against have reversed their position and now support the UN Declaration." <u>https://social.desa.un.org/issues/indigenous-peoples/united-nations-declaration-on-the-rights-of-indigenous-peoples</u>

Status of ratifications of ILO 169 – Indigenous and Tribal Peoples Convention.

https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11300:0::NO:11300:P11300_INSTRUMENT_ID:312314:NO

¹³⁰ Applies to communities of Indigenous Peoples and communities that are not self-described as Indigenous Peoples.

TOPIC	ISSUES	CHAPTER X-REF
Socio-Economic Impacts	Are there potential positive or adverse impacts from the project/operation on the socio- economics of communities on the local or regional scale?	2.3
	Is there potential for the proposed project/modification to create opportunities and benefits for local communities (e.g., jobs, training programs, community development projects, taxes, service provider or procurement opportunities, etc.)?	2.3, 1.5
	Are there opportunities for shared facilities or infrastructure during operations or post- closure, e.g., roads, energy, medical, communications, etc.	2.1, 2.3, 3.3, 4.5
	Is there potential for in-migration of workers to change community demographics in a manner that could create social or cultural conflicts, the potential for increased sexual violence, violence against gender-diverse individuals, or violence or exploitation of women, children, or other potentially vulnerable groups?	3.3, 1.X, 1.3
	Is there potential for in-migration of people seeking to benefit from land acquisition /resettlement processes, including compensation and livelihoods programming, that could create social or cultural conflicts, land speculation, or the potential for increased sexual violence or exploitation of women, children, or other potentially vulnerable groups?	2.4
Infrastructure (e.g., Transportation, Communications, Health, Energy)	Is there potential that in-migration of workers or the needs of the operation itself would 3.3 create stresses on local and regional infrastructure such as housing, sanitation, water supply, public health, energy supply, roads, etc.?	
	Will infrastructure associated with the operation create potential opportunities to benefit communities (e.g., creation jobs, better energy, transportation and/or communications systems, access to improved health facilities, etc.)?	2.3
	Will infrastructure associated with the operation create adverse impacts on communities (e.g., displacement), or on the resources that support them (e.g., create easy access to areas, leading to increased hunting, poaching or resource depletion)?	2.4, 4.6
Land Use	Will lands disturbed by the operation need to be rehabilitated/restored?	2.6, 4.XX
	Will lands acquired for the operation require the physical and/or economic displacement and relocation of people (voluntary or involuntary)?	2.4
	Will there be involuntary economic displacement of people due to impacts on land or land use (e.g., will agricultural lands or forests be converted or become unusable by those whose livelihoods or sustenance depend on them? Will herders have to travel farther to graze their animals?)	2.4
	Will lands used by artisanal and small-scale miners be affected?	3.6
	Will involuntary displacement or impacts on land use create greater risks for certain genders or age groups (e.g., require women or children to travel further for food, water, fuel)?	1.X, 1.3, 2.4, 3.3
Cultural Heritage	Are there cultural resources (archaeological, paleontological, historical) in the area of influence? And will the proposed project/modification affect cultural heritage (replicable, non-replicable or critical cultural heritage) of local communities, or cultural heritage of regional, national or international significance?	3.7
	Will the proposed project/modification affect cultural heritage that is used or valued by Indigenous Peoples?	3.7, 2.2
	Will lands acquired for the proposed project/modification require cultural structures or areas of cultural significance to be demolished or relocated?	2.4, 3.7
	Will cultural heritage of Indigenous Peoples be proposed for commercial use?	3.7, 2.2

TOPIC	ISSUES	CHAPTER X-REF
Human Rights	Is there potential that the proposed project/modification will affect any internationally recognized human rights, including, but not limited to: Right to life, liberty and security Right of self-determination Right to a standard of living adequate for health and wellbeing Right to education Right to take part in cultural life Right to benefit from scientific progress Right of protection for the child Right to freedom from war propaganda, and freedom from incitement to racial, religious or national hatred Right to equality before the law, equal protection of the law, non-discrimination Right to freedom of movement Right to freedom of thought, conscience and religion Right to freedom of public life Right to freedom of assembly Right to freedom of association Right to enjoy just and favorable conditions of work Right to enjoy just and favorable conditions of work Right to social security, including social insurance 	1.3
	Is there the potential to affect human rights that have been identified as being particularly relevant for extractives sectors? ¹³¹	1.3
	Are there security forces used in relation to the operation (e.g., directly employed security guards, private security forces, public security forces) that might have impacts on human rights and will therefore need to be trained on human rights?	3.6, 1.3
	Is the proposed project/modification located in, or will it source or transport minerals through a conflict-affected or high-risk area?	3.4, 1.3
	Is the proposed project/modification located in an area where bribery, corruption or use of facilitation payments (e.g., to facilitate acquisition of permits, licenses, concessions, etc.) is possible or likely?	1.5
	Do any of the potential impacts on human rights create greater risks for certain genders?	1.X
Workers	Are there any risks to workers due to the legal framework in the host country (e.g., has the host country ratified the fundamental ILO conventions and instruments ¹³² ; does the host	3.1

¹³¹ For example, see: <u>https://www.bsr.org/en/primers/10-human-rights-priorities-for-the-extractives-sector</u>

¹³² The eleven fundamental instruments are: Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87); Right to Organise and Collective Bargaining Convention, 1949 (No. 98); Forced Labour Convention, 1930 (No. 29) (and its 2014 Protocol); Abolition of Forced Labour Convention, 1957 (No. 105); Minimum Age Convention, 1973 (No. 138); Worst Forms of Child Labour Convention, 1999 (No. 182);

TOPIC	ISSUES	CHAPTER X-REF
	country have weak laws/regulations or none at all to provide minimum protections related to wages, hours of work, paid leave, etc.)?	
	Have there been increases or changes in risks to workers' rights and protections (e.g., as a result of strikes or a breakdown in negotiations, regulatory changes such as decrease in benefits or legal rights, economic changes such as recession, etc.)?	3.1
	Are there differential risks to the human rights of particular workers (e.g., those of different genders, ethnicities, religious affiliation, etc.)	1.3, 1.X
	What are the specific hazards related to the proposed project/modification that create health or safety risks to workers?	3.2
	• Will any of these hazards be exacerbated by a changing climate? (e.g., if daily temperatures increase, will there be a need for increased ventilation, cooling systems, air conditioning and water in breakrooms, etc.)	
	Have there been increases or changes in risks to worker health or safety (e.g., due to changes in operations such as equipment failures, changes in equipment or processes, influx of new workers needing to be trained, changes in climate or extreme weather events that alter working conditions, etc.)?	3.2
	Is there the potential for industrial accidents or incidents, including spills or releases of chemicals or hazardous materials, that could put workers at risks?	3.2, 2.5
	Are there differential risks to particular workers (due to the nature of the work, or gender/health status of the worker)	1.X, 3.2
Water Resources	Is there potential for impacts on water quality in streams, rivers, lakes, marine environments, wetlands, groundwater aquifers from:	4.2
	Mine waste storage or disposal areas (tailings facilities, waste rock facilities)	
	Other waste storage or disposal areas	
	 Mineral extraction areas (pits, underground workings, heap leach pads) 	
	Mineral processing facilities	
	Roads	
	• Pipelines	
	Chemical or fuel storage and/or handling facilities	
	Vehicle parking areas	
	Stormwater runoff	
	Is there the potential that extraction or use of water by the operation will lead to diminishment in the volume or availability of local or regional water supplies?	4.2
	Is there the potential that extraction of fresh water or brine may lead to subsidence of ground surface, which could then pose risks to safety, the physical integrity of facilities, environmental resources, etc.?	4.2, 4.X
	Is there the potential that a catastrophic failure of a tailings or other waste facility would affect water resources?	4.X, 4.2
	Are there any processes or activities that may result in air emissions and subsequent deposition that may affect water quality and subsequently pose a risk to fauna (including humans), flora or fungi (e.g., via ingestion, direct contact, or bioaccumulation)?	4.2

Equal Remuneration Convention, 1951 (No. 100); Discrimination (Employment and Occupation) Convention, 1958 (No. 111); Occupational Safety and Health Convention, 1981 (No. 155); Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

TOPIC	ISSUES	CHAPTER X-REF
	Are there any known hazardous chemicals or materials being used on site? Is there the potential for spills or releases of chemicals or hazardous materials that could affect surface water or groundwater resources?	4.1, 4.2
	Is the potential that hydrologic features may create risks to physical stability of any facilities?	4.X
Air Resources	Are there any thermal processes or mining-related activities that will result in air emissions that may affect local or regional air quality, and subsequently pose a risk to human health, fauna, flora or fungi (e.g., via inhalation, ingestion or contact)?	4.3, 3.2, 3.3
	Is there potential for emissions or dust that may detrimentally affect local or regional air quality, or visual amenity of protected areas?	4.3, 3.3, 4.6
	Are there any known hazardous chemicals or materials being used on site? Is there the potential for spills or releases of those chemicals or hazardous materials that could affect air quality?	3.2, 4.1, 4.3
Climate and Energy	Will development of the proposed project/modification have associated greenhouse gas emissions from land or vegetation clearing, including clearing carried out for associated facilities?	2.1, 4.5
	Will the proposed project/modification have significant energy requirements?	4.1
	Will the proposed project/modification have significant Scope 1, Scope 2 and/or Scope 3 emissions?	4.5
	Might climate change exacerbate any of the risks/impacts associated with the proposed project/modification? (question repeated in various sections in this table)	2.1
Geology	Are there any active or potentially active faults or geologic characteristics that may trigger or result in surface fault ruptures, seismicity, earthquake ground shaking, liquefaction, landslides/mass wasting, uplift, subsidence, seiches or tsunamis, which could then pose risks to safety, the physical integrity of facilities, environmental resources, etc.?	2.5, 3.2, 3.3, 4.1, 4.X, 4.6
Soil Resources	Are there expansive soils in the area of influence that could pose risks to worker safety or the physical integrity of facilities?	3.2, 4.X
	Will the proposed project/modification result in increased erosion and loss of topsoil?	2.6, 4.XX
	Are there any processes or activities that may result in air emissions and deposition that may affect soil quality, and subsequently pose a risk to fauna (including humans), flora or fungi?	3.3, 4.3, 4.6
	Are there any known hazardous chemicals or materials being used on site? Is there the potential for spills or releases of chemicals or hazardous materials that could affect soil quality?	4.1
	Will the proposed project/modification affect soil resources that will require reclamation/remediation upon closure?	2.6
Ecosystems	Will the proposed project/modification affect ecosystems that will require restoration upon closure?	2.6
	Will the proposed project/modification affect ecosystems that support important global, national or local biodiversity?	4.6
	Will the proposed project/modification affect Key Biodiversity Areas?	4.6
	Will the proposed project/modification affect natural ecosystems that provide provisioning, regulating, cultural or supporting ecosystem services?	4.6, 3.3
	Might climate change exacerbate any of the risks/impacts on ecosystems?	2.1

TOPIC	ISSUES	CHAPTER X-REF
Fauna	 Are there potential direct impacts on fauna (i.e., any animals including insects, aquatic organisms, amphibians, mammals, birds, etc.) such as: Disturbance, fragmentation or reduction/loss in species' populations or their habitats (e.g., from linear infrastructure, land clearing, road traffic, facilities); Effects on health or behavior from air or water emissions/effluents, traffic, etc. Effects due to barriers to movement of wildlife or livestock (e.g., from fences, open pits, etc.) Effects due to changes in surface hydrology, land forms, and coastal processes; Reduction in habitat, food or ecosystem services due to competition from invasive species Edge effects Spread of invasive alien species from proposed project or modification-related 	X-REF 4.6 – sort of 2.6 could help remediate habitat?
	 Are there potential indirect impacts on fauna such as: Increased impacts on wildlife resources (hunting, poaching and wildlife trade, spread of invasive alien species) from proposed project or modification-induced access by third parties or in-migration or land conversion 	4.6, 3.3, 2.6
	 Are there potential cumulative impacts on fauna? For example: What is the extent to which the proposed project/modification might exacerbate any preexisting threats/impacts from other existing or planned¹³³ or developments (e.g., incremental impact of added traffic or infrastructure on migratory routes or wildlife movement or behavior or mortality) What is the extent to which the proposed project/modification might exacerbate any threats/impacts to animal species' populations or habitats that already exist due to climate change (e.g., from changing precipitation levels or temperatures, sea level rise saltwater inundation during storms, etc.) 	2.1, 4.6
	Are any of the impacts on species that may be important to affected communities (for livelihoods/economic ventures, sustenance, etc.), or important in terms of biodiversity?	2.3, 2.4, 3.3, 4.6
	Will the proposed project/modification affect natural, modified or critical habitat critical habitat for aquatic or terrestrial fauna?	4.6
	Will the proposed project/modification affect any threatened or endangered species of aquatic or terrestrial fauna?	4.6
	Is there a potential that noise from facilities, blasting, equipment, machinery, vehicles may affect wildlife, especially during sensitive life periods such as during lactation or calving? ¹³⁴	4.4
Flora and Fungi ¹³⁵	 Are there potential direct impacts on flora (i.e., plants) or fungi (i.e., plants), such as: Degradation or loss in native species' populations or habitats (e.g., from land clearing, pollution, facility footprints, changes in surface hydrology, land forms, and coastal processes; or from introduction and spread of invasive alien species from proposed project/modification activities)? 	3.3, 4.1, 4.2, 4.3, 4.6, 4.XX

¹³³ Those that are existing or planned or reasonably defined at the time the risks and impacts identification process is conducted.

¹³⁴ U.S. National Parks Service. 2014. Annotated Bibliography – Impacts of Noise on Wildlife. <u>https://www.nhsec.nh.gov/projects/2014-04/documents/150420pastoriza.pdf</u>

¹³⁵ Prior to 2015, fungal species were barely present on the IUCN Red List of Threatened Species. <u>https://www.mdpi.com/1424-2818/14/9/736</u>. As of June 2023, the Red List has 635 fungal species listed (as viewed under the "Taxonomy" tab. <u>https://www.iucnredlist.org/search</u>

TOPIC	PIC ISSUES	
	 Are there potential indirect impacts on flora or fungi such as: Spread of invasive alien species from proposed project- or modification-induced access by third parties or in-migration or land conversion Use of these resources by third parties 	2.6, 3.3, 4.6
	Are there potential cumulative impacts on native species of flora or fungi (in particular those that may be important to affected communities or important in terms of biodiversity)?	3.3, 4.6
	• What is the extent to which the proposed project/modification might exacerbate any preexisting threats/impacts from other existing or planned ¹³⁶ or developments (e.g., incremental impact of project-related vegetation clearing, or pollution, on the health or abundance of flora or fungi, etc.)	
	• What is the extent to which the project might exacerbate any threats/impacts to plants of fungi species' populations or habitats that already exist due to climate change (e.g., from changing precipitation levels or temperatures, sea level rise, saltwater inundation during storms, etc.)?	
	Will the proposed project/modification affect natural, modified or critical habitat for aquatic or terrestrial flora or fungi?	4.6
	Will the proposed project/modification affect any threatened or endangered species of aquatic or terrestrial flora or fungi?	4.6
Protected Areas	Will the proposed project/modification affect the values being protected (e.g., cultural, geological, geomorphic, biological, biodiversity, ecosystems, ecological processes, habitats, species, landscapes, seascapes, scenic values, etc.) in any local, national, or internationally protected area?	4.6, 3.7 (for cultural)

ANNEX 2.1-C: Rationale for Carrying or Not Carrying Out ESIA

Proposed projects/modifications will need to develop a defensible rationale for why a full, partial or no ESIA is warranted. One possible approach has been developed by the International Finance Corporation (IFC).¹³⁷ The IFC (described below) uses a process of environmental and social categorization to reflect the magnitude of risks and impacts associated with investment projects and based on the category of risk, determines if a full or partial ESIA is warranted. IFC's approach is not intended to cover all possible investment scenarios or categorization variables; therefore, IFC stresses that the categorization will ultimately be the result of professional judgment.

Category A	Business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.	A full ESIA is required. The project or modification's potential adverse and positive environmental impacts, compares them with those of feasible alternatives (including, the "without project" / "without modification" situation), and measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental and social performance are recommended
		performance are recommended.

¹³⁶ Those that are existing or planned or reasonably defined at the time the risks and impacts identification process is conducted.

¹³⁷ International Finance Corporation (IFC). 2012. "Interpretation Note on Environmental and Social Categorization." (Accessed 31 March 2023). <u>https://www.ifc.org/wps/wcm/connect/f873da60-4adf-4fa0-83ec-</u> <u>729227aa5511/Interpretation+Note+on+E+and+S+Categorization.pdf?MOD=AJPERES&CVID=mUtZ0yc</u>

Category B	Business activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.	The scope of ESIA for a Category B project may vary from project to project (or modification to modification), but it is narrower than what would be required for Category A. The project or modification's potential adverse and positive environmental and social impacts are examined, and measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance are recommended.
Category C	Business activities with minimal or no adverse environmental or social risks and/or impacts.	Beyond screening, no further assessment action is required for a Category C project or modification.

Chapter 2.2 Indigenous Peoples and Free, Prior and Informed Consent (FPIC)

NOTES ON THIS CHAPTER: We are proposing that the name of this chapter be revised from 'Free, Prior and Informed Consent' to 'Indigenous Peoples and Free, Prior and Informed Consent (FPIC).' The previous titled implied that the chapter was only about FPIC, and while the majority of the chapter does cover FPIC-related expectations it does also include ongoing engagement and other requirements beyond FPIC.

Proposed additions and changes:

- The changes to this chapter have been informed by discussions with IRMA's Expert Working Group on Free, Prior and Informed Consent (FPIC). The proposed addition of remedy (or equivalent) agreements that address past impacts, a requirement for community validation of agreements, need for specific reference to a grievance mechanism, and more detail on expectations regarding Indigenous Peoples living in voluntary isolation were all added as a result of those discussions and input from working group members.
- Other changes, such as capitalizing Indigenous Peoples throughout the chapter (and Standard) and moving the reference to Indigenous Peoples living in voluntary isolation from the Cultural Heritage chapter (3.7) to this one, are editorial changes proposed by the IRMA Secretariat.

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

PARTICIPATE IN AN EXPERT WORKING GROUP ON THIS CHAPTER

If you are interested in participating in an Expert Working Group on Indigenous Peoples and Free, Prior and Informed Consent, please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net).

CONSULTATION QUESTION 2.2-1

Background: It is unlikely that any community, anywhere, whether it be Indigenous or non-Indigenous, will unanimously support or unanimously oppose a large-scale industrial development such as a mine or processing facility. However, the working assumption within this chapter is that FPIC can still be achieved even if there is dissent from or dissatisfaction expressed by individuals within a community as long as the decision to grant consent is made by Indigenous Peoples' own representative decision-making institutions, after a process that adheres to the principles of FPIC.

One challenge that is likely to be faced by auditors, however, is what to do if a company has obtained consent from a decision-making institution that is recognized by <u>some</u> of the Indigenous Peoples, but others in the community do not view those decision-making institutions as being representative. For example, this may happen in parts of the world where a governance structure was, at some point in time, imposed on the Indigenous Peoples by a colonial government of the country where the project is located. These governance structures may now have been in place for decades or even more than a century, and they may involve the Indigenous Peoples "choosing" or electing the representatives, but those elected may not be universally viewed by all affected Indigenous Peoples as legitimate representatives of their communities because that is not how leaders were traditionally chosen. There may be pre-

existing (and sometimes competing) traditional decision-making structures, such as councils of elders, that are viewed by some as the sole legitimate representative structure.

In other cases, for a host of historic and political reasons, an "historically imposed" governance structure may be the only functional representative institution, and while all members of a community may not view it as legitimate, there is no traditional governance structure that is intact, and communities have not had the capacity to design a collectively recognized and agreed governance structure.

This latter situation has been recognized by the UN Expert Mechanism on the Rights of Indigenous Peoples: "Failure to engage with legitimate representatives of Indigenous Peoples can undermine any consent received. In the Declaration it is clear that States and third parties should consult and cooperate with Indigenous Peoples 'through their own representative institutions' (arts. 19 and 32) and 'in accordance with their own procedures' (art. 18). Yet, identifying the legitimate representatives of Indigenous Peoples can be challenging. States should be mindful of situations where Indigenous Peoples' decision-making institutions have been undermined by colonialism and where communities have been dispersed, dispossessed of land or relocated, including to urban areas... It is important for States or third parties to ensure that institutions supporting Indigenous Peoples and claiming to represent them are so mandated."¹³⁸

Question: How might IRMA revise its standard to address the situations where 1) there is more than one decisionmaking structure that is considered legitimate by members of an affected population of Indigenous Peoples; or 2) where there is only one structure, but it is not considered legitimate by all members of the affected population of Indigenous Peoples.

CONSULTATION QUESTION 2.2-2

Background: In IRMA's Expert Working Group on FPIC there was a suggestion to expand the requirement for FPIC beyond Indigenous Peoples, to others, such as traditional or other communities that have prior legal or <u>customary</u> rights to land, vulnerable land connected peoples, etc. In one of the FPIC working group discussions we provided examples of other standards that have extended the concept of FPIC to others (e.g., the World Bank's inclusion of "Sub-Saharan African Historically Underserved Traditional Local Communities," and the requirements in the Forest Stewardship Council and Roundtable for Sustainable Palm Oil standards.¹³⁹

There was no consensus within the Expert Working Group on how to proceed. There was recognition that FPIC is an internationally recognized right of Indigenous Peoples that is grounded in a set of other fundamental rights of Indigenous Peoples, such as their right to self-determination, the right to control and use ancestral lands and resources, the right to non-discrimination, the right to effective participation in public life, etc. Some suggested that if human rights of non-Indigenous communities have been affected, that these could and should be recognized and addressed as part of an entity's human rights due diligence (in IRMA Chapter 1.3 – 'Human Rights Due Diligence'). Others thought that a subset of the FPIC principles could be applied to such communities (and perhaps included in IRMA Chapter 2.3 – 'Obtaining Community Support and Delivering Benefits').

Question: Do you think IRMA should expand the requirement for FPIC, or some subset of FPIC principles, beyond Indigenous Peoples? Put differently, do you think IRMA should require that entities obtain the FPIC of non-Indigenous Peoples prior to initiating a project? What is the basis for this opinion? And if you think that FPIC or a subset of FPIC requirements should apply beyond Indigenous Peoples, to whom should they apply and why (e.g., those with customary land rights, vulnerable land-connected peoples, historically underserved traditional local communities), and what sorts of requirements would you propose be included?

¹³⁸ United Nations Human Rights Council, Free, Prior and Informed Consent: A Human Rights-Based Approach: Study of the Expert Mechanism on the Rights of Indigenous Peoples, 10 August 2018. <u>https://un-declaration.narf.org/wp-content/uploads/Free-prior-and-informed-consent-a-human-rights-based-approach-1.pdf</u>

¹³⁹ Work Bank Environmental and Social Framework, Standard ESS. <u>https://thedocs.worldbank.org/en/doc/837721522762050108-0290022018/original/ESFFramework.pdf#page=89&zoom=80</u>

Forest Stewardship Council, Principle 4. https://connect.fsc.org/document-centre/documents/resource/392

Roundtable for Sustainable Palm Oil. Principles 4. <u>https://rspo.org/wp-content/uploads/rspo-principles-criteria-for-production-of-sustainable-palm-oil-2018revised-01-february-2020-with-updated-supply-chain-requirements-for-mills.pdf</u>

BACKGROUND

For more than a quarter century, the international community has recognized that heightened attention needs to be paid to the collective and individual rights of Indigenous Peoples and their members.¹⁴⁰ It is important to note that, while certain rights may require specific attention in the context of industrial-scale mineral development, the full range of human rights as they relate to Indigenous Peoples may be at stake in any given context and must be analyzed as such. That said, the following rights of Indigenous Peoples are especially but not exclusively relevant in relation to industrial-scale mineral development:¹⁴¹

- The right to self-determination, by virtue of which Indigenous Peoples freely determine their political status and pursue their economic, social, and cultural development;
- Rights to property, culture, religion, and non-discrimination in relation to lands, territories, and natural resources, including sacred places and objects;
- Rights to health and physical well-being in relation to a clean and healthy environment;
- Rights to set and pursue their own priorities for development; and
- The right to make authoritative decisions about external projects or investments.

States must and corporations should respect these rights. Corporations may demonstrate such respect by obtaining the free, prior and informed consent (FPIC) of Indigenous Peoples and providing culturally appropriate alternatives and adequate compensation and benefits for undertakings that affect Indigenous Peoples' rights.¹⁴²

TERMS USED IN THIS CHAPTER

Affected Community Collaboration Consultation Cultural Heritage NEW Customary Rights NEW Customary Rights NEW Culturally Appropriate NEW Entity NEW Exploration NEW Free, Prior and Informed Consent (FPIC) Grievance Grievance Mechanism Host Country Law Indigenous Peoples Indigenous Peoples Living in Initial Contact NEW Indigenous Peoples Living in Voluntary Isolation NEW Indigenous Peoples' Rights NEW Livelihood Mineral Processing NEW Mining NEW Operation NEW Potentially Affected Indigenous Peoples Project NEW Marginalized Groups Mining-Related Activities Remediation/Remedy Rights Holder Site NEW Stakeholder Vulnerable Groups

These terms appear in the text with a dashed underline. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

Key elements of the requirement for consent of Indigenous Peoples have been recognized by international law since 1989, when the General Conference of the International Labour Organization (ILO) adopted Convention 169 on Indigenous and Tribal Peoples.¹⁴³ Since 1989, FPIC has been widely recognized by international bodies, tribunals, and instruments, including private sector bodies, and it is also increasing reflected in national laws, jurisprudence, and policies.¹⁴⁴

OBJECTIVES/INTENT OF THIS CHAPTER

To demonstrate respect for the dignity, aspirations, cultures, livelihoods, and rights (including the right to free, prior and informed consent) of Indigenous Peoples.

¹⁴⁰ United Nations. 2008. Guidelines on Indigenous Peoples' Issues. www.un.org/esa/socdev/unpfii/documents/UNDG guidelines EN.pdf

¹⁴¹ Anaya, J. 2013. Extractive Industries and Indigenous Peoples. Report of the Special Rapporteur on the Rights of Indigenous Peoples. UN Doc. A/HRC/24/41. Para. 28. Available at: <u>unsr.jamesanaya.org/study/report-a-hrc-24-41-extractive-industries-and-indigenous-peoples-report-of-the-special-rapporteur-on-the-rights-of-indigenous-peoples</u>

¹⁴² IFC. 2012. Performance Standard 7 Indigenous Peoples. Objectives and Paras. 9 and 14. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

¹⁴³ ILO. Indigenous and Tribal Peoples Convention, 1989 (No. 169). Available at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C169

¹⁴⁴ For a detailed discussion of recent international jurisprudence related to FPIC see: Gilbert, J. and Doyle, C. 2011. "A New Dawn over the Land: Shedding Light on Collective Ownership and Consent." pp. 24-42. Available at: <u>https://repository.uel.ac.uk/item/86165</u>

NOTE ON OBJECTIVES: REVISED. Simplified, and clarified that FPIC is a right rather than the previous wording in the 2018 Mining Standard that an objective was "creating conditions that allow for Indigenous Peoples' free, prior and informed consent and decision-making regarding mining development."

SCOPE OF APPLICATION

RELEVANCE: This chapter is assumed applicable to all <u>exploration</u>, <u>mining</u> and <u>mineral processing projects</u> and <u>operations</u>, and if an entity believes it is not relevant then it needs to provide evidence to that effect to IRMA auditors. This may be done, for example, through documented investigations and <u>consultations</u> with experts that demonstrate there are no <u>Indigenous Peoples</u> whose legal or <u>customary rights</u> or interests have been or may be affected by the entity's past, present or proposed <u>mining-related activities</u> (which include exploration, mining, and mineral processing). Examples of rights or interests may include impacts on lands, territories, and resources which Indigenous Peoples have traditionally owned, occupied, or otherwise used or acquired; preservation of livelihoods, food security, cultural or spiritual activities or places; and the right to not be relocated/resettled without having first given their free, prior and informed consent (FPIC).

OVERLAP WITH HOST COUNTRY LAWS: The state always holds the primary duty to protect <u>Indigenous Peoples</u>' rights.¹⁴⁵ Nothing in this chapter is intended to reduce the primary responsibility of the state to <u>consult</u> with Indigenous Peoples in order to obtain their <u>FPIC</u> and protect their rights. IRMA recognizes that in the exercise of their right to self-determination, some Indigenous Peoples may wish to engage with <u>entities</u> such as <u>exploration</u> or <u>mining</u> companies even if the state failed to fulfill its obligations. It is important to note, in such engagements, the need for the entity to adhere to Indigenous Peoples' own laws/enactments, protocols, or policies where these exist (see requirement 2.2.4.1). Also, all entities need to conduct due diligence to understand if the state carried out this duty prior to granting land access or concession rights (2.2.2), and share this with the Indigenous Peoples so that they can make an informed decision regarding whether or not to proceed with discussions with the entity.

As per Chapter 1.1, if <u>host country laws</u> related to FPIC exist, entities must abide by those laws. Where host country laws require or enable agreements between entities and Indigenous Peoples it may not be necessary for entities to run a parallel FPIC process based on the requirements of this chapter. It would, however, be necessary for entities to demonstrate to IRMA auditors that the process whereby the agreement was reached conformed with or exceeded IRMA FPIC requirements and met the general intent of this chapter (for example, there was no express or implied threat to invoke compulsory powers if agreement could not be reached, and Indigenous communities were informed at the outset that the entity would not pursue proposed activities in the absence of the Indigenous Peoples' consent). If gaps exist between national laws and the IRMA chapter, the entity would be expected to implement measures, to the extent possible, to fill those gaps.

NOTE ON SCOPE OF APPLICATION: We removed references to new and existing mines as we are no longer using that means of differentiation in the standard. We have included normative requirements below to address expectations if FPIC was not obtained in the past.

This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

¹⁴⁵ See e.g., Rights of Indigenous Peoples, A/HRC/45/34, 18 June 2020, para. 61-2. <u>https://www.ohchr.org/en/documents/thematic-</u>

reports/ahrc4534-rights-indigenous-peoples-report-special-rapporteur-rights ("It is necessary to ... focus on the international human rights obligations that States must observe at all times. Any restrictions on these rights, such as a decision to proceed without the free, prior and informed consent of an Indigenous people, imposes on the State a burden to prove the permissibility of the said restrictions under the international criteria of legality, necessity and proportionality in relation to a valid public purpose. 62. The Special Rapporteur, in common with previous mandate holders, has highlighted the need for review mechanisms through a judicial or other impartial and competent body in order to ensure that any decision by a State entity that does not have the consent of the Indigenous Peoples affected complies with these criteria and does not affect the physical and cultural survival of the Indigenous Peoples concerned. If these requirements are not met, it ought to be concluded that the measure or activity should not proceed without Indigenous consent").

CRITICAL REQUIREMENTS IN THIS CHAPTER

Proposed activities only proceed with the FPIC of all affected communities of Indigenous Peoples (2.2.4.3).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Free, Prior and Informed Consent (FPIC) Requirements

2.2.1. Policy Commitment

2.2.1.1. An Indigenous Peoples' policy (or equivalent) is in place that includes a statement of the entity's respect for Indigenous Peoples' rights as set out in international law and policy frameworks including those affirmed in the United Nations Declaration on the Rights of Indigenous Peoples.¹⁴⁶ The policy:

- a. Is approved at the most senior level of the entity; and
- b. Is publicly available and communicated to Indigenous Peoples who may be or are affected by the entity's mining-related activities.

NOTE for 2.2.1.1. REVISED. Requirements 2.2.1.1 and 2.2.1.2 from the 2018 Mining Standard have been combined here to reflect consistency with other IRMA chapters. We added sub-requirements a and c to align with elements in policy requirements in other chapters.

2.2.2. Due Diligence Related to State Obligations

2.2.2.1. The <u>entity</u> conducts due diligence to determine if the host government carried out an adequate <u>consultation</u> process aimed at obtaining <u>Indigenous Peoples' FPIC</u> prior to granting access to mineral resources or lands for mineral development.

- 2.2.2.2. The entity makes available to affected Indigenous Peoples:¹⁴⁷
 - a. Key findings of the due diligence assessment; and
 - b. A justification for proceeding with the project/operation, if findings reveal that the host government failed to fulfill its duty to obtain the <u>FPIC</u> of Indigenous Peoples prior to granting access to mineral resources or lands for mineral development.

NOTE for 2.2.2.2: REVISED. The language has been improved for clarity purposes, and the expectations have been separated out to make it clear that there are two elements: 1) carrying out the due diligence assessment, and 2) making the findings available to relevant stakeholders.

¹⁴⁶ *Id.* para. 48 (explaining that "the conceptualization and application of Indigenous prior consultation and consent should be based not only on the Indigenous and Tribal Peoples Convention and the guidelines developed by ILO in that regard, but also on a much broader, and subsequent, body of law consisting of various instruments, resolutions, declarations – in particular the United Nations Declaration on the Rights of Indigenous Peoples, jurisprudence and authoritative interpretations developed by international and regional human rights mechanisms").

¹⁴⁷ In this case, 'relevant stakeholders' are considered to be those directly involved in FPIC processes; namely, Indigenous Peoples and their advisors.

Additionally, previously the requirement was to make the findings publicly available, but we are proposing to change this to providing the due diligence to affected Indigenous Peoples from whom the entity is seeking FPIC. A public statement could create conflict between the entity and the government, or the government and Indigenous Peoples, which is not the intent of the due diligence. But this information is important for Indigenous Peoples as they decide whether or not they wish to proceed with an FPIC process.

2.2.3. Identification of and Engagement with Indigenous Peoples

NOTE FOR 2.2.3: This criterion was previously called 'Free, Prior and Informed Consent Scoping.' It has been changed because many of the elements below are not limited solely to informing FPIC. They will be necessary for longer-term engagement with Indigenous Peoples, more generally. For example, 2.2.3.1.c, below, refers to mapping and analysis of Indigenous Peoples communities. Understanding community dynamics and potentially affected vulnerable groups and individuals will be important to inform engagement strategies beyond any FPIC process.

- 2.2.3.1. The entity:
 - a. Identifies Indigenous Peoples whose traditionally owned, occupied, or otherwise used or acquired lands, territories, and resources have been or may be affected by the entity's mining-related activities; ¹⁴⁸
 - b. <u>Consults</u> with relevant Indigenous Peoples' organizations or bodies, if they exist, and external experts¹⁴⁹ and published sources to determine:
 - i. If there are any Indigenous Peoples who have not been identified by the entity; and
 - ii. If there are any Indigenous Peoples living in voluntary isolation or in initial contact who may be present in the area of the proposed or actual mineral development;¹⁵⁰ and
 - c. Carries out stakeholder/rights holder mapping and analysis (as per Chapter 1.2, requirement 1.2.1.1).

NOTE for 2.2.3.1: REVISED. This combines the previous 2.2.3.1 and two NEW components.

Sub-requirement (b) is being proposed to ensure that external sources are consulted in the identification process, including any relevant Indigenous Peoples organization or bodies (e.g., associations or councils of Indigenous Peoples or Indigenous rights organizations active in the region of the proposed projects/operations), external experts (e.g., academics or governmental or non-governmental practitioners with cultural, anthropological, and/or human rights expertise in the region where proposed projects/operations are located), and published sources to determine if there may be populations of Indigenous Peoples who may not have been identified by the entity. This includes identification of Indigenous Peoples living in voluntary isolation (sometimes referred to as "uncontacted peoples") and those living in initial contact (those who have very little interaction with the majority non-Indigenous society). This is of utmost concern given that the rights and survival of these peoples could be threatened given their situations of extreme vulnerability.¹⁵¹

While not globally pervasive, there are regions of the world where Indigenous Peoples continue to live in voluntary isolation or have little interaction with non-Indigenous society. For example, in 2013 it was reported that on the South American continent there were Indigenous Peoples in voluntary isolation or initial contact in Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, and Venezuela, and also indications of their presence in

¹⁴⁸ It is important to note that this is not restricted to lands, territories or resources (e.g., waters, forests, plants, animals, minerals) owned/possessed pursuant to title/rights issued under domestic law, nor is it restricted to those that are actually and presently possessed/occupied or used.

¹⁴⁹ E.g., academics or practitioners (may be governmental or non-governmental) with cultural, anthropological, and/or human rights expertise in the region where projects are located.

¹⁵⁰ The most credible source of information will be Indigenous Peoples in the area; however, contact must not be made with those living in voluntary isolation. Other sources should also be consulted in case there are different communities of Indigenous Peoples that may be affected (i.e., consulting a single community may not result in identification of all potential Indigenous Peoples who might be affected). Other sources could include government studies, academics, other regional Indigenous Peoples' communities, representative bodies or organizations, etc.

¹⁵¹ "The Right to Live in Voluntary Isolation: Indigenous Peoples of the Amazon in the Age of COVID-19" (20 May 2020). Unrepresented Nations and Peoples Organization (ONPO), available at: <u>https://unpo.org/article/21899.</u>

Guyana and Suriname, near their respective borders with Brazil.¹⁵² In 2022, it was estimated that there were 185 distinct groups of Indigenous Peoples living in voluntary isolation in South America.¹⁵³ Other uncontacted peoples have been reported in India and New Guinea,¹⁵⁴ and it has been suggested that there may be others in Malaysia and Central Africa.¹⁵⁵ (The requirement to determine where there may be Indigenous Peoples living in voluntary isolation was only mentioned in a footnote to requirement 3.7.2.1 in the 2018 Mining Standard).

Sub-requirement (c) is being proposed to make it clear that, as per Chapter 1.2, which outlines expectations with respect to stakeholder and rights holder engagement, a mapping and analysis of potentially affected Indigenous Peoples is also required to understand the characteristics and vulnerabilities of potentially affected groups and individuals, and dynamics within those communities.

2.2.3.2. If the presence of Indigenous Peoples living in voluntary isolation or initial contact in the area is identified:

- a. The <u>entity</u> does not initiate contact with any potentially affected Indigenous Peoples living in voluntary isolation or initial contact; and
- b. The entity <u>consults</u> with relevant Indigenous Peoples' organizations or bodies, if they exist, and external experts¹⁵⁶ to determine if the entity's past, present or proposed activities are affecting or may affect the rights or wellbeing of those living in voluntary isolation or initial contact, and:
 - i. If proposed activities may affect any Indigenous Peoples living in voluntary isolation, the entity redesigns the project to avoid all such impacts, or, if avoidance is not possible, ceases to pursue the proposed activities; and/or
 - ii. If past or existing impacts on Indigenous Peoples living in voluntary isolation are identified, the entity consults with representative bodies for Indigenous Peoples, and external experts to determine the appropriate remedial actions; and/or
 - iii. If past or proposed activities may affect any Indigenous Peoples living in initial contact, the entity consults with representative bodies for Indigenous Peoples, and cultural, anthropological, and/or human rights experts to determine whether and how engagement with these groups is appropriate; if it is determined that engagement is not appropriate, the entity proceeds with these groups as though they were Indigenous Peoples in voluntary isolation.

NOTE for 2.2.3.2: This is a NEW requirement being proposed to address the situation where mines may or have affected Indigenous Peoples who are living in voluntary isolation (sometimes referred to as "uncontacted peoples") and initial contact. Some elements of this requirement were covered in requirement 3.7.5.5 in the 2018 Mining Standard (Chapter '3.7 Cultural Heritage').

2.2.3.3. If <u>Indigenous Peoples</u> (other than those in voluntary isolation) have engagement protocols in place, the entity follows the protocols. If no engagement protocols exist, the <u>entity</u> mutually agrees and documents, in a manner agreed to by Indigenous Peoples' representatives, the engagement process to be followed. If there is more than one distinct group of Indigenous Peoples (e.g., nation, population) that may be affected by the

¹⁵² Indigenous Peoples in Voluntary Isolation and Initial Contact in the Americas. Inter-American Commission on Human Rights (IACHR). 30 December 2013. Available at: <u>https://www.oas.org/en/iachr/indigenous/docs/pdf/Report-Indigenous-Peoples-Voluntary-Isolation.pdf</u>

¹⁵³ "Declaration of the International Working Group GTI-PIACI Emphasized the Urgent Need to Protect Peoples Living in Voluntary Isolation. 19 December 2022. Available at: <u>https://www.landislife.org/declaration-of-the-international-working-group-gti-piaci-emphasizes-the-urgent-need-to-protect-peoples-living-in-voluntary-isolation-1335/</u>

¹⁵⁴ Granico, Tarsicio. N.D. "Guardians of the forests...or refugees? Indigenous Peoples in voluntary isolation in the Amazon" 2023. Available at: <u>https://wwf.panda.org/discover/knowledge hub/where we work/amazon/amazon views/guardians of the forests or refugees indigenous</u> <u>peoples in voluntary isolation in the amazon/?</u>

¹⁵⁵ Shelton, D., Vaz, A. Huertas Castillo, B. et al. Indigenous Peoples in Voluntary Isolation and Initial Contact, p. 52. International Working Group for Indigenous Affairs (IWGIA) and Instituto de Promoción Estudios Sociales (IPES), 2013. Available at <u>https://www.iwgia.org/images/publications/0617_ENGELSK-AISLADOS_opt.pdf</u>

¹⁵⁶ E.g., academics or practitioners (may be governmental or non-governmental) with cultural, anthropological, and/or human rights expertise in the region where projects are located.

entity's mining-related activities, they may be included in a coordinated process or in separate engagement processes, as decided by the Indigenous Peoples.

NOTE for 2.2.3.3. REVISED. In the 2018 Mining Standard, this was previously partially covered in 2.2.3.2.a. It has been separated out into its own requirement to make it clear that determining the appropriate engagement protocol is something that should be done early in the process. We added, as well, that following existing engagement protocols that have been developed by Indigenous Peoples is expected best practice, if such protocols exist. Previously this was only mentioned in IRMA guidance.

2.2.3.4. In a <u>culturally appropriate</u> manner, the <u>entity</u> discloses to affected and <u>potentially affected</u> <u>Indigenous</u> <u>Peoples</u> (other than those living in voluntary isolation):

- a. Information about proposed, ongoing and past mining-related activities, as relevant; and
- b. The right of Indigenous Peoples to FPIC.

NOTE for 2.2.3.4. In the 2018 Mining Standard, this was 2.2.3.1.b. There are two expectations here, and so they have been separated into sub-requirements.

2.2.3.5. Through collaboration with Indigenous Peoples' representatives and other relevant members of affected and potentially affected Indigenous Peoples, the entity:

- a. Identifies Indigenous Peoples' rights (including <u>customary rights</u>) and interests that may be affected by proposed activities, are being affected by ongoing activities, and/or have been affected by past activities and have not yet been <u>remediated</u>;
- b. Identifies additional studies or assessments needed to determine the range and degree of potential or actual impacts on Indigenous Peoples' rights or interests; and
- c. Identifies if there are capacity issues that may prevent:
 - i. Full and informed participation of Indigenous Peoples' representatives in the FPIC process; and
 - ii. Participation of potentially marginalized or <u>vulnerable groups</u>¹⁵⁷ or individuals from the community in ongoing engagement processes.¹⁵⁸

NOTE for 2.2.3.5. REVISED. In the 2018 IRMA Standard, identifying and addressing participatory impediments were both part of requirement 2.2.3.2. The content of that requirement has now been divided into two requirements: 2.2.3.5, which focuses on identifying the various issues that need to be addressed so that Indigenous Peoples can participate fully in a process of FPIC (i.e., with the information needed and the capacity to do so), and 2.2.3.6, which is focused on addressing any gaps that need to be filled.

CONSULTATION QUESTION 2.2-3:

Background: There has been some confusion as to what exactly meant by the word interests in the phrase 'rights and interests.' Many United Nations reports and other documents refer to interests in various ways in relation to Indigenous Peoples, such as 'environmental and social concerns and interests,' 'rights, interests

¹⁵⁷ Identification of potentially marginalized or vulnerable groups requiring specific focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement in particular, special attention should be paid to traditional participatory structures and power dynamics and those whose voices may not be heard within those structures.

¹⁵⁸ Indigenous Peoples' customary approaches to engagement may not always include participation of women, vulnerable groups or marginalized groups within Indigenous communities. The UN Rapporteur on Indigenous Peoples has written that: "Indigenous Peoples should be encouraged to include appropriate gender balance within their representative and decision-making institutions. However, such gender balance should not be dictated or imposed upon Indigenous Peoples by states or companies, any more than Indigenous Peoples should impose gender balance on them."

Women, men youth, elders, etc. may have different needs, priorities and interests that should be considered and factored into the company's understanding of the project's full impacts, and its own subsequent decision-making processes. It is recommended that any efforts undertaken by the company to find other ways of facilitating involvement of women, vulnerable or marginalized Indigenous Peoples be carried out in coordination with and/or through mutual agreement with the Indigenous Peoples' representative institutions (as suggested by the UN Rapporteur, above, under no conditions should a company impose such processes on Indigenous Peoples).

and concerns of Indigenous Peoples,' 'Indigenous land rights and interests,' and 'strategic interests.' The term 'interests' is also used in relation to other sectors, e.g., industry and community, often in relation to land.

Black's law dictionary has a long definition of 'interest,' but it relates only to interest in property.¹⁵⁹ We have not been able to find any definition or even an explanation of what the term interests might encapsulate in relation to Indigenous Peoples.

We are considering the following definition based on our research and general understanding of the term:

Interest:

A subject of concern; an advantage or benefit; an object or right in property in which one has a stake, share, or involvement; a specified common concern, especially in politics or business.

Question: Are you aware of any sources that provide a definition or at least an explanation of what might constitute the interests of Indigenous Peoples? Is this something that IRMA should be concerned about? Or is are the interests of Indigenous Peoples simply something that will be expressed during discussions with the entity, and therefore not something that needs to be defined by IRMA?

2.2.3.6. The entity collaborates with Indigenous Peoples' representatives to design and implement plans to address any information gaps and capacity needs identified in 2.2.3.5, including providing funding or other support that enables Indigenous Peoples to address capacity issues in their preferred manner.

NOTE for 2.2.3.6. This was previously 2.2.3.4.e in the 2018 Mining Standard. See note for 2.2.3.5.

2.2.4. Processes for Reaching Agreements on Past Impacts and Seeking Free, Prior and Informed Consent for Proposed Activities¹⁶⁰

NOTE for 2.2.4: This criterion has been renamed. It was called 'Determine FPIC Processes' in the 2018 Mining Standard. The new criterion also replaces a criterion called 'Implement FPIC Process' (the requirements from that criterion have been incorporated here).

2.2.4.1. At operations where the FPIC of Indigenous Peoples was not previously obtained (by either the entity or a prior owner/operator) for activities that affected or are continuing to affect the rights or interests of those Indigenous Peoples:

- a. The <u>entity</u>, in <u>collaboration</u> with affected Indigenous Peoples, develops, documents, and implements a mutually agreed remediation (or equivalent) process to obtain agreement on actions that will be taken provide <u>remedy</u> (e.g., <u>mitigation</u>, compensation, provision of benefits, etc.) for any past or ongoing unremediated impacts identified as per 2.2.3.5.a;
- b. If there are impacts on specific people, the process includes input from and remedy for these directly affected individuals; and
- c. The entity engages in the process, in good faith, until a remedy agreement (or equivalent) on actions to remedy any past and present unremediated impacts is reached.

NOTE for 2.2.4.1 2.2.4.1 is NEW. In the 2018 Mining Standard, the Scope of Application section of Chapter 2.2 states that, "At existing mines, where FPIC was not obtained in the past, operating companies will be expected to demonstrate that they are operating in a manner that seeks to achieve the objectives of this chapter. For example, companies may demonstrate that they have the free, informed consent of Indigenous

¹⁵⁹ Black's law definition of interest: In property. The most general term that can be employed to denote a property in lands or chattels. In its application to lands or things real, it is frequently used in connection with the terms "estate." "right," and "title," and, according to Lord Coke, it properly includes them all. . . More particularly it means a right to have the advantage accruing from anything; any right in the nature of property, but less than title; a partial or undivided right; a title to a share. The terms "interest" and "title" are not synonymous. [Edited for ease of reading]

¹⁶⁰ This may be carried out concurrent with 2.2.3. Also, there may be a desire to establish different FPIC processes for different stages of development (e.g., exploration, mining, mineral processing, closure) or based on various triggers (e.g., major expansion of existing facilities, construction of new facilities, etc.). For example, a process to obtain FPIC during the exploration stage may be less onerous than a process established to obtain FPIC for a mining operation, as the mining stage will likely have greater potential impacts on Indigenous Peoples' rights and interests, require more assessment, more dialogue around impact mitigation, remediation compensation, project benefits, etc.

Peoples for current operations by providing evidence of signed or otherwise verified agreements, or, in the absence of agreements, demonstrate that they have a process in place to respond to past and present community concerns and to remedy and/or compensate for past impacts on Indigenous Peoples' rights and interests."

Because this information was contained in the Scope of Application and was not an actual requirement in the standard, it created the potential for inconsistent auditing and interpretation and what some stakeholders and rights holders considered to be a loophole in the IRMA Standard.¹⁶¹

The proposed 2.2.4.1 creates a normative requirement to describe the process that must be followed if FPIC was not obtained previously to initiating mining-related activities. While not FPIC, per se, because prior consent was not given for the activities, the requirement for agreement on remedy is now specifically part of this chapter. This proposal is the outcome of discussions of the Expert Working Group convened to discuss this chapter, and it is important to note that the signing of a remedy agreement is not the same as free, prior and informed consent, or even consent for ongoing activities, unless that is explicitly stated in the agreement.

The signing of remedy agreements has been proposed by others. For example, the Accountability Framework in their 2010 Operational Guidance on Free, Prior and Informed Consent states that "Where a company has caused or contributed to the appropriation of or harm to the lands, territories, or resources of IP/LC without first securing FPIC, a remediation process is required to address these past harms."¹⁶²

CONSULTATION QUESTION 2.2-4: Until the IRMA Board approves changes to the standard (based on input gathered through global stakeholder consultations) IRMA is not making changes to critical requirements (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above). However, we would be interested in knowing if you believe this new requirement should be critical. Why or why not?

CONSULTATION QUESTION 2.2-5: There may be situations in which Indigenous Peoples do not wish to enter into or continue an agreement-making process. If this is the case, should the entity just score 'does not meet' (i.e., zero) on this requirement? Or could they get 'partially meets' or 'substantially meets' if they've made a good-faith effort even if no process is initiated due to Indigenous Peoples' decision not to participate or if Indigenous Peoples decide to terminate discussions?

2.2.4.2. In situations where proposed mining-related activities (for new projects or at existing operations) may result in new or increased impacts on the rights or interests of Indigenous Peoples, a process to obtain the FPIC of Indigenous Peoples¹⁶³ for the proposed activities is undertaken, according to the following:

- a. If there is more than one distinct group of Indigenous Peoples (e.g., nation, population, community) whose rights may be affected by the entity's mining-related activities, each is included in an FPIC process;¹⁶⁴
- b. If the Indigenous Peoples have a protocol in place for seeking their FPIC for proposed activities, the entity abides by the protocol unless changes are agreed by the Indigenous Peoples;

¹⁶¹ International Work Group for Indigenous Affairs and Indigenous Peoples Rights International. 2021. The UN Guiding Principles on Business and Human Rights and Indigenous Peoples: Progress achieved, the implementation gap and challenges for the next Decade. p. 23. <u>https://www.iwgia.org/en/resources/publications/305-books/4419-the-un-guiding-principles-on-business-human-rights-and-indigenous-peoples-</u> <u>%E2%80%93-progress-achieved,-the-implementation-gap-and-challenges-for-the-next-decade.html</u>

¹⁶² Accountability Framework. 2019 (rev.2020). Operational Guidance on Free, Prior and Informed Consent. <u>https://accountability-framework.org/fileadmin/uploads/afi/Documents/Operational_Guidance/OG_FPIC-2020-5.pdf</u>

¹⁶³ If there is more than one distinct Indigenous Peoples' group (e.g., nation, population) that may be affected by the entity's mining-related activities, they may be included in coordinated or separate FPIC processes, as desired by the Indigenous Peoples.

¹⁶⁴ They may be included in coordinated or separate FPIC processes, as desired by the Indigenous Peoples.

- c. If no protocol exists, the entity supports Indigenous Peoples to develop, document, and implement a process that aligns with the principles of FPIC;¹⁶⁵ and
- d. In all cases, the FPIC process, at minimum:
 - i. Specifies the decision-making processes of the respective parties;
 - ii. Outlines any Indigenous Peoples' customs and protocols to be respected;
 - iii. Includes discussions on potential impacts of proposed <u>mining-related activities</u>, actions that could be taken to prevent, minimize, restore and compensate for impacts on Indigenous Peoples rights and environmental, social, cultural and economic impacts, and actions that could be taken to provide sustained benefits to Indigenous Peoples; and
 - iv. Includes the conditions under which the entity may (or may not) request renewal of discussions if the process fails to result in consent for proposed activities.

NOTE FOR 2.2.4.2. REVISED. This requirement combines 2.2.4.1 (now 2.2.4.2.a) and 2.2.4.2 from the 2018 Mining Standard. Documenting the process used to be in 2.2.5.1 but is now incorporated here.

2.2.4.2.b and c reflect what was previously 2.2.4.2 in the 2018 Standard. However, we have revised it to say that rather than jointly determine an FPIC process that the entity "support" the Indigenous Peoples to determine their own agreed FPIC process. This may be, for example, providing funding for Indigenous Peoples to access facilitators to aid them in establishing a process by which they can, as a community, come to agreement on a process to be followed that accords with their customary decision-making processes or creates an agreed new decision-making process, or it could simply be that the entity recognizes that development of such a process may take time.

2.2.4.2.d is NEW. We are proposing that the FPIC discussions need to include negotiations on the mitigation of impacts and provision of benefits. While the Indigenous Peoples should lead in terms of the content of these discussions, it seems productive to include a minimum set of expectations here. Input on this is welcome.

And we are proposing that these discussions also outline if and how the entity can request to renew FPIC discussions if they fail to obtain consent for their initial proposal. There may be cases when Indigenous Peoples say no, and that is the end of the discussion. There may also be cases when they say no to a certain proposal, but are open to further discussions if significant enough changes can be made to proposal. These conditions should be established early in the process, so that the entity does not continue to approach Indigenous Peoples for discussions if the Indigenous Peoples are not interested in such discussions. This is related to requirement 2.2.4.3.b, below.

2.2.4.3. (Critical Requirement)

Proposed activities only proceed with the <u>FPIC</u> of all <u>affected communities</u> of <u>Indigenous Peoples</u>. If Indigenous Peoples' representatives clearly communicate that they do not consent to proposed activities, or that they do not wish to initiate or continue with <u>FPIC</u>-related discussions:¹⁶⁶

- a. The entity ceases to pursue the proposed activities; and
- b. Further discussions are only renewed in accordance with conditions agreed in 2.2.4.2.d.iv.

¹⁶⁵ The entity could support the development of the FPIC process by providing funding or other resources to provide Indigenous Peoples with the technical or legal support that may be necessary for them to develop an FPIC process. Support could also be shown by respecting the Indigenous Peoples' timeline for developing its own protocol.

The process could include the following elements: Identify the decision-makers and parties to the negotiation; Specify the decision-making processes of the respective parties; Identify the role, if any, of outside counsel, advisors, facilitators or mediators; Come to a common understanding of any applicable laws or principles to guide the FPIC process; Agree on time periods and scheduling; Identify any Indigenous Peoples' customs and protocols to be respected; Agree on measures to create an environment without coercion or duress; Determine how the affected Indigenous Peoples will participate in the analysis of impacts and risk; Determine formats and protocols for sharing information. (Source: The Accountability Framework. 2019. Operational Guidance on Free, Prior and Informed Consent. https://accountability-framework.org/fileadmin/uploads/afi/Documents/Operational_Guidance/OG_FPIC-2020-5.pdf)

¹⁶⁶ This communication may occur prior to, during, or as an outcome of the FPIC process. If consent has already been provided through an FPIC process, then it is expected that any agreements signed would also outline the conditions under which future FPIC discussions may or may not take place.

NOTE FOR 2.2.4.3. This combines concepts from 2.2.2.2, 2.2.2.3 and 2.2.2.4 from the 2018 Mining Standard, which were found in the General Requirements criterion. We are proposing to delete that criterion, and so have moved these elements here. This concept was also included, but stated in a slightly different way, in 2.2.6.1 of the 2018 Mining Standard.

This one requirement now consolidates the expectation that new (proposed) activities should only proceed with consent of Indigenous Peoples.

The requirement is critical, which means that in the IRMA system a site that does not obtain the consent of Indigenous Peoples for proposed activities cannot reach the higher achievement levels in IRMA (unless, for example, a mine proposed an expansion, the Indigenous Peoples did not provide consent and, as a result, the entity decided to not move ahead with the proposed expansion activities). See note on 'Critical Requirements in this Chapter,' above.

2.2.4.4. The entity offers to provide funding to Indigenous Peoples to select and hire technical and/or legal advisors to support them during a remediation (or equivalent) process or FPIC process (2.2.4.1 and 2.2.4.2, respectively). Any funding is provided in a manner agreed to by Indigenous Peoples.

NOTE FOR 2.2.4.4. REVISED. The concept of identifying capacity issues and providing funding or other means to address capacity issues was in the 2018 Mining Standard (requirement 2.2.3.2.d). This requirement makes it clear that "informed" consent means that Indigenous Peoples have the technical capacity needed to understand and evaluate proposals, and if such capacity does not exist, it is incumbent on the entity proposing the development to help address that need.

Previously, this support was specifically stated in relation to the FPIC process, and we are proposing that it also be extended to the remediation process in 2.2.4.1.

We have also specified that funding must be offered by the entity (bearing in mind that Indigenous Peoples may refuse), and if accepted by the Indigenous Peoples and that it must be provided in a manner agreed to by them (i.e., to avoid entity offering to directly hire lawyers or technical experts rather than provide funding for Indigenous Peoples to do so themselves).

2.2.4.5. The entity informs members of the affected Indigenous Peoples' communities of the remediation (or equivalent) process or <u>FPIC</u> process that is to be followed, unless the Indigenous Peoples' representatives explicitly request otherwise.

NOTE FOR 2.2.4.5. REVISED. This was 2.2.4.3 in the 2018 Mining Standard. The original requirement expected that this information be made publicly available. We are proposing to change it to a requirement that members of Indigenous Peoples communities be informed of the FPIC or remediation process, so that they are aware that these processes are occurring and can be in touch with their representatives if they have input and concerns that they want to be reflected in the discussions.

Public disclosure of the process that was followed and the outcomes of the process are addressed in 2.2.5.7.

2.2.4.6. If the processes in 2.2.4.1 and 2.2.4.2 result in a <u>remediation</u> agreement (or equivalent) for addressing past and present impacts, or <u>FPIC</u> for proposed activities:

- a. A draft agreement is prepared that includes the terms and conditions reached during negotiations, including, if relevant:
 - i. Agreed actions to be taken to prevent, mitigate, and compensate for potential and actual adverse impacts on the Indigenous Peoples' right and interests;
 - ii. Agreed actions to be taken to deliver positive benefits to Indigenous Peoples;
 - iii. Terms related to the monitoring of commitments; and

- iv. How the parties will resolve any future disputes;¹⁶⁷
- b. Affected community members are provided an opportunity to verify that the agreement's terms and conditions reflect what was understood by them during negotiations; and
- c. The agreement is signed or otherwise validated by representatives of the Indigenous Peoples and the entity.

NOTE FOR 2.2.4.6. REVISED. This was previously requirement 2.2.5.3., which stated that entities had to sign and make public (if accepted by Indigenous Peoples) a binding agreement outlining the terms and conditions reached.

In 2.2.4.6 we expanded the language to be more specific about the content of the agreement (2.2.4.6.a.i to iv) and added sub-requirement (b) based on Expert Working Group discussions. Sub-requirements (c) reflects that the agreement be binding by having it be signed/validated. We moved the requirement for making the agreement public (if agreed by the Indigenous Peoples) to 2.2.4.7.

2.2.4.7. The <u>entity</u> publicly reports, in a manner agreed by the <u>Indigenous Peoples</u>, the agreement-making or <u>FPIC</u> process that was followed, and the outcome of those processes. Any agreements reached are made public unless otherwise decided by the Indigenous Peoples.

NOTE for 2.2.4.7. The content here is not new. It reflects previous expectations in 2.2.5.1 and 2.2.5.2 of the 2018 Mining Standard. We altered the language slightly to refer to 'agreement-making' processes, which include agreements for remedy related to past impacts and FPIC.

2.2.5. Implementation Plan and Monitoring of Agreements

NOTE for 2.2.5: This criterion is NEW. It includes requirements from a criterion in the 2018 Mining Standard that is proposed for deletion (2.2.7 'Implementation and Ongoing Engagement').

2.2.5.1. An Indigenous Peoples' Development Plan (or equivalent) guides the implementation of the agreement reached in 2.2.4.6. The plan:

- a. Is developed by competent professionals;
- b. Outlines the agreed specific actions to minimize, <u>mitigate</u>, or compensate for potential and actual adverse environmental and social impacts on Indigenous Peoples' right and interests, and actions to optimize positive benefits;
- c. Includes appropriate performance criteria and indicators agreed with Indigenous Peoples¹⁶⁸ to enable evaluation of the effectiveness of actions over time as well as a plan to conduct monitoring and evaluation;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;¹⁶⁹
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE for 2.2.5.1. NEW. Previously, there was no requirement for an actual plan that outlined the actions to be taken by the entity to honor the agreements with Indigenous Peoples. This requirement is similar to what

¹⁶⁷ This should identify a mechanism or a process to be followed if, for example, there are breaches of the agreement or commitments in the agreement, or differences of opinions regarding the interpretation and application of the FPIC agreement. The process could include one or more of the following steps: dialogue, mediation, independent arbitration, adjudication via an international for a for grievances, etc.

¹⁶⁸ Appropriate performance criteria and indicators must include those required by host country law (e.g., regulator maximum concentrations of certain chemicals in air or water), and, as relevant, those associated with external standard (e.g., IRMA water quality criteria in Chapter 4.2), those agreed with stakeholders, or indicators that are tied to an identified baseline (e.g., annual GHG emissions don't exceed emissions baseline measured in 2002).

¹⁶⁹ If work is carried out by third party contractors, there needs to be a staff employee responsible for overseeing quality of work, timelines, etc.

is required in IFC Performance Standard 7-Indigenous Peoples,¹⁷⁰ and the sub-requirements align with management plan expectations in other IRMA chapters.

In addition to developing an actual plan to carry out the agreed actions, we are also proposing that a monitoring and evaluation plan be developed. Although not specifically required in IFC's Performance Standard, the guidance notes for that Performance Standard do include an Annex that includes suggested elements related to an "Indigenous Peoples Development Plan," including monitoring, evaluation and reporting.¹⁷¹ Reporting in the IRMA chapter is covered in 2.2.6.2.

2.2.5.2. The entity tracks and documents the status of the commitments made in the agreement (see 2.2.4.6.a).

NOTE for 2.2.5.2. This was included in 2.2.7.1 of the 2018 Mining Standard. It was separated out because this is the entity's responsibility, while collaboration on monitoring the agreement (now 2.2.5.3, below) with Indigenous Peoples.

2.2.5.3. The entity collaborates with Indigenous Peoples to monitor:

- a. The commitments made in the agreement (see 2.2.4.6.a); and
- b. The implementation and effectiveness of actions included in the Indigenous Peoples Development Plan (see 2.2.5.1).

NOTE for 2.2.5.3. This was included in 2.2.7.1 of the 2018 Mining Standard. It has been expanded to include monitoring of commitments made in the agreement as well as monitoring the implementation of the management plan.

2.2.6. Ongoing Engagement

NOTE for 2.2.6: This criterion is NEW. It includes requirements from a criterion in the 2018 Mining Standard that is proposed for deletion (2.2.7. Implementation and Ongoing Engagement).

2.2.6.1. The <u>entity collaborates</u> with <u>Indigenous Peoples</u> to develop and implement a mechanism or mechanisms through which complaints or <u>grievances</u> related to the <u>entity's actions and activities</u> can be heard and addressed. At least one mechanism is in place that allows for complaints to be filed by individual members of affected Indigenous Peoples communities, and community members are aware of this mechanism.¹⁷²

NOTE for 2.2.6.1. This is NEW. It was added based on discussions by the Expert Working Group, because even though IRMA has a chapter on Grievance Mechanism it was felt there may be the need for specific mechanism(s) to address Indigenous Peoples concerns – and that such mechanisms need to be designed and implemented in collaboration with Indigenous Peoples specifically. There was also concern that one mechanism may not be sufficient, especially in situations where Indigenous Peoples' communities are not entirely cohesive or united in their beliefs and perspectives. In such cases, there must be an accessible mechanism that allows any person to contact the company to express concerns or complaints.

CONSULTATION QUESTION 1.4-2 (repeated from Chapter 1.4 – 'Complaints and Grievance Mechanism and Access to Remedy')

Background: Chapter 1.4 - 'Complaints and Grievance Mechanism and Access to Remedy' includes a range of requirements surrounding the existence of an accessible and effective operational-level grievance mechanism. It is not possible to score well on Chapter 1.4 if the mechanism does not have certain quality-related characteristics. Other chapters (i.e., human rights, gender, resettlement, security, ASM) also have

¹⁷⁰ See para. 8 and related guidance notes, and also Annex A of: IFC. 2012. Guidance Note for Performance Standard 7 – Indigenous Peoples. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

¹⁷¹ Ibid. See Annex A, provision (i) Monitoring, Evaluation and Reporting.

¹⁷² If a mechanism established as per Chapter 1.4 fulfills this requirement, then no additional mechanisms need be developed unless deemed necessary by the Indigenous Peoples.

requirements relating to the existence of a grievance mechanism;¹⁷³ however, the requirements in each of those chapters ask only that a mechanism is in place that allows grievances to be filed and addressed, but they do not speak to the overall quality of that mechanism. This is an approach proposed by IRMA to avoid too much repetition across chapters. However, this creates a situation in which an entity could theoretically score 'fully meets' on the grievance-related requirement in an individual chapter (which in most cases only asks that stakeholders have "access to" a grievance mechanism), even if the grievance mechanism as a whole is not an effective one (as reflected in the overall score for Chapter 1.4).

Question: Should an entity's score on grievance-related requirements within individual non-grievance-specific chapters be restrained or linked to the overall score that the entity gets on the grievance chapter (Chapter 1.4) as a whole?

For example, if a site scores 80% on Chapter 1.4, the most the site could receive for a grievance requirement in the other chapters would be a 'substantially meets,' but if a site scores 100% on Chapter 1.4 then, assuming the mechanism can handle grievances specific to the other chapters, they could possibly get a 'fully meets' rating on those grievance requirements.

2.2.6.2. Ongoing engagement with Indigenous Peoples:

- a. Includes the regular sharing of information and <u>consultation</u> with a diversity of members and representatives of <u>affected</u> communities of Indigenous Peoples on the <u>entity's mining-related</u> activities;
- b. Includes regular updates on the status of commitments made in any agreements and the implementation and effectiveness of actions included in the Indigenous Peoples Development Plan; and
- c. Continues throughout all stages of the project's/operation's life cycle.

NOTE for 2.2.6.2. This was 2.2.7.2 in the 2018 Mining Standard. The original requirement simply stated that engagement needed to occur throughout the life cycle. We are proposing to add sub-requirements (a) and (b) to indicate the various types of information should be shared on a regular basis.

We have added clarification, as well, that information sharing and engagement is with Indigenous Peoples communities generally, not just Indigenous Peoples representatives. This aligns with other standards such as IFC Performance Standard 7, which requires that ongoing engagement not only involve Indigenous Peoples' representative bodies but also "Be inclusive of both women and men and of various age groups in a culturally appropriate manner."¹⁷⁴

NOTES

<u>FPIC</u>, in the context of this standard, requires that engagement with <u>Indigenous Peoples</u> be free from external manipulation, coercion and intimidation; that potentially affected <u>Indigenous Peoples</u> be notified that their consent will be sought, and that notification occur sufficiently in advance of commencement of any <u>mining-related activities</u>; that there be full disclosure of information regarding all aspects of the proposed <u>mining project</u> in a manner that is accessible and understandable to the <u>Indigenous Peoples</u>; and that <u>Indigenous Peoples</u> can fully approve, partially or conditionally approve, or reject a project or activity, and companies will abide by the decision.

The chapter uses the term Indigenous Peoples, recognizing that there may be peoples for whom this chapter applies who prefer to use other terms such as tribal, aboriginal, First Nations, *Adivasi*, etc., but who have the right to <u>FPIC</u> according to international and/or <u>host country laws</u>. For the purposes of interpreting this standard IRMA uses a definition presented in and the Glossary of Terms Used in this Chapter, below, which is from guidance published by the United Nations Permanent Forum on Indigenous Peoples.

¹⁷³ See: Chapter 1.3, requirement 1.3.3.3; proposed Chapter 1.X, requirement 1.X.3.2; Chapter 2.4, requirement 2.4.3.3; Chapter 3.5, requirement 3.5.6.3; and Chapter 3.6, requirement 3.6.2.1.d.

¹⁷⁴ IFC. 2012. Guidance Note for Performance Standard 7 – Indigenous Peoples. Paragraph 9. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Customary Rights

Rights that arise from a behavior or act that is repeated over time under the belief that it is obligatory, and due to repetition and acceptance acquire the force of law within a geography or society. Such rights may be based on patterns of long-standing land and resource usage in accordance with Indigenous Peoples' and local communities' customary laws, values, customs, and traditions. Such rights apply to the lands, resources, and territories that Indigenous Peoples and local communities have traditionally owned, occupied, or otherwise used. They do not apply to lands, territories, and resources that these groups have acquired in other ways, such as by purchase or part of a compensation package. These rights are a collective human right of Indigenous Peoples and local communities that exists whether or not a title from the State has been issued. Source: Accountability Framework. https://accountability-framework.org/the-framework/contents/definitions/

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Indigenous Peoples Living in Initial Contact

Indigenous Peoples or segments of Indigenous Peoples who maintain intermittent or sporadic contact with the majority non-Indigenous population, generally used in reference to peoples or segments of peoples who have initiated a process of contact recently. However, "initial" should not necessarily be understood as a temporal term, but as a reference to the scant extent of contact and interaction with the majority non-Indigenous society. Indigenous Peoples in initial contact are peoples who were previously in voluntary isolation and who for some reason, voluntary or otherwise, came into contact with members of the surrounding population, and although they maintain a certain level of contact, they are not fully familiar with nor do they share the patterns and codes of social relations of the majority population.

Source: Inter-American Commission on Human Rights. Rapporteurship on the Rights of Indigenous Peoples. "Indigenous Peoples in voluntary isolation and initial contact in the Americas: Recommendations for the full respect of their human rights." <u>https://www.oas.org/en/iachr/indigenous/docs/pdf/Report-Indigenous-Peoples-Voluntary-Isolation.pdf</u>

Indigenous Peoples Living in Voluntary Isolation

Indigenous Peoples or segments of Indigenous Peoples who do not maintain sustained contacts with the majority non-Indigenous population, and who generally reject any type of contact with any person who is not part of their own people. They may also be peoples or segments of peoples previously contacted and who, after

intermittent contact with the non-Indigenous societies, have returned to a situation of isolation and break the relations of contact that they may have had with those societies.

Source: Inter-American Commission on Human Rights. Rapporteurship on the Rights of Indigenous Peoples. "Indigenous Peoples in voluntary isolation and initial contact in the Americas: Recommendations for the full respect of their human rights." <u>https://www.oas.org/en/iachr/indigenous/docs/pdf/Report-Indigenous-Peoples-Voluntary-Isolation.pdf</u>

Indigenous Peoples' Rights

These include traditional rights, which are defined as "Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit." It also encompasses the rights of Indigenous and Tribal Peoples established by the United Nations Declarations of the Rights of Indigenous Peoples (UNDRIP).

Source: Adapted from Forest Stewardship Council.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Potentially Affected Indigenous Peoples

Indigenous Peoples who have traditionally owned, occupied, or otherwise used or acquired lands, territories, and/or resources that may be affected by mining-related activities.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision

which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle, the company should take into account the concerns and views expressed by stakeholders in the final decision.

Free, Prior and Informed Consent (FPIC)

A process and an outcome that is based on: engagement that is free from external manipulation, coercion and intimidation; notification, sufficiently in advance of commencement of any activities, that consent will be sought; full disclosure of information regarding all aspects of a proposed project or activity in a manner that is accessible and understandable to the people whose consent is being sought; acknowledgment that the people whose consent is being sought can collectively approve or reject a project or activity, and that the entities seeking consent will abide by the decision.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which the project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules, regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project or operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Indigenous Peoples

An official definition of "indigenous" has not been adopted by the United Nations system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of "indigenous" includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic or political systems; maintain distinct languages, cultures and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a

preference to use other terms such as: Tribes, First Peoples, First Nations, Aboriginals, Adivasi and Janajati. All such terms fall within this modern understanding of "Indigenous."

Source: Adapted from United Nations Permanent Forum on Indigenous Issues, Fifth Session, "Fact Sheet 1: Indigenous Peoples and Identity."

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Remediation/Remedy (including in relation to human rights impacts or grievances)

Remediation and remedy refer to both the processes of providing remedy for an adverse impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

REVISED. Added reference to grievances.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected or protected.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 2.3 Obtaining Community Support and Delivering Benefits

NOTES ON THIS CHAPTER: Changes to this chapter were relatively minor. There were no requirement/criterion deletions; the modifications and additions to requirements are outlined below.

Proposed additions and changes:

- In this chapter, we added clarifications to terms such as transparency, good governance, culturally appropriate and more onus on the entity to undertake more proactive (2.3.3.3) and predictable (2.3.3.5) approach to consultations. Other small revisions to organization of sub-requirements.
- We proposed making local procurement a standalone requirement (2.3.3.7) in the 2018 Mining Standard it was grouped in with local development opportunities, but they are distinct as the latter is not based on philanthropy but rather a business relationship that can benefit the supplier and purchaser). We also proposed that the procurement policy includes minimum expectations related to supplier environmental, labor, human rights, and social standards (2.3.3.6).

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

There is widespread acknowledgement from extractive industries that efforts spent on building respectful relationships, responding to community and Indigenous Peoples' concerns, and minimizing project-related impacts can be beneficial to both companies and affected communities.

Mining companies typically contribute national and local economic benefits through payments in taxes and royalties and can contribute even more by procuring goods and services from the host country. Leading companies also recognize the need for delivering additional benefits to affected communities, and that benefits are best defined by the communities themselves. When communities' needs and aspirations are not at the forefront of mining company investments, experience shows that efforts often fail to deliver long-lasting benefits. Increasingly, efforts are being made to ensure that community investments made by mining companies provide both immediate and ongoing benefits that last beyond the life of the mining operation.

TERMS USED IN THIS CHAPTER

Affected Community
Broad Community
Support Closure Collaboration
Consultation Entity NEW Exploration
NEW Indigenous Peoples Mineral
Processing NEW Mining NEW Operation
NEW Project NEW Stakeholder
Supplier Vulnerable Group

These terms appear in the text with a dashed underline. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

In addition to providing tangible benefits to affected communities, there is a growing need for mining companies to obtain and maintain broad community support for their projects and operations.¹⁷⁵ A high level of community

¹⁷⁵ For example, ICMM members recognize that: "Successful mining and metals projects require the support of a range of interested and affected parties. This includes both the formal legal and regulatory approvals granted by governments and the broad support of a company's host communities." (ICMM. 2013. Indigenous Peoples and Mining. Position Statement. <u>https://www.icmm.com/en-gb/members/member-</u>commitments/position-statements/indigenous-peoples-and-mining-position-statement)

support can provide reassurance to an entity's shareholders and investors, and steps taken by a company to earn community support can foster the development and maintenance of strong relationships with affected communities.

OBJECTIVES/INTENT OF THIS CHAPTER

To obtain and maintain credible broad support from affected communities; and produce tangible and equitable benefits to communities that are in alignment with their needs and aspirations and sustainable over the long term.

SCOPE OF APPLICATION

RELEVANCE: This chapter is assumed applicable to all <u>exploration</u>, <u>mining</u> and <u>mineral processing projects</u> and <u>operations</u>, and if an entity believes it is not relevant then it needs to provide evidence to that effect to IRMA auditors. This may be done, for example, through maps or other documentation demonstrating that there are no communities that may be affected by a proposed project and/or no communities being affected by ongoing operations or proposed <u>major modifications</u> to operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Obtaining Community Support and Delivering Benefits Requirements

2.3.1. Commitments to Affected Communities

2.3.1.1. The entity publicly commits to maintaining or improving the social and economic wellbeing of affected communities.

NOTE FOR 2.3.1.1: NEW. We removed the reference to health, as that is covered in Chapter 3.3, and separated out the previous sub-requirement (b) related to a commitment to broad community support for projects that are being developed. Instead, we are proposing that entities be required to demonstrate that they have obtained and are maintaining such support in 2.3.2.1, below.

2.3.2. Obtaining and Maintaining Community Support¹⁷⁶

NOTE FOR 2.3.2: We have changed the title of this criterion to better reflect the expectations that community support must not only be obtained but also maintained over time. Also, in the requirements below, we combined two requirements, and removed the qualifier 'for new mines' and 'for existing mines' from 2.3.2.1 and 2.3.2.2 as IRMA is moving away from this distinction of new versus existing mines. Instead, all projects/operations will be expected to demonstrate that they have broad community support no matter their phase of development.

2.3.2.1. The entity demonstrates that broad community support for projects/operations has been obtained through a local democratic process or governance mechanism, or another process or method agreed to by the entity and an affected community (e.g., a referendum) undertaken to gauge the level of support for a project/operation, and/or a signed agreement between the entity and affected communities (e.g., a benefit sharing agreement). In all cases, the process used to gauge community support and/or reach an agreement:

- a. Occurs after the entity carries out <u>consultations</u> with relevant <u>stakeholders</u> regarding potential or actual impacts and benefits of the project/operation;
- b. Is transparent;
- c. Is free from coercion or manipulation; and
- d. Includes the opportunity for meaningful input by all potentially affected community members, including different genders, ages, ethnicities, and any potentially <u>vulnerable groups</u>,¹⁷⁷ prior to carrying out any decision-making or agreement-making process.

NOTE FOR 2.3.2.1. REVISED. This was 2.3.2.2 in the 2018 Mining Standard. In addition to local votes or referenda related to projects/operations, we are proposing to include signed agreements as possible evidence of broad community support. However, in such cases there must be evidence that potentially affected community members were aware of the impacts and benefits of the project/proposal and had the opportunity to provide input into any agreement-making process prior to an agreement being signed (just as there would need to be this opportunity prior to any vote/referenda).

If no such process has occurred, then we are proposing that an entity will not meet this requirement. However, the entity could request that such a community process occurs, or could sign an agreement with a community at any point, and demonstrate that it meets this requirement.

Also, even without meeting this requirement an entity could demonstrate in 2.3.2.2 that it is maintaining broad community support in 2.3.2.2 (even though broad community support was not officially obtained). See Note for 2.3.2.2, below.

2.3.2.2. The entity demonstrates that broad community support from communities affected by the project/operation is being maintained over time.¹⁷⁸

NOTE FOR 2.3.2.2. REVISED. This was 2.3.2.3 in the 2018 Mining Standard, and previously applied to existing mines. The requirement now applies to both projects (e.g., in the exploration or development stages) and operating mines/processing facilities, because even if evidence of broad community support is initially obtained, it must be maintained throughout the life cycle.

¹⁷⁶ The requirements in 2.3.2 apply to non-Indigenous communities. If an affected community is an Indigenous Peoples' community, the entity is required to obtain the free, prior and informed consent (FPIC) of that community (as per Chapter 2.2). An entity may need to obtain FPIC from Indigenous Peoples and also demonstrate that it has broad community support for the same project, if there are any communities of non-Indigenous Peoples also affected by the mine.

¹⁷⁷ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate without particular considerations/accommodations; this often includes people with disabilities, socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices or household duties deter participation (i.e., women, elderly, children), etc. Additional guidance will be provided in the IRMA Guidance Document.

¹⁷⁸ This also may be referred to as social license to operate, or community support, etc.

CONSULTATION QUESTION 2.3-1

Background: 'Broad community support' neither requires nor implies 100% agreement in the community. Therefore, even if a democratic vote is taken or an agreement signed there will almost always be some community members who are supportive of a project or operation, and some who are opposed (see a similar discussion related to free, prior and informed consent (FPIC) in <u>CONSULTATION QUESTION 2.2-1</u> in Chapter 2.2).

Furthermore, even if agreements have been signed or there was at some point in time a community vote, etc., sentiments can change over time: opposition may emerge or increase if entities are not responsive to community concerns and/or do not manage social or environmental impacts well; or support may increase if efforts are made to create positive opportunities or benefits such as jobs or training programs. As a result, at one point in time there may be significant enough community-based opposition to say that a site has not obtained or maintained broad community support, and a few years later this situation could reverse.

Ultimately, at every audit the auditors will need to determine about whether a project /operation has broad community support based on the weight of evidence that they have reviewed. Typically, auditors:

- Carry out interviews with affected community members, local and regional non-governmental organizations, and local authorities to understand any processes, events, or outcomes that might indicate presence/absence or change in level of broad community support; and
- Review current social and traditional media to ascertain community opinions and responses to the entity/project.

IRMA will continue to train auditors so that the narratives that accompany this requirement in the public audit report reflect the weight of evidence (i.e., any positive support and any opposition that may exist) that led to their conclusions. We will also develop additional guidance and training for auditors on how to assess/factor in the presence of some opposition (i.e., how much weight to give to a handful of negative articles, a few oppositional tweets, a group of unhappy community members, etc.).

Question: Are there specific metrics that can consistently and objectively reflect whether or not broad community support is being maintained? Or is it enough that auditors weigh the evidence and are transparent about their findings?

2.3.3. Planning and Delivering Community Benefits

2.3.3.1. The entity, in collaboration with affected communities and other relevant stakeholders (including workers and local government), develops a <u>culturally appropriate</u> participatory planning process to guide the entity's contributions to community development initiatives and benefits in affected communities.¹⁷⁹ The planning process:

a. Facilitates participation by a broad spectrum of the community (including different genders, ages, ethnicities, and any potentially vulnerable groups);¹⁸⁰

¹⁷⁹ "Relevant stakeholders" may include, for example, local economic planning entities, community service groups, social services agencies, landuse focused groups, chambers of commerce, artisanal and small-scale mining representatives, faith-based groups, school boards, conservation organizations, etc.

[&]quot;Community initiatives" may include any projects or undertakings that support the community, such as infrastructure, training programs, social programs, scholarships, mentorships, grants, etc.

¹⁸⁰ Note that the purpose of including a broad range of stakeholders is to ensure that benefits to communities are not confined to a few, but rather are shared throughout the community. This approach should also aid in reducing potential conflicts within communities that could arise if some groups or individuals are viewed as gaining benefits while others do not.

Which stakeholders must be included and what may constitute a 'vulnerable group' requiring additional focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those who are not able or willing to participate in planning processes without particular considerations/accommodations; this often includes people with disabilities,
- b. Adheres to principles of good governance, including:
 - i. An agreed set of procedures to guide the process; and
 - ii. An agreed set of criteria for how initiatives and beneficiaries will be selected;
- c. Adheres to the principle of transparency, meaning that:
 - i. Information on the planning process and procedures and are widely available and understood within the community; and
 - ii. The planning process and any outcomes, decisions, and/or agreements are documented and made publicly available in languages and formats that are understandable to <u>affected communities</u>.

NOTE FOR 2.3.3.1. REVISED. This requirement combines 2.3.3.1 and 2.3.3.2 from the 2018 Mining Standard, as both requirements related to the same participatory process. We added a reference to the need for the planning process to be culturally appropriate.

More detail was added on what was meant by good governance and transparency. Previously, this information was in the IRMA guidance for this chapter,¹⁸¹ but to increase consistency in expectations we are proposing to add it here.

2.3.3.1.c.ii used was requirement 2.3.3.5 in the 2018 Mining Standard. Since it relates to transparency, it was moved here.

2.3.3.2. <u>Affected communities</u> are offered access to funding for mutually agreed-upon experts to aid in the participatory process (e.g., as facilitators and/or community advisors) if such assistance is not provided by the appropriate public authorities.

NOTE FOR 2.3.3.2. REVISED. This was requirement 2.3.3.3 in the 2018 Mining Standard. It stated, "If requested by the community and not provided by the appropriate public authorities, the operating company shall provide ..." – however, this was difficult to audit because if the communities didn't know this was available, they were unlikely to ask for it, and if they didn't ask for it, there was nothing to audit. We therefore altered the language in 2.3.3.2 to put the onus on the entity to explicitly offer this assistance, in line with similar changes in other chapters. We also added "e.g., as facilitators and/or community advisors" to guide entities and auditors as to what form this assistance might take.

2.3.3.3. Community contributions include:

- a. Initiatives that benefit a broad spectrum of the community (e.g., women, men, children, youth, and vulnerable and traditionally marginalized groups) and are <u>culturally appropriate</u>; and
- b. Mechanisms that can be self-sustaining after <u>closure</u> of the operation (including building community capacity to oversee and sustain any projects or initiatives agreed upon through negotiations).

NOTE FOR 2.3.3. REVISED. In the 2018 Mining Standard, this was requirement 2.3.3.4, and it had three sub-requirements. We separated out the previous 2.3.3.4.a, which referred to local procurement opportunities (now addressed in the new 2.3.3.6 below). We added a reference to the need for the initiatives to be culturally appropriate.

2.3.3.4. In <u>collaboration</u> with the community, the <u>entity</u> establishes and implements a procedure to regularly monitor the effectiveness of any mechanisms or agreements developed to deliver community benefits, based on agreed-upon indicators, and to evaluate if changes need to be made to those mechanisms or agreements.¹⁸²

socially or geographically marginalized groups, those in a state of poverty, the illiterate, groups for whom local cultural practices or household duties deter participation (i.e., women, elderly, children), etc. Additional guidance will be provided in the IRMA Guidance Document.

¹⁸¹ See IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). Explanatory Note for 2.3.3.2. Available at: <u>https://responsiblemining.net/resources/#full-documentation-and-guidance</u>

¹⁸² Note that in Chapter 1.5 (Financial Transparency and Anti-Corruption), requirement 1.5.1.2.c.iv, entities are also required to public disclose "Project/operation-specific social expenditures, including the names and functions of beneficiaries."

NOTE FOR 2.3.3.4. REVISED. This was requirement 2.3.3.6 in the 2018 Mining Standard. We added language to indicate that the site must <u>establish and implement a procedure</u> to regularly monitor and assess revise the effectiveness of community initiatives. This more systematized approach reflects comments from stakeholders suggesting more predictability in terms of reviews and revisions of community initiatives.

2.3.3.5. The entity develops and implements a procurement policy (or equivalent) that:

- a. Sets out minimum environmental, labor, human rights, and social standards for <u>suppliers</u> of goods and services to the <u>project/operation</u>;
- b. Includes targets for sourcing from and supporting local suppliers and businesses; and
- c. Is communicated to suppliers.

2.3.3.6. The <u>entity</u> monitors its <u>suppliers</u> for compliance with its policy and evaluates its own performance against its local procurement targets. Where supplier compliance is not occurring, or targets are not being met, the entity develops and implements an action plan to improve supplier compliance and its own performance.

NOTE FOR 2.3.3.5 and 2.3.3.6. NEW. This is a new approach. Previously, a reference was made to procurement in requirement 2.3.3.4 in the 2018 Mining Standard; however, IRMA has received a suggestion that the Standard should separate local procurement from the participatory planning process for community development initiatives into a separate, standalone requirement. This is reasonable, as local procurement is another means to provide benefits at the local level but is not based on philanthropy but rather a business relationship that can benefit the supplier and purchaser.

The creation of these requirements is also in response to feedback received on IRMA's draft Mineral Processing Standard. That standard proposed requirements for mineral processing sites that include due diligence on environmental, social and governance (ESG) performance for suppliers of raw materials, and suggestions were made that suppliers providing other goods and services should also be subject to some due diligence. We are not proposing to use the term governance here, but in addition to environmental and social expectations we are proposing to add human rights and labor, as these issues are already covered in the IRMA Standard in relation to suppliers.¹⁸³

In 2.3.3.5, we are proposing two elements.

- First, that the procurement policy includes minimum expectations related to supplier environmental, labor, human rights and social standards. Increasingly, this is an expectation for businesses. For example, the UN Guiding Principles on Business and Human Rights (and IRMA Chapter 1.3) include the expectation that entities identify and address human rights impacts across their operations, products and throughout supplier and business networks.¹⁸⁴
- Second, we have added that targets be set to "buy local," which provides a demonstration that companies are interested in supporting local economies. Being transparent about local procurement intentions, by releasing a public policy, is another way to both manage expectations and demonstrate that local procurement is considered important by the company.

Requirement 2.3.3.6 has been added because there needs to be a way to determine if policies are being implemented effectively, and, if they are not, then action needs to be taken to improve implementation.

NOTES

None.

¹⁸³ There are already expectations that entities evaluate risks of child labor and forced labor amongst suppliers in IRMA Chapter 3.1 (Fair Labor and Terms of Work) criteria 3.1.7 and 3.1.8, respectively), and Chapter 1.3 (Human Rights Due Diligence) expects that human rights due diligence includes evaluating and addressing human rights risks related to business relationships, which include suppliers (see criteria 1.3.2 and 1.3.3).

¹⁸⁴ See, for example, UN Working Group on Business and Human Rights. 2011. UN Guiding Principles on Business and Human Rights: An Introduction. p. 3. <u>https://www.ohchr.org/sites/default/files/Documents/Issues/Business/Intro_Guiding_PrinciplesBusinessHR.pdf</u>

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Broad Community Support (BCS)

A collective expression by the community in support of the mining project. Support may be demonstrated through credible (i.e., transparent, inclusive, informed, democratic) local government processes or other processes/methods agreed to by the community and entity. There may be BCS even if some individuals or groups object to the business activity.

Closure

A period of time when ore-extracting and/or processing activities have ceased and final decommissioning and site reclamation are occurring. It typically includes pre-closure (detailed closure design and planning), closure (actual activities of closure of mine workings, if relevant, and decommissioning of facilities), and post-closure (mainly long-term, monitoring, and treatment) periods, each with its own specific activities.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changes to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic ,or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Suppliers

Providers of goods, services, or materials to a project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 2.4 Land Acquisition, Displacement, and Resettlement

NOTES ON THIS CHAPTER: We are proposing to remove the flag from this chapter. The flag related to encouraging assessing mines to help us better understand if the metrics in the chapter were sufficient to ensure that resettlement would be carried out in a fair and respectful manner that leads to improvements in quality of life and economic opportunities for affected peoples. Through the first audits, and an Expert Working Group on Resettlement in 2022, a great deal was learned about the challenges of carrying out resettlement, and also challenges with the chapter as written. The proposed changes below attempt to address those challenges.

We are proposing to change the title of the chapter from 'Resettlement' to 'Land Acquisition, Displacement, and Resettlement' as not all land acquisition results in displacement (i.e., if acquired lands are vacant and publicly owned there may not be displacement) and, more importantly, not all displacement is addressed through resettlement. This latter point is because the term 'resettlement' refers to a conscientious process of moving affected populations from one area to another, which may not have happened with historical displacement, if there was no physical displacement, or if an entity simply engaged in forced evictions or cash compensations. Therefore, to encompass the variety of scenarios that may arise (no displacement, no resettlement, etc.) we are proposing this as a more encompassing and therefore accurate title.

Proposed additions and changes:

There are three major changes being proposed to the content in Chapter 2.4.

1) First, IRMA is proposing that all entities conduct land acquisition due diligence to support claims that no displacement occurred as a result of their land acquisition process. This is being proposed as it is not feasible for auditors to independently investigate such claims; rather, entities must provide them with evidence to evaluate (see 'Rationale for Adding Requirements Related to Historical Land Acquisition and Displacement' below).

2) Second, we are proposing to create a separate set of requirements - 2.4B - that will apply to circumstances where resettlements happened in the past. This would be distinct from those requirements 2.4A that apply to land acquisition that happened in the recent past and/or land acquisition proposed for the future.

The objective is to ensure that recent resettlements (2012 or later) and proposed projects follow international best practices. We are proposing a cutoff date of 2012 because this date marks the release of the most up-to-date edition of IFC's Sustainability Framework, including the Performance Standards (PS) on Environmental and Social Sustainability upon which these chapters are based. However, in recognition that Chapter 2.4A goes beyond the IFC PS in several ways, we are proposing to exempt entities that conducted land acquisition prior to the release of the final version 2.0 of the updated IRMA Standard from meeting those requirements that go above and beyond the IFC PS and therefore cannot be said to have been normative prior to the release of the updated IRMA Standard. This is explained in the 'Scope of Application' section of both 2.4A and 2.4B.

For historical (pre-2012) resettlements, the intent is not to be punitive but rather to focus on how sites can remediate and continue to improve the lives and livelihoods of those who have been displaced as a result of mineral development. Where land acquisition due diligence reveals that displacement did occur, IRMA lays out an abbreviated (compared to Chapter 2.4A – 'Proposed Land Acquisition and Resettlement') set of criteria aimed at achieving the objectives of Chapter 2.4A, to the extent possible given the historic nature of displacement.

• View a side-by-side version of 2.4A (modified and full) and 2.4B here: https://responsiblemining.net/wp-content/uploads/2023/07/IRMA-STANDARD Draft-1-of-Version-2.0-Chapter2.4ABsidebyside.pdf

The allocation of requirements based on entity circumstance would therefore be:

• Chapter 2.4B – 'Historical Land Acquisition, Displacement and Resettlement' – applies to all land acquisition and displacement taking place before 2012 (see below for cut-off date rationale).

- Chapter 2.4A (modified requirements) 'Proposed Land Acquisition, Displacement and Resettlement' projects or operations with recent land acquisition processes, i.e., between 2012 and the release of the updated version of the IRMA Standard.
- Chapter 2.4A (full requirements) 'Proposed Land Acquisition and Resettlement' project or operations that are proposing new land acquisition that may lead to displacement.

This approach is similar in some ways to that of the European Bank for Reconstruction and Development (EBRD).

A resettlement guidance documented published by EBRD in 2017 states that:

"When land acquisition for a project has been completed prior to the EBRD's involvement...any gaps in the achievement of aims and objectives of [EBRD's Performance Requirement 5 or PR5] will have to be satisfactorily addressed by the client before approval of the loan. To identify the gaps, the Bank will usually require a review of the historic land acquisition process and compare it to PR5... Based on the outcomes of these activities, an action plan to fulfil gaps is prepared and agreed by the EBRD and the client."¹⁸⁵

However, IRMA recognizes that entities that undertook land acquisition long ago may not be able to simply identify and 'fill gaps' vis-a-vis the requirements in Chapter 2.4A (due to dispersion of the affected population, lack of documentation of assets affected, etc.). IRMA therefore takes a remediation-focused approach that encourages recognition and remedy of past displacement impacts in a manner that approximates the requirements of Chapter 2.4A to the extent possible but puts emphasis on negotiated remediation in cooperation with the persons affected based on what is realistic and feasible in a given context.

3) The third proposed substantive change is adding a requirement relating to voluntary displacement (2.4.7.9).

Rationale for Adding Requirements Related to Historical Land Acquisition, Displacement and Resettlement:

Resettlements that occurred in the past create a particularly challenging scenario from an auditing and certification process. On the one hand, many land acquisition processes occurred before the concept of what constituted 'best practice' with respect to resettlement had emerged at the international level, so it seems unfair to expect entities undertaking land acquisition and/or resettlement 50 years ago, for example, to the same standards as those undertaking it today. This is not to mention logistical difficulties determining impacts in the past and the inability of entities to go back in time to rectify or remediate for shortcomings vis-à-vis today's standards.

In recognition of 2006 (the year the IFC first published their Performance Standards (PS), including PS5 on land acquisition and involuntary resettlement) as a watershed moment for international guidance on resettlement best practice, the previous version of the IRMA standard did not include requirements for entities that acquired land, displaced people, or conducted a resettlement prior to 2006, beyond requiring that unmitigated human rights impacts be remediated per Chapter 1.3. For resettlements occurring between 2006 and the release of the 2018 Mining standard, IRMA required that entities meet a selection of Chapter 2.4 criteria, aimed at identifying and mitigating the impacts of resettlement, including human rights impacts. The full chapter only truly applied to mines that proposed and carried out a resettlement project as of the date the IRMA Mining Standard came into effect (June 2018). Finally, for an entity to mark the chapter as 'not relevant,' the entity had to provide a rationale that no displacement/resettlement occurred in the past (a claim that auditors had to verify).

While a reasonable solution in face of the complexities of addressing historical displacement and/or resettlement, some stakeholders and auditors subsequently expressed that the categories were somewhat arbitrary and could result in resettlement chapter scores for different mining entities that appeared equivalent even though actual performance and outcomes were very different. Thus, some opportunities for improvement emerged. Namely:

 Although their prominence increased with the publication of the first IFC Performance Standards in 2006, international norms surrounding good practice in resettlement existed as early as 1980, with the release of the World Bank's Operational Manual Statement OMS 2.33 (1980), which laid out basic principles for involuntary resettlement relating to fair compensation, the need to produce a resettlement plan to guide activities, and the

¹⁸⁵ European Bank for Reconstruction and Development. 2017. Resettlement Guidance and Good Practice. pp. 9, 10. <u>https://www.ebrd.com/publications/resettlement-guidance-good-practice.pdf</u>

mandate to leave affected people better off as a result of resettlement.¹⁸⁶ These policies were further refined in 1990 in the World Bank's Operational Directive 4.30 on involuntary resettlement, which introduced a preference for replacement land over cash compensation for those with land-based livelihoods and encouraged projects to provide financial management and livelihoods training to affected people. Therefore, to hold an entity that conducted resettlement in 2006 to drastically different standards than one that conducted resettlement in 2005 required rethinking.

- 2) Absent at least an obligation on behalf of the entity to conduct due diligence on historical (pre-2006 under the 2018 Mining Standard) land acquisition processes, there was a potential that projects initiated prior to 2006 could become certified by IRMA despite having knowingly or unknowingly committed human rights abuses and other impacts incongruent with the spirit of IRMA and the requirements of Chapter 2.4, as this information may not be forthcoming without a dedicated effort to evaluate the events surrounding land acquisition (see also point #3 below).
- 3) By not requiring entities to develop and demonstrate an understanding of their own land acquisition processes, the onus was on the auditor to independently validate claims that 'no displacement occurred' (i.e., chapter 'not relevant') or that 'no human rights abuses occurred'. This was not only a missed opportunity for entities to understand and recognize their past, but it also put undue pressure on auditors to identify potentially affected populations (that by definition are no longer in the project area) for validation interviews or to conduct independent research into land acquisition processes on which they have little information to guide them. While investigation of past environmental impacts is often facilitated by the proximity of impacted people to the source of the impact, resettlement by nature involves the removal of affected people from the source of the impact. This further complicated the auditor's ability to independently determine whether displacement occurred in the past and, if so, whether human rights abuses resulted and/or whether those affected had or have access to grievance processes.

The creation of Chapter 2.4B ('Historical Land Acquisition, Displacement and Resettlement') was motivated by a desire – expressed by working group members and other resettlement practitioners – to ensure all entities are held accountable at a minimum for understanding and assessing the events surrounding project-related land acquisition and, where relevant and to the extent possible, identifying and offering remedy for historical impacts.

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

PARTICIPATE IN AN EXPERT WORKING GROUP ON THIS CHAPTER

If you are interested in participating in an Expert Working Group on Land Acquisition, Displacement, and Resettlement, please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net).

BACKGROUND

In some cases, by virtue of the location of a mineable ore body, proposed mining projects are located in close proximity to where people live. In order to develop a project, companies often have to acquire land – either permanently or temporarily – on which people are living.

Land acquisition includes both outright purchases of property and acquisition of access rights, such as easements or rights of way.¹⁸⁷ This may result in people being economically displaced from their livelihoods as well as physically displaced from their lands, homes, communities, and social and cultural ties. Project impacts can also, if sufficiently

¹⁸⁶ World Bank (2016). "Emerging Lessons Series #1: Involuntary Resettlement." Appendix A: Summary of World Bank Policy on Involuntary Resettlement. <u>https://documents1.worldbank.org/curated/en/521101467989568006/pdf/105660-NWP-Box394887B-PUBLIC-PUBDATE-4-12-16.pdf</u>

¹⁸⁷ International Finance Corporation (IFC). 2012. Performance Standard 5: Land Acquisition and Involuntary Resettlement. Footnote 2. Available here: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

adverse and not able to be mitigated, result in physical and economic displacement even where no land acquisition occurs.

For the purposes of this Standard, the situation where those affected do not have the legal right to refuse land acquisition is referred to as involuntary displacement.¹⁸⁸ IRMA considers 'involuntary' therefore to also include people who are involuntarily displaced from lands that they do not own as a result of 'voluntary' transactions between a landowner and the entity.

The World Bank experience indicates that, "involuntary resettlement under development projects, if unmitigated, often gives rise to severe economic, social and environmental risks: productive systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments

where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost."¹⁸⁹ Social disintegration and severe impoverishment are therefore some of the immediate risks of resettlement that affect not only the displaced community but also host communities.¹⁹⁰

IRMA does not prohibit involuntary resettlement, although it encourages entities to avoid it when doing so is in the best interest of the people and communities affected. When avoidance is not possible nor in the best interest of those affected, IRMA, like other internationally recognized standards on resettlement (e.g., the International Finance Corporation's [IFC] Performance Standard 5 [PS5] on Land Acquisition and Involuntary Resettlement) requires that companies strive to minimize impacts

TERMS USED IN THIS CHAPTER

Affected Community
Baseline
Collaboration
Competent
Professionals
Consultation
Culturally Appropriate NEW
Customary Right NEW
Displacement (Economic/Physical)
Displacement Remediation Plan NEW
Entity NEW
Expropriation NEW
Forced Eviction
Free, Prior and
Informed Consent (FPIC)
Grievance
Grievance Mechanism
Host Community
Host Country Law
Impacts
Indigenous Peoples
In-Kind Compensation NEW
Involuntary Displacement
Livelihood
Livelihood
Restoration Plan (LRP)
Mineral Processing NEW
Mining
NEW
Mining-Related Activities
Mitigation
Operation
NEW
Physical Displacement
Resettlement
Action Plan
(RAP)
Stakeholder
Temporary Transitional Resettlement
NEW
Voluntary Displacement
NEW
Vulnerable Group

These terms appear in the text with a dashed underline. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

on affected people by implementing mitigation measures such as fair compensation and improvements to livelihoods and living conditions that are discussed ahead of time with affected peoples. Active engagement of affected people and their advisors is required throughout the process, from the earliest stages of resettlement risk and impact assessment through the monitoring of resettlement outcomes.

As does the IFC, IRMA encourages entities to use negotiated settlements, even if they have the legal means to acquire land without the seller's consent.¹⁹¹ Negotiated settlements typically give affected people a greater role in planning the resettlement, help avoid expropriation, and eliminate the need to use governmental authority to remove people forcibly.¹⁹² However, should efforts at good faith negotiations and subsequent arbitration options

¹⁸⁸ According to the International Finance Corporation, "This occurs in cases of (i) lawful expropriation or temporary or permanent restrictions on land use and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail." (IFC. Performance Standard 5: Land Acquisition and Involuntary Resettlement. Para. 1.). While the IFC refers to 'involuntary resettlement' the IRMA Standard refers instead to involuntary displacement (as a result of land acquisition) in recognition that resettlement particularly historically - is a process by which displaced households are physically moved to another location which may or may not have occurred following displacement.

 ¹⁸⁹ World Bank. 2001. Operational Manual. OP 4.12 – Involuntary Resettlement. <u>https://ppfdocuments.azureedge.net/1572.pdf</u>
 ¹⁹⁰ Sridarran et al. 2018. "Acceptance to be the Host of a Resettlement Programme: A literature review," Procedia Engineering. 212:962-969. <u>https://www.sciencedirect.com/science/article/pii/S1877705818301474</u>

¹⁹¹ IFC Performance Standard 5. Para. 3

¹⁹² European Bank for Reconstruction and Development. 2014. Performance Requirement 5. Land Acquisition, Involuntary Resettlement and Economic Displacement. p. 30. <u>www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html</u>

fail, any legally-permitted expropriation process ending in involuntary removal of people from the lands they occupy must only be conducted in accordance with national laws and international best practices.¹⁹³

OBJECTIVES/INTENT OF THIS CHAPTER

To understand past and potential land acquisition and displacement, avoid displacement and resettlement if that is the most protective option for people, and, when avoidance is not the best option, equitably compensate affected people and improve the livelihoods and standards of living of displaced people.

NOTE: REVISED. The objectives have been revised to incorporate the terms land acquisition and displacement. The new objectives also reflect that in some cases avoidance of displacement and resettlement may not be the best option for safeguarding the health, safety and wellbeing of people and communities close to large-scale mining operations.

This approach is supported by literature on land acquisition and resettlement. For example, Owen and Kemp (2015) carried out a study that reviewed 41 resettlement events at 33 sites, and write that "Any avoidance decision must be set against the net impacts that a community will experience if resettlement is not at least offered on the basis of future mine-community cohabitation scenarios. The challenge here is that some companies claiming compliance with international standards by virtue of having 'avoided' resettlement in the design phase may also be avoiding the cost of land acquisition, resettlement and impact mitigation efforts. In these circumstances, the cumulative impact of avoidance may not, in fact, provide any safeguards for local communities in the context of mining."¹⁹⁴

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

All sites undertaking and IRMA assessment must conduct the due diligence outlined in requirement 2.4A.1.1, regardless of whether land acquisition is thought to have resulted in (or may potentially result in) permanent or temporary involuntary or voluntary physical or economic <u>displacement</u> of people.¹⁹⁵ (See Relevance of Voluntary and Involuntary Displacement later in this section.) Beyond that, entities will be audited according to the following scheme:

- Sites where land acquisition occurred before 2012 (i.e., the release of the 2012 edition of IFC's Sustainability Framework, including the IFC PS) are audited against the full set of requirements in 2.4B. This applies irrespective of whether the entity owned the asset at the time of the land acquisition. It may be the case that an entity conducted and concluded a resettlement process prior to this date that adhered to international norms (i.e., the IFC PS). In such cases, the entity may not wish to be audited against 2.4B, as its focus on retroactive assessment and remediation do not make sense for an already-concluded resettlement that meets many of the requirements of 2.4A. In such cases, the entity may opt to be audited against 2.4A.
- Sites where land acquisition occurred between 2012 and the release of version 2.0 of the IRMA Standard (i.e., 2024) are audited against a modified set of the requirements in 2.4A. These modifications reflect that some IRMA criteria go above and beyond the IFC PS, which have served as the normative guide for international best practice since 2012. It is therefore unfair to expect entities to have done things in the past which were not, at the time, considered international best practice.¹⁹⁶ There are also some requirements that cannot be met retroactively due to their temporal nature. To the extent that these requirements constituted international best practice as of 2012, entities will not be able to 'fully meet' these requirements; however, with remediation

¹⁹³ See Kothari, M. 2007. "Basic Principles and Guidelines on Development-based Evictions and Displacement". A/HRC/4/18. www.ohchr.org/Documents/Issues/Housing/Guidelines_en.pdf

¹⁹⁴ Owen, J. and Kemp, D. 2015. "Mining-induced displacement and resettlement: a critical appraisal," Journal of Cleaner Production. 87:478-488. https://www.sciencedirect.com/science/article/pii/S0959652614010269

¹⁹⁵ It is important to note that displacement can be the result of permanent land acquisition or temporary land access leases (i.e., easements) for a limited period of time (i.e., during construction).

¹⁹⁶ These requirements are obligation to make demonstrable efforts to avoid temporary transitional displacement (requirement 2.4.7.7); and obligation to assess and ensure quality of "voluntary" (willing buyer-seller) transactions (requirement 2.4.7.9).

actions they can achieve 'substantially' or 'partially' meets.

• Sites entering the IRMA system after the release of version 2.0 of the IRMA Standard (and pending any grandfathering period, to be determined) are audited against the full set of unmodified requirements of 2.4A. There are some requirements that, if entities do not do them from the outset of their resettlement process and prior to entering the IRMA system, cannot be retroactively met due to their temporal nature. To the extent that these requirements constituted international best practice as of 2024, entities that did not undertake these actions prior to entering the IRMA system will not be able to 'fully meet' these requirements; however, with remediation actions they may be able to achieve 'substantially' or 'partially' meets.¹⁹⁷

The flow-chart below is a proposal for how entities with **historical resettlements** would proceed through the chapter, and how/when determinations of 'not relevant' can be made.



RELEVANCE TO VOLUNTARY AND INVOLUNTARY DISPLACEMENT: IRMA considers that informal land occupiers displaced from lands as a result of 'voluntary' (i.e., "willing buyer-seller") land transactions on behalf of the landowner fall into the category of 'involuntary displacement', even if there is no inherent underlying recourse to expropriation to make the transaction by definition 'involuntary'. Therefore, as part of land acquisition due diligence (requirement 2.4.1.1), entities are required to investigate the conditions surrounding 'voluntary' land transactions. This is necessary not only to identify stakeholders that may be considered "involuntarily displaced" (and therefore subject to most of the requirements of this chapter) but also to identify potential human rights abuses associated with land acquisition (per IRMA Chapter 1.3) and to allow for evaluation of a new requirement aimed at ensuring quality of 'voluntary' land transactions (2.4.7.9 in Chapter 2.4A).

¹⁹⁷ Entities with multiple phases of land acquisition, i.e., 'proposed' land acquisition for an expansion but also historical land acquisition associated with the primary operations must conduct due diligence and proceed per Chapter 2.4B for historical land acquisition, while the new (post-2024) land acquisition will be subject to the criterion of Chapter 2.4A.

NOTE ON SCOPE OF APPLICATION: The Scope of Application section has been rewritten to address the proposed changes in the chapter.

This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

Chapter 2.4A: Procedures to monitor and evaluate the effectiveness of the implementation of a <u>Resettlement</u> Action Plan (RAP) and/or <u>Livelihood Restoration Plan (LRP</u>) are in place, and the <u>entity</u> takes corrective actions as necessary until the provisions of the RAP/LRP and the objectives of this chapter have been met. These procedures are designed and implemented by <u>competent professionals</u> with expertise and experience in monitoring and evaluation of land acquisition and resettlement (2.4.8.1).

Chapter 2.4B: To the extent possible and if relevant and desired by historically affected people or communities, procedures to monitor and evaluate the implementation of the <u>Displacement Remediation Plan (DRP)</u> are established. Monitoring and evaluation are appropriate to the scale and scope of agreed-upon <u>displacement remediation</u> activities. These procedures are designed and implemented by <u>competent professionals</u> with expertise and experience in monitoring and evaluation of land acquisition and resettlement (2.4.8.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated

2.4A—Requirements for Proposed Land Acquisition, Displacement and Resettlement

2.4A.1. Land Acquisition Due Diligence

2.4A.1.1. The entity hires competent professionals with resettlement expertise to document:

- a. Applicable host country laws related to land acquisition and resettlement;¹⁹⁸
- b. Circumstances of any land acquisition that already occurred in the project area, identifying, to the extent possible:
 - i. Records of formal and informal land ownership, land use, and land occupancy on any lands acquired by the project/operation prior to acquisition by the entity, prior owner, or government in the case of government-led land acquisition;
 - ii. Records of other potential project-related <u>displacement</u>, i.e., due to impacts on natural resources utilized by communities, exposure to noise, vibration, etc.; and

¹⁹⁸ This is recommended by EBRD 'Resettlement Guidance and Good Practice' (2017), p. 21. <u>https://www.ebrd.com/news/2017/ebrd-launches-new-resettlement-guidance-and-good-practice-publication.html</u>

iii. If there was any physical or economic displacement of Indigenous Peoples.

NOTE for 2.4A.1.1: NEW. We are proposing to add this because, for entities claiming that land acquisition will not result in displacement (i.e., those intending to mark the chapter 'not relevant'), this step constitutes the burden of proof required to demonstrate to auditors that land acquisition due diligence has been formally conducted and no displacement will occur. For entities that believe or are aware that displacement will occur in a proposed project, the results of this due diligence will inform – and could constitute part of – the assessment outlined in 2.4.1.2. We also created a new criterion, 'Land Acquisition Due Diligence,' to distinguish it from risk and impact assessment (now criterion 2.4.2).

2.4A.2. Risk/Impact Assessment

2.4A.2.1. If there is the potential that land acquisition for mining-related activities or the level of direct or indirect impacts from the project/operation could result in the involuntary displacement (for the remainder of this chapter, referred to as 'displacement') of people, the entity undertakes a rigorous assessment to evaluate the potential direct and indirect risks and impacts related to the physical and/or economic displacement of people. The assessment:

- a. Is carried out by competent professionals with expertise in land acquisition and resettlement;
- b. Occurs during the early stages of land acquisition planning;
- c. Includes identification and systematic evaluation of project design alternatives to avoid or minimize the displacement of people if that is the most protective option for people;
- d. Identifies and analyzes the social, cultural, human rights, conflict, environmental, and economic risks and impacts to displaced people and <u>host communities</u> for each alternative, paying particular attention to potential impacts on different genders, ages, ethnicities, and any potentially vulnerable groups;¹⁹⁹ and
- e. Identifies measures to prevent and <u>mitigate</u> risks and impacts and estimate the costs of implementing the measures.

NOTE for 2.4A.2.1: REVISED. This was 2.4.1.2 in the 2018 Mining Standard. Here we expanded the definition of "physical displacement" in the guidance notes to recognize involuntary displacement (of informal land occupants) resulting from voluntary land acquisition processes. We also combined previous 2.4.1.1, 2.4.2.2, 2.4.1.3 and 2.4.1.4 as the latter were qualifiers on the former. Sub-requirement (a) in this requirement was previously 2.4.1.3 and sub-requirement (c) was previously addressed in 2.4.1.2 and 2.4.1.4.

We changed the word 'experience' to 'expertise' in sub-requirement (a) and will add guidance on how this should be defined, depending on the nature of the resettlement.

We added to (c) language indicating that avoidance should only be an objective if doing so is in the best interest of affected people.

2.4A.2.2. The assessment is made publicly available in the early stages of the resettlement planning process, and details on how it can be accessed are actively provided to potentially affected stakeholders and their advisors.

NOTE for 2.4A.2.2: REVISED. This was 2.4.1.5 in the 2018 Mining Standard. We added language requiring entities to actively provide the assessment to potentially affected stakeholders and their advisors.

¹⁹⁹ Which stakeholders must be included and what may constitute a 'vulnerable group' requiring additional focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those with existing forms of vulnerability (including insecure or non-existent land tenure, inadequate housing, debt, high-risk or informal livelihoods) as well as those whose may experience heightened impacts from resettlement such as women, children, the elderly, those with disabilities, those lacking land titles, those lacking the capacity to understand contractual matters, etc. Additional guidance will be provided in the IRMA Guidance Document.

2.4A.3. Community Engagement

2.4A.3.1. The entity discloses, in a <u>culturally appropriate</u> manner, relevant information and conducts consultations with potentially affected people and communities, including host communities, to inform:

- a. The assessment of <u>displacement</u> and <u>resettlement</u> risks and impacts, including the consideration of alternative project designs to avoid or minimize resettlement; and
- b. The development, implementation, monitoring, and evaluation of a <u>Resettlement Action Plan (RAP</u>) and/or <u>Livelihood Restoration Plan (LRP</u>), including but not limited to soliciting input on resettlement and <u>livelihood restoration options</u>.

NOTE for 2.4A.3.1: REVISED. This was 2.4.2.1 in the 2018 Mining Standard. We combined sub-requirements (b) and (c) of the former 2.4.2.1 as the former was a constituent part of the latter. We also added language that consultations must be conducted in a culturally appropriate manner, and are proposing the following definition of **culturally appropriate**:

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

2.4A.3.2. Potentially affected people and communities, including host communities, are actively and explicitly offered access to independent legal or other expert advice. This offer is made at the earliest stages of project design and continue throughout monitoring and evaluation of the resettlement process.

NOTE for 2.4A.3.2: REVISED. This was 2.4.2.2 in the 2018 Mining Standard. This has been revised to make it clear that the entity needs to actively inform the affected stakeholders that this is an option available to them, rather than assuming people must approach the entity to ask for it.

2.4A.3.3. Potentially affected people and communities are actively and explicitly provided with information about, and access to, a mechanism to raise and seek recourse for concerns or grievances related to displacement and resettlement.²⁰⁰

NOTE for 2.4A.3.3: REVISED. This was 2.4.2.3 in the 2018 Mining Standard. We have proposed new language that not only must affected people have access to a grievance mechanism, but that the entity must actively and explicitly inform them of the mechanism and provide them with information about how they can use it.

CONSULTATION QUESTION 1.4-2 (repeated from Chapter 1.4 – 'Complaints and Grievance Mechanism and Access to Remedy')

Background: Chapter 1.4 - 'Complaints and Grievance Mechanism and Access to Remedy' includes a range of requirements surrounding the existence of an accessible and effective operational-level grievance mechanism. It is not possible to score well on Chapter 1.4 if the mechanism does not have certain quality-related characteristics. Other chapters (i.e., human rights, gender, resettlement, security, ASM) also have requirements relating to the existence of a grievance mechanism;²⁰¹ however, the requirements in each of those chapters ask only that a mechanism is in place that allows grievances to be filed and addressed, but they do not speak to the overall quality of that mechanism. This is an approach proposed by IRMA to avoid too much repetition across chapters. However, this creates a situation in which an entity could theoretically score 'fully meets' on the grievance-related requirement in an individual chapter (which in most cases only

²⁰⁰ The operational-level grievance mechanism developed as per Chapter 1.4 may be used as a mechanism to receive and address resettlement related grievances, or a mechanism may be created to handle only resettlement-related concerns. If a separate mechanism is developed, it shall be done in a manner that is consistent with IRMA Chapter 1.4 (in particular, it shall be developed in a manner that meets the UNGP effectiveness criteria for grievance mechanisms.

²⁰¹ See: Chapter 1.3, requirement 1.3.3.3; proposed Chapter 1.X, requirement 1.X.3.2; Chapter 2.4, requirement 2.4.3.3; Chapter 3.5, requirement 3.5.6.3; and Chapter 3.6, requirement 3.6.2.1.d.

asks that stakeholders have "access to" a grievance mechanism), even if the grievance mechanism as a whole is not an effective one (as reflected in the overall score for Chapter 1.4).

Question: Should an entity's score on grievance-related requirements within individual non-grievance-specific chapters be restrained or linked to the overall score that the entity gets on the grievance chapter (Chapter 1.4) as a whole?

For example, if a site scores 80% on Chapter 1.4, the most the site could receive for a grievance requirement in the other chapters would be a 'substantially meets,' but if a site scores 100% on Chapter 1.4 then, assuming the mechanism can handle grievances specific to the other chapters, they could possibly get a 'fully meets' rating on those grievance requirements.

2.4A.4. Resettlement and Livelihood Restoration Planning and Preparation

2.4A.4.1. Where <u>displacement</u> is deemed unavoidable, the entity undertakes the following prior to displacement:

- a. A household-level socioeconomic census to collect appropriate <u>baseline</u> data on the current <u>livelihoods</u>, standards of living, and socio-cultural practices of people who will be physically or economically displaced by the <u>project/operation</u>; and
- b. A land and asset survey to: establish an inventory of affected lands and other assets, along with their location, status, and condition; to determine owners or users of the assets; to determine eligibility for compensation; and to establish a cut-off for compensation claims.

NOTE for 2.4A.4.1: REVISED. This was 2.4.3.1 in the 2018 Mining Standard. We removed reference in subrequirement (a) to identifying affected people, as this is done under the assessment detailed in 2.4.1.1. We separated the socioeconomic census from the land and asset survey for clarity and moved details from the guidance notes re: purpose of each into the requirement. We moved a guidance note pertaining to gender and eligibility for compensation down to NEW requirement 2.4.4.4.

CONSULTATION QUESTION 2.4A-1: IRMA has identified climate resiliency and adaptation as a necessary consideration in the ESIA process. Should IRMA also require that climate resiliency and climate adaptation be considered during resettlement planning (e.g., in terms of social capital development, social learning and effective community organization and leadership; livelihoods restoration strategies which respond to changing climatic conditions; climate-resilient housing, settlements layout and infrastructure; or other key areas of climate-related impact as it relates to resettlement)? Examples of current, emerging, or predicted concerns are welcome for context.

2.4A.4.2. In the case of physical <u>displacement</u>, the <u>entity</u> develops and implements a <u>Resettlement Action Plan</u> (<u>RAP</u>). If the project involves economic <u>displacement</u> only, then a <u>Livelihood Restoration Plan (LRP</u>) is developed and implemented. In either case, these plans:

- a. Are developed by competent professionals with land acquisition/resettlement expertise;
- b. Include a gap analysis of host country laws and international laws pertaining to compensation and restoration for displacement and outline how any gaps will be filled;
- c. Document the socioeconomic baseline results for the area affected by land acquisition/displacement that describes the current livelihoods, standards of living, and socio-cultural practices of affected people;
- d. Describe how affected people will be involved in an ongoing process of <u>consultation</u> (including access to <u>grievance</u> processes) throughout the resettlement/livelihood restoration planning, implementation and monitoring phases, including how consultations will ensure the inclusion of potentially <u>vulnerable</u> groups;²⁰²

²⁰² Which stakeholders must be included and what may constitute a 'vulnerable group' requiring additional focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether

- e. Describe the strategies to be undertaken to <u>mitigate</u> the negative impacts of <u>displacement</u> and restore or, ideally, improve <u>livelihoods</u> and standards of living of displaced people, paying particular attention to the needs of potentially <u>vulnerable groups</u> and the potential for compensation or livelihoods support to create or exacerbate conflicts within or between communities;
- f. Describe how livelihood restoration measures draw on <u>consultations</u> with affected people concerning their preferences, as well as a demonstrated understanding of local markets and feasible economic opportunities;²⁰³
- g. Describe the methods used for valuing land and other assets;
- h. Establish the compensation framework (i.e., entitlements and rates of compensation for all categories of affected people, including host communities) in a transparent, consistent, and equitable manner;
- i. Describe how monitoring and evaluation will be conducted; and
- j. Include a budget and implementation schedule.

NOTE for 2.4A.4.2: REVISED. This was 2.4.3.3 in the 2018 Mining Standard. Previous requirement 2.4.3.2 moved down to 2.4.4.3. The proposed changes here include:

- Adding sub-requirements (a), (b), (c), (g)
- Adding reference in (d) to consultation with marginalized /vulnerable populations and access to grievance processes;
- Adding reference in (e) to consideration of mitigation strategies in a manner that will not exacerbate conflicts within or between communities;
- Adding reference in (f) to the need to explicitly consider stakeholder preferences and local market conditions; and
- Adding note to (h) stating that way of making the LRP/RAP publicly available must be appropriate to the affected population.

2.4A.4.3. Clear compensation eligibility criteria and a cut-off date for eligibility are established, and information regarding the cut-off date and eligibility criteria is well-documented and actively communicated to the project's/operation's stakeholders in advance of survey and census activities.

NOTE for 2.4A.4.3: REVISED. This was 2.4.3.2 in the 2018 Mining Standard. We removed reference to 'in absence of government procedures' to emphasize that entities must establish procedures aligned with the requirements even where government procedures exist, and where they are not aligned, make efforts to collaborate with government actors per the IRMA guidance note for 2.4.3.2.²⁰⁴

2.4A.4.4. The <u>entity</u> takes steps to integrate <u>gender</u> progressive approaches in the development of compensation and entitlement measures as appropriate to the context, including:

- a. Measures to address gender inequality in terms of access to and control of resources or assets;
- b. Ensuring gender responsive livelihood restoration approaches; and

all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those with existing forms of vulnerability (including insecure or non-existent land tenure, inadequate housing, debt, high-risk or informal livelihoods) as well as those whose may experience heightened impacts from resettlement such as women, children, the elderly, those with disabilities, those lacking land titles, those lacking the capacity to understand contractual matters, etc. Additional guidance will be provided in the IRMA Guidance Document.

²⁰³ Note that IRMA Chapter 2.3-Obtaining Support and Delivering Benefits addresses processes that will provide additional benefits to communities through projects or initiatives such as education, training, infrastructure, economic development opportunities, etc. Community members affected by displacement and/or resettlement would have the opportunity to participate in the planning process for community-wide benefits. Entities are encouraged to consider synergies between community development programming and livelihood restoration efforts; however, for the purposes of this chapter, entities are only obligated to restore and, ideally (potentially but not mandatorily through linkages with broader community development programming), improve livelihoods that are directly affected by land acquisition and displacement.

²⁰⁴ IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). See note for requirement 2.4.3.2. Available at: https://responsiblemining.net/resources/#full-documentation-and-guidance

c. Ensuring adequate female representation on community-based resettlement, compensation, or grievance evaluation committees, if relevant.

NOTE for 2.4A.4.4: NEW. We are proposing to add this to more actively encourage gender progressive resettlement planning and implementation. Previously, such gender considerations were contained within the guidance notes.

2.4A.4.5. The <u>RAP</u> and/or <u>LRP</u> is made publicly available in a manner that is appropriate to the affected population.

NOTE for 2.4A.4.5: NEW. We separated this sub-requirement out from 2.4.4.3 (the rest of which deals with the content of the RAP/LRP, not the procedures surrounding it).

2.4A.5. Specific Measures Related to Physical Displacement

2.4A.5.1. In all cases where people are physically displaced, the entity:

- a. Provides relocation assistance that is suited to the needs of each group of displaced people and is sufficient for them to improve or at least restore their standard of living at an alternative location;
- b. Ensures that locations where displaced people are resettled offer equal or, ideally, improved living conditions;
- c. Takes into consideration displaced people's preferences with respect to relocating in pre-existing communities and groups; and
- d. Respects and seeks to preserve and/or reestablish existing social and cultural institutions of the displaced people and any host communities.

NOTE for 2.4A.5.1: This was 2.4.4.1 in the 2018 Mining Standard.

2.4A.5.2. In cases where physically <u>displaced</u> people have formal legal rights to the land or assets they occupy or use, or do not have formal legal rights but have a claim to land that is recognized or recognizable under <u>host</u> <u>country law</u>, the <u>entity</u>:

- a. Offers the choice of replacement land of at least equal value and characteristics, security of tenure, and advantages of location; and
- b. Offers the choice of replacement residential structures of at least equal value and characteristics; if original residential structures do not meet a minimum standard for dignified housing, the entity will provide replacement housing that meets these standards; or
- c. Offers as an alternative compensation that is sufficient to replace lost land and residential structures at full replacement cost in local markets, if cash compensation is appropriate and/or preferred by the affected person.

NOTE for 2.4A.5.2: REVISED. This was 2.4.4.2 in the 2018 Mining Standard.

2.4A.5.3. In cases where physically <u>displaced</u> people have no recognizable legal right or claim to the land or assets that they occupy or use, the <u>entity</u>:

- a. Provides affected people with options for adequate housing with security of tenure; and
- b. Compensates for the loss of assets other than land at full <u>replacement cost</u>, provided that the people had been occupying the project area prior to the cut-off date for eligibility.

NOTE for 2.4A.5.3: REVISED. This was 2.4.4.3 in the 2018 Mining Standard.

CONSULTATION QUESTION 2.4A-2

Background: IFC guidance states that entities are not obligated to provide replacement land or compensation for land to affected people with no formal or customary claim to the lands on which they live /engage in productive activities. However, PS5 does state that affected people, "should be offered resettlement

assistance sufficient to restore their standards of living at a suitable alternative site." If not through offering replacement land or compensation for land, how should entities restore standards of living of affected people who do not own land and, without compensation, may not be able to purchase land to reestablish their affected structures/livelihoods?

Question: What guidance should IRMA give to entities concerning obligations towards physically displaced households in particular, where those households do not own lands on which to reestablish their residential structures? How should IRMA guide auditors to interpret "options for adequate housing with security of tenure" and the overall obligation to restore previous standards of living?

CONSULTATION QUESTION 2.4A-3

Background: In the case of tenants, IFC does not specify a particular outcome. IFC guidance states that, "In some cases, tenants may qualify for replacement housing and in other cases they will be resettled in similar housing under similar or improved tenure arrangements."²⁰⁵ Without some boundaries it is difficult for companies and auditors to know if the requirement for providing "adequate housing with security of tenure" is fully being met.

Question: What should 'security of tenure' look like in practice for households renting residential structures that are affected by the project? Should IRMA specify a best practice outcome? If so, what would that look like, e.g., similar housing with a 12-month lease (if there was no previous lease), or something else?

2.4A.6. Specific Measures Related to Economic Displacement

2.4A.6.1. If project- or operation-related land acquisition or restrictions on land use result in economic displacement in the form of displaced business operations or commercial structures, regardless of whether the affected people are physically displaced, the entity:

- Compensates business owners for the cost of rebuilding affected non-moveable commercial structures, for re-establishing commercial activities elsewhere, for lost net income during the period of transition, and for the costs of the transfer and reinstallation of any moveable business-relevant equipment, goods, or structures;
- b. Compensates renters of commercial structures for lost net income during the period of transition, for the costs of the transfer and reinstallation of any moveable business-relevant equipment or goods, and provides assistance to establish a new, equivalent commercial lease with secure tenure (i.e., 12 months lease); and
- c. Compensates employees of affected businesses for lost income.

NOTE for 2.4A.6.1: REVISED. This was 2.4.5.1 in the 2018 Mining Standard. Divided this into separate requirements for clarity, addressing displacement of commercial structures (a), renters of commercial structures (b), and impacts on business-related income for employees of commercial business owners (c).

2.4A.6.2. If project- or operation-related land acquisition or restrictions on land use result in economic displacement in the form of acquisition of lands on which affected people engage in productive activities or possess productive assets, regardless of whether or not the affected people are physically displaced, the entity:

- a. Compensates affected people with legal rights or claims to lands that are recognized or recognizable under national law with replacement land of equal or greater value appropriate to the affected people's <u>livelihoods</u> or, where appropriate, with cash compensation for land/improvements to the land at full replacement cost; and
- b. Compensates economically displaced people who are without legally recognizable claims to land for lost assets other than land (i.e., productive structures, crops/trees/grasses, and other improvements to lands) at full replacement cost.

²⁰⁵ International Finance Corporation (IFC). 2012. Guidance Notes 5. Land Acquisition and Involuntary Resettlement. p. 6.

NOTE for 2.4A.6.2: REVISED. This was part of 2.4.5.2 in the 2018 Mining Standard. We incorporated aspects of the original 2.4.5.2 into 2.4.6.1 and 2.4.6.2.

2.4A.6.3. To economically <u>displaced</u> people whose <u>livelihoods</u> are wage-based or dependent upon access to natural resources and where project- or operation-related restrictions on access or other impacts adversely affect livelihoods or income levels, the <u>entity</u> provides:

- a. Continued access to affected resources or access to alternative resources with at least equivalent livelihood-earning potential and accessibility; or
- b. Alternative income earning opportunities to restore livelihoods that are feasible and agreed to by affected people, where circumstances prevent the entity from providing land or similar resources as described above.

NOTE for 2.4A.6.3: REVISED. This was part of 2.4.5.2 in the 2018 Mining Standard. We incorporated aspects of original 2.4.5.2 into 2.4.6.1 and 2.4.6.2 above. Requirement 2.4.6.3 now focuses specifically on displacement of land-based or wage-based livelihoods due to land access restrictions or other project impacts.

2.4A.7. Resettlement and Livelihood Restoration Agreements and Implementation

2.4A.7.1. If proposed mining-related activities require the displacement of Indigenous Peoples' communities from their traditional lands or economically displace them from pursuing their traditional livelihoods, the entity obtains the free, prior and informed consent (FPIC) of affected Indigenous Peoples' communities before proceeding with the resettlement and proposed mining-related activities (as per IRMA Chapter 2.2).

NOTE for 2.4A.7.1: This was 2.4.6.1 in the 2018 Mining Standard. In the 2018 Mining Standard there was a similar requirement (2.4.6.2) that applied to non-Indigenous Peoples, but we are proposing to remove because there was nothing to be evaluated that was independent of other requirements, i.e., the evaluation of the requirement was the culmination of all other requirements because the entire chapter is premised on negotiations occurring.

2.4A.7.2. Prior to negotiating with affected people, the entity provides or facilitates access to resources necessary to participate in an informed manner. This includes, at minimum:

- a. Copies of the RAP/LRP (based on results of consultations outlined in requirement 2.4.3.1);
- b. Details on what to expect at various stages of the <u>resettlement</u> or <u>livelihood</u> restoration process (e.g., when an offer will be made to them, how long they will have to respond, how to access the <u>grievance</u> <u>mechanism</u> if they wish to appeal property or asset valuations, legal procedures to be followed if negotiations fail); and
- c. Access to independent legal experts or others to ensure that affected people understand the content of any proposed agreement and associated information.

NOTE for 2.4A.7.2: REVISED. This was 2.4.6.3 in the 2018 Mining Standard. We will add a guidance note for 2.4A.7.2.c to clarify that assistance of legal or other expert assistance must be explicitly offered to potentially affected stakeholders.

2.4A.7.3. In cases where affected people reject compensation offers that meet the requirements of this chapter and where subsequent arbitration efforts fail and, as a result, <u>expropriation</u> or other legal procedures are initiated, the <u>entity</u> explores opportunities to <u>collaborate</u> with the responsible government agency, and, if permitted by the agency, plays an active role in <u>resettlement</u> planning, implementation, and monitoring to <u>mitigate</u> the risk of impoverishment of affected people.

NOTE for 2.4A.7.3: REVISED. This was 2.4.6.4 in the 2018 Mining Standard. Added language of "where subsequent arbitration efforts fail" to reflect that there are additional steps (previously left implicit) between presentation of compensation offers and expropriation.

2.4A.7.4. The <u>entity</u> does not carry out <u>forced evictions</u>, defined as the permanent or temporary removal against their will of people from their homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection as outlined in this chapter.

NOTE for 2.4A.7.4: REVISED. This was 2.4.6.5 in the 2018 Mining Standard. The text of this requirement has been changed to reflect an important distinction between "forced eviction" in terms of arbitrarily or systematically removing people from lands that they either own or are occupying without due process or compensation, and the involuntary removing of people from removing people from lands that have been legally acquired through an expropriation process (dealt with in the new requirement 2.4A.7.5).

2.4A.7.5. Should affected people refuse to leave the lands they own or occupy at the end of a legal expropriation process preceded by good faith negotiations that meet the requirements of this chapter, the entity only removes people from their lands in accordance with law and international best practice,²⁰⁶ meaning the entity:

- a. Provides affected people with clear and timely information on the procedures for and timing of proposed evictions;
- b. Gives adequate and reasonable notice to all affected people prior to the scheduled date of eviction;
- c. Arranges for government officials or their representatives, and any relevant local authorities, to be present during the removal;
- d. Does not carry out removals in particularly bad weather or at night unless the affected people consent otherwise;
- e. Provide information about legal <u>remedies</u> and where possible, legal aid to people who are in need of it to seek redress from the courts;
- f. Identifies all people carrying out the removal and ensures that they are trained on human rights and the appropriate use of force; and
- g. Establishes and trains relevant people on procedures describing appropriate actions to take in case of conflicts or violent opposition to the removals.

NOTE for 2.4A.7.5: NEW. We are proposing to add this requirement to address an absence of requirements concerning the conditions under which forced removals of project-affected people can take place (i.e., at the end of a legal expropriation process) and how those removals should occur. This requirement draws on guidance from the UN Committee on Economic, Social and Cultural Rights.

2.4A.7.6. The entity takes possession of acquired land and related assets only after full compensation has been made available and replacement housing/lands/assets and moving allowances have been provided to the displaced people, where applicable.

NOTE for 2.4A.7.6: This was 2.4.6.6 in the 2018 Mining Standard.

2.4A.7.7. The entity takes steps to avoid temporary transitional resettlement. Where temporary transitional resettlement cannot be avoided, the entity ensures that:

- a. Affected people have been <u>consulted</u> on the implications of transitional temporary relocation and are in agreement;
- b. Transitional temporary residential structures and replacement lands meet the requirements of this chapter (i.e., housing adequate, respect for social networks and <u>stakeholder</u> preferences, access to basic amenities, adequate to support <u>livelihoods</u> including continued access to natural resources, etc.);
- c. Transitional temporary resettlement is time-bound and agreed upon with affected people; and
- d. Affected people are duly compensated for the multiple disruptions to their lives.

²⁰⁶ See: UN Committee on Economic, Social and Cultural Rights (CESCR). 1997. General Comment No. 7: The right to adequate housing (Art. 11.1): forced evictions. In particular, see Paragraph 15. Available at: www.refworld.org/docid/47a70799d.html

NOTE for 2.4A.7.7: NEW. We are proposing this addition to address a concern indicated by working group members and resettlement practitioners about the lack of attention paid to issues of temporary or multiple displacements. Temporary displacement can result from temporary land acquisition wherein an entity only requires use of/access to lands for a limited period of times (e.g., during construction due to noise impacts or risks associated with equipment transport). Temporary resettlement can also occur when entities permanently acquire lands and clear people from those lands before providing them with replacement lands/residential structures, thus requiring them to move to a transitional temporary location until their permanent location/assets are ready (hence, 'temporary transitional resettlement'). For physically displaced people in particular, this entails a double disruption to their lives (the transitional move, and then the permanent move when replacement land/housing is available) and makes it difficult for them to reestablish social networks and build a sense of community. Therefore, best practice suggests that this should be avoided.

PROPOSAL: For displacement taking place after 2012 and prior to the release of the updated version 2.0 of the IRMA Standard, entities can choose not to be audited against this requirement. This 'cutoff date 'of 2012 because this date marks the release of the most up-to-date edition of IFC's Sustainability Framework, including the Performance Standards (PS) on Environmental and Social Sustainability upon which many requirements in this standard these derive their content. However, in recognition that this requirement arguably goes beyond the IFC PS, we are proposing to exempt entities that conducted land acquisition prior to 2024 (i.e., the release of this standard) from meeting this requirement as it cannot be said to have been normative prior to the release of this standard.

CONSULTATION QUESTION 2.4A-4

Background: Per IRMA guidance for requirement 2.4.7.6 (which was 2.4.6.6 in the 2018 Mining Standard²⁰⁷) the IFC PS5 requires entities to pay compensation and provide affected people with replacement lands/structures prior to displacement, while recognizing that circumstances can arise in which it is not feasible to do so. However, there is little international guidance detailing how these 'transitional' temporary resettlements should occur. Requirement 2.4.7.7 is designed to fill this gap and ensure that the treatment of displaced people subject to transitional temporary physical resettlement is done in a manner that is consistent with the spirit of this chapter in terms of reducing vulnerability and ensuring that stakeholders are not made worse off as a result of displacement.

Question: Do you agree that this is an issue that needs to be addressed? And if so, do you have any feedback on the requirement as proposed?

2.4A.7.8. All transactions to acquire land rights and all compensation discussions, measures, and resettlement activities are documented.

NOTE for 2.4A.7.8: This was 2.4.6.7 in the 2018 Mining Standard.

2.4A.7.9. In the case of voluntary displacement (i.e., willing buyer-seller transactions where there is no recourse to expropriation), the entity ensures that:

- a. All land transactions are documented;
- b. Affected people are paid a fair (market) price paid;
- c. Landowners (sellers) have sufficient information about project timelines and the various options available to them (including the voluntary nature of the sale) to make an informed decision;
- d. Decisions are made free of coercion and on a timeline conducive to informed decision-making and consultation with family members/legal experts as necessary; and

²⁰⁷ IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). See note for requirement 2.4.6.6. Available at: https://responsiblemining.net/resources/#full-documentation-and-guidance

e. Informal land occupants are identified and considered in a way that is consistent with the contents of this chapter relating to involuntarily displaced people as well as the chapter on Human Rights Due Diligence (Chapter 1.3).

NOTE for 2.4A.7.9: NEW. We are proposing to add this requirement in recognition that risks in market transactions arise when there is incomplete information on behalf of the seller (e.g., as to what constitutes fair market value), inability/unwillingness of the seller to advocate for their own best interest, and/or feelings of coercion or obligation to sell (whether real or perceived). In many instances in which resettlement occurs, the 'sellers' are characterized by at least one of the above conditions. Moreover, inherent to the "willing buyer-seller" transaction is the idea of formal, private land ownership. This means that vulnerable households physically residing informally or without legal rights on project-affected lands could be forcibly evicted with no protections by a project subsequently seeking IRMA certification. Therefore, IRMA has added this requirement to ensure voluntary land transactions meet basic requirements for voluntarily displaced people (landowners engaged in willing buyer-seller transactions) and to identify and address involuntary displacement of vulnerable people that may occur as a result of willing buyer-seller transactions.²⁰⁸

PROPOSAL: For voluntary displacement taking place after 2012 and prior to the release of the updated version 2.0 of the IRMA Standard, entities can choose not to be audited against this requirement. This cutoff date of 2012 because this date marks the release of the most up-to-date edition of IFC's Sustainability Framework, including the Performance Standards (PS) on Environmental and Social Sustainability upon which these chapters are based. However, in recognition that this requirement arguably goes beyond the IFC PS, we are proposing to exempt entities that conducted land acquisition prior to the release of the updated IRMA standard from meeting this requirement as it cannot be said to have been normative prior to the release of this standard.

CONSULTATION QUESTION 2.4A-5

Background: The current proposal for requirement 2.4.7.9 is that entities undertaking their land acquisition between 2012 and the release of the updated IRMA Standard can choose to be exempted from this requirement, based on the logic that regulation of voluntary land transactions goes beyond the IFC PS and therefore cannot be said to have been normative (and therefore expected of entities) beginning in 2012.

However, one might also argue that the requirements indicated for voluntary transactions (fair market price, decisions made free of coercion, etc.) constitute norms of fair market value transactions that were normative long before 2012.

Question: Do you agree with the proposed approach of allowing entities whose land acquisition occurred between 2012 and the release of IRMA Version 2.0 (2024) to choose to be audited (or not) against this requirement (2.4.7.9 - obligation to assess and ensure quality of "voluntary" [willing buyer-seller] transactions) as it was arguably not considered international best practice.

Or do you believe that despite not falling under the gamut of the IFC standards (the motivation for the current 'exemption' clause indicated above), 2.4.7.9 reflects extant normative expectations since 2012 concerning the characteristics and outcomes of good faith free-market negotiations, and that it should therefore be applied retroactively to all voluntary land acquisition processes occurring between 2012 and the release of the updated IRMA Standard? Put differently, do you agree that entities should not be exempt from this requirement in the updated IRMA Standard, as they are from others that arguably go beyond IFC norms?

CONSULTATION QUESTION 2.4A-6

²⁰⁸ Note: per the guidance offered at the beginning of this chapter, informal land occupiers or users that are affected by voluntary transactions affecting the lands on which they reside or produce are considered as "involuntarily displaced" and thus treated as per the criteria in the rest of this chapter. This criterion therefore refers to landowners or formal land users who, due to their formal association with affected lands, are able to engage in willing buyer-seller transactions.

Background: The previous consultation question suggests that the conditions under which voluntary (willing buyer-seller) land transactions occur in the context of land acquisition for mining-related activities often do not meet the requirements for truly voluntary (informed, equitable, non-coerced) land transactions.

Question: If that is the case, should IRMA go further than the proposed 2.4.7.9 for entities undertaking land acquisition after the release of the updated IRMA Standard and require that <u>all land acquisition</u> be treated as "involuntary," regardless of whether it is what the IFC deems to be involuntary (i.e., the entity has recourse to expropriation) or voluntary (willing buyer-seller)?

This would mean that entities acquiring lands after the release of this version of the IRMA Standard would therefore be required to meet the full set of requirements in this Chapter 2.4A, including not only the outcome components (full replacement value, livelihood restoration, etc.) but also the process requirements such as creation of a transparent common compensation framework, community engagement, creation of a RAP/LRP, etc.

2.4A.8. Resettlement and Livelihood Restoration Monitoring and Evaluation

2.4A.8.1. (Critical Requirement)

Procedures to monitor and evaluate the effectiveness of the implementation of a <u>RAP/LRP</u> are in place, and the entity takes corrective actions as necessary until the provisions of the RAP/LRP and the objectives of this chapter have been met. These procedures are designed and implemented by <u>competent professionals</u> with expertise and experience in monitoring and evaluation of land acquisition and <u>resettlement</u>.

NOTE for 2.4A.8.1: REVISED. This was 2.4.7.1 and was a critical requirement in the 2018 Mining Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above). We combined the previous 2.4.7.1 and 2.4.7.2.a to ensure that the 'competence' of those designing monitoring and evaluation activities was also incorporated into this critical requirement. We removed reference to 'significant social impacts' which was in 2.4.7.2.a, in recognition that 1) all resettlements pose a risk of significant social impacts if not done well, and therefore; 2) all resettlement monitoring and evaluation should be designed and/or implemented by competent professionals.

2.4A.8.2. Monitoring and evaluation indicators will incorporate both input and outcome related criteria that are substantively and directly linked to the objectives of the <u>RAP/LRP</u> to restore or, ideally, improve affected people's livelihoods and standards of living.²⁰⁹

NOTE for 2.4A.8.2: NEW. We are proposing to add this because feedback from working group members and other resettlement experts indicated that monitoring and evaluation was too often focused on inputs rather than outcomes. An input-focused approach is not conducive to evaluating the success or impact over time of restoration measures on the lives of those impacted.

2.4A.8.3. The entity reports periodically to affected people and other relevant stakeholders on progress made toward full implementation of the RAP/LRP.

NOTE for 2.4A.8.3: This was 2.4.7.3 in the 2018 Mining Standard.

2.4A.8.4. When the entity determines that its <u>RAP/LRP</u> has been successfully and fully implemented, a completion audit is commissioned and undertaken to determine if the objectives of the RAP/LRP have been met. The completion audit:

a. Is carried out by external <u>competent professionals</u> with expertise in <u>livelihood</u> restoration and/or <u>resettlement</u> as applicable;

²⁰⁹ Examples of input indicators include number of improved seed varieties provided, number of livelihoods trainings offered, percentage of affected households signing up for financial management training, etcetera. Conversely, examples of outcome indicators can include affected people's perceptions of their standards of living vis-à-vis pre-displacement levels, changes in educational attendance and achievement versus pre-displacement levels, reestablishment of functioning socio-cultural networks and cooperatives, etc.

- b. Includes a review of the mitigation measures implemented by the <u>entity</u> and a comparison of implementation outcomes against the requirements of this RAP/LRP;
- c. Clearly demonstrates that the objectives of the RAP/LRP have been successfully met (and therefore the monitoring process can be ceased); and
- d. Is made available to affected people and their advisors.

NOTE for 2.4A.8.4: This was 2.4.7.3 in the 2018 Mining Standard. Minor structural changes.

2.4A.8.5. If the completion audit determines that the objectives of the <u>RAP</u> and/or <u>LRP</u> have not been met, a corrective action plan is developed and implemented. This plan includes concrete measures to be implemented and a timeline budget for doing so and provisions for a second completion audit that meets the requirements of 2.4A.8.4 when the objectives of the correction action plan are deemed to have met the objectives of the RAP and/or LRP.

NOTE for 2.4A.8.5: NEW. We propose to add this requirement as the 2018 Standard offered guidance notes but did not explicitly include a requirement indicating obligations of entities in instances where the original completion audit determines the objectives of the RAP/LRP have not been met. This is based on guidance included in IFC PS Guidance Notes 5. Land Acquisition and Involuntary Resettlement. Para. 15, Footnote 18.

2.4A.9. Private Sector Responsibilities Under Government-Managed Resettlement

2.4A.9.1. Where land acquisition and <u>resettlement</u> are the responsibility of the government, the <u>entity</u> <u>collaborates</u> with the responsible government agency, to the extent permitted by the agency, to identify government resettlement and compensation measures. If these measures do not meet the relevant requirements of this chapter, the <u>entity</u> prepares a supplemental plan that, together with the documents prepared by the responsible government agency, addresses the relevant requirements of this chapter. The entity includes in its supplemental plan, at a minimum:

- a. Identification of affected people and impacts;
- b. A description of regulated activities, including the entitlements of physically and economically <u>displaced</u> people provided under applicable national laws and regulations;
- c. The supplemental measures to achieve the requirements of this chapter in a manner that is permitted by the responsible agency and implementation time schedule; and
- d. The financial and implementation responsibilities of the entity in the execution of its supplemental plan.

NOTE for 2.4A.9.1: REVISED. This was a combination of 2.4.8.1 and 2.4.8.3 in the 2018 Mining Standard. We combined the previous 2.4.8.1 and 2.4.8.2 into this requirement to reduce redundancy as both spoke to the need to collaborate with government bodies.

CONSULTATION QUESTION 2.4A-7

Background: As per IRMA Chapter 1.1, entities are not expected to violate host country law in order to meet IRMA requirements. Therefore, under both the 2018 and this proposed version of the IRMA Standard entities will only be expected to fulfill IRMA requirements to the extent that is possible within the law in situations where <u>host country law</u> largely controls the resettlement process. If the law is silent on aspects addressed in the IRMA chapter, then entities will be expected to advocate for their inclusion in government resettlement projects or plans, or the entity should include those provisions in their own supplemental resettlement plan. This is aligned with the IFC PS, which state that, "While government agencies are often mandated to lead resettlement efforts, experience indicates that there are generally opportunities for clients to either influence or supplement the planning, implementation and monitoring of government-led resettlement..."²¹⁰

²¹⁰ International Finance Corporation (IFC). 2012. Guidance Notes 5. Land Acquisition and Involuntary Resettlement. GN74. Available at: https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards

However, the auditing of this requirement as written is challenging because, if an entity applies for IRMA assessment and their land acquisition was (or will be) government-led, then the Standard as currently written asks them to attempt - to the extent possible - to meet all of the requirements in this entire chapter but only evaluates them against 2.4.9.1. This puts the full weight of the chapter onto a single requirement and does not allow the audit report to easily capture nuances such as which of the various components of this chapter the entity did or did not meet and/or where the entity failed to meet a component due to negligence/omission versus where they made a good faith effort to do so but were constrained by government regulations.

Working group members also expressed concerns that hinging an entity's performance on this 'best effort' requirement in the case of a government-led resettlement might allow entities to shift blame onto governments for poorly executed resettlements and claim 'government restrictions' prevented them from fair compensation and due process. Even where the entity does indeed make acceptable efforts to supplement or substitute government actions, in instances where government regulations are particularly restrictive, IRMA could end up certifying a land acquisition/resettlement process that is, in fact, deeply problematic.

Question: Is it common that host country laws explicitly <u>prohibit</u> private entities from supplementing/supporting land acquisition processes (i.e., engagement, notification timelines, etc.) and outcomes (i.e., compensation and other support) provided for by government bodies? If so, should entities be simply evaluated against the extent of their demonstrable efforts to influence government (the 2018 and proposed approach)? If not, should entities be audited against the full set of requirements of this chapter, regardless of whether it is an entity-led or government-led land acquisition/resettlement?

2.4.B—Requirements for Historical Land Acquisition, Displacement, and Resettlement

2.4B.1. Land Acquisition Due Diligence

2.4B.1.1. If past development or expansion of a mining and/or mineral processing site involved land acquisition (whether by the current, owning entity or a previous owner), the entity hires competent professionals with land acquisition and resettlement expertise to document and assess the circumstances of any displacement of people. This due diligence identifies, to the extent possible:

- a. Applicable host country laws related to land acquisition and resettlement;²¹¹
- b. Records of formal and informal land ownership, land use, and land occupancy on project/operation lands prior to acquisition;
- c. If there was any physical or economic <u>displacement</u> resulting from land acquisition, considering both formal and informal owners, as well as occupants and land users, if any; and
- d. If there was any physical or economic displacement of Indigenous Peoples.

NOTE for 2.4B.1.1: In the 2018 Standard, historical (i.e., pre-2006 in the 2018 Standard) land acquisition processes were not subject to any explicit requirements under Chapter 2.4. We are proposing to add this as a necessary step to allow auditors to easily assess entity claims that historical land acquisition did not result in displacement (for those intending to mark the chapter 'not relevant') or, where no such claim is made, to facilitate the identification of impacts and issues subject to the remediation requirements outlined in the remainder of the chapter in the updated version of the Standard.

²¹¹ This is recommended by EBRD 'Resettlement Guidance and Good Practice' (2017) <u>https://www.ebrd.com/news/2017/ebrd-launches-new-resettlement-guidance-and-good-practice-publication.html</u>, pg. 21.

2.4B.2. Impact Assessment

2.4B.2.1. If land acquisition or direct impacts from the <u>operation</u> resulted in physical or economic <u>displacement</u> the entity hires <u>competent professionals</u> with land acquisition and <u>resettlement</u> expertise to identify, to the extent possible: ²¹²

- a. The names and current locations of all displaced people;
- b. The social, cultural, and economic impacts of displacement on displaced people and <u>host communities</u>, paying particular attention to impacts on women, children, the poor, and other potentially marginalized or <u>vulnerable groups</u>; and
- c. Impacts on the human rights of displaced people or <u>host communities</u> that occurred because of the <u>displacement</u> process (before, during, or after land acquisition/resettlement occurred).

NOTE for 2.4B.2.1: Further to the overall approach of this version of the Standard to hold entities responsible for historical land acquisition impacts, we are proposing this requirement (along with 2.4B.2.2 below) to mirror requirement 2.4A.2.1 in Chapter 2.4A, albeit with a focus on past impacts rather than risks of resettlement.

CONSULTATION QUESTION 2.4B-1:

Background: Depending on the nature of a project's land acquisition process or the amount of time since it occurred, there may be instances where entities are unable to find information on the extent/nature of a historical land acquisition/displacement process. In these cases, IRMA proposed that the requirement be assessed based on the robustness of the methodology utilized by the entity to determine sufficiency in terms of investigating the impacts of a historical displacement. The purpose of doing so is to avoid an open-ended obligation on entities to investigate historical displacement.

Question: Keeping in mind the intent to balance robustness of the due diligence process with the constraints faced by entities whose efforts are unlikely to bear fruit (due to previous project owners, amount of time passed since displacement occurred, etc.), what criteria should be considered when evaluating the 'robustness' of the investigation? Some suggestions are: What sources did the entity use to attempt to determine historical events? Were interviews conducted? Were local authorities involved? Were notices posted in relevant communities soliciting information, if relevant? Are there recordkeeping timeframes by law that limit access before a certain period?

2.4B.2.2. Based on the information gathered, an assessment is done to determine:

- a. What resettlement/livelihood restoration efforts were undertaken, if any, including:
 - i. If physically displaced people received replacement lands/assets of equal or greater value or full replacement value for any lost lands or assets and, if lands provided, if security of tenure was ensured;
 - ii. If the livelihoods of economically displaced people were restored (or, if restoration was not possible, alternative means of income earning provided) and if standards of living were restored or improved compared to pre-displacement levels;
 - iii. Any other compensation paid, or assistance given to displaced people during or after the land acquisition process; and
 - iv. Any engagement with or involvement of affected people in the planning of the above;
- b. If land acquisition, displacement, and/or any subsequent resettlement or livelihood restoration activities led to any human rights impacts on displaced people that have not yet been remediated.

NOTE for 2.4B.2.2: This requirement is similar to requirement 2.4A.2.1 in Chapter 2.4A but adapted to focus on past impacts rather than risks of resettlement.

²¹² If the due diligence undertaken in 2.4.1.1 reveals that no involuntary physical and/or economic displacement occurred, no further efforts are required.

2.4B.2.3. The assessment is publicly available in the early stages of the <u>remediation</u> process and details on how it can be accessed are actively provided to potentially affected <u>stakeholders</u> and their advisors.

NOTE for 2.4B.2.3: This requirement mirrors requirement 2.4A.2.2 in Chapter 2.4A.

2.4B.3. Community Engagement

2.4B.3.1. The <u>entity</u> discloses relevant information and conducts <u>consultations</u> with historically affected people and communities, including <u>host communities</u>, to inform:

- a. The due diligence and assessment of historical displacement and resettlement impacts (2.4B.1 and 2.4B.2); and
- b. The development, implementation, monitoring, and evaluation of a <u>Displacement Remediation Plan</u> (DRP) or its equivalent (2.4B.2.2).

NOTE for 2.4B.3.1: This is similar to requirement 2.4.2.1 in the 2018 Mining Standard but adapted to the due diligence and remediation process outlined in Chapter 2.4B, which is slightly distinct in terms of timelines and the need for flexibility in approach depending on historical circumstances.

2.4B.3.2. Historically affected people and communities, including <u>host communities</u>, are actively and explicitly offered access to independent legal or other expert advice. This offer is made at the outset of the due diligence process and continued throughout the development and monitoring and evaluation of a <u>DRP</u> or its equivalent (if relevant and desired by historically affected people or communities).

NOTE for 2.4B.3.2: This is similar to requirement 2.4.2.2 in the 2018 Mining Standard but slightly distinct in terms of timelines and the need for flexibility in approach depending on historical circumstances.

2.4B.3.3. Historically affected people and communities, including <u>host communities</u>, are actively and explicitly provided with information about and access to a mechanism to raise and seek recourse for concerns or grievances related to <u>displacement</u> and <u>resettlement</u>.

NOTE for 2.4B.3.3: This is similar to requirement 2.4.2.3 in the 2018 Mining Standard but slightly distinct in terms of timelines and the need for flexibility in approach depending on historical circumstances.

2.4B.4. Displacement Remediation Planning and Preparation

2.4B.4.1. Where historic operation-related <u>displacement</u> has been identified, the <u>entity</u> undertakes, to the extent possible, an inventory of lost assets and a socioeconomic census to collect appropriate <u>baseline</u> data to characterize those that were physically or economically displaced by the operation as well as their current <u>livelihoods</u>, standards of living, and socio-cultural practices.

NOTE for 2.4B.4.1: This is similar to requirement 2.4.3.1 in the 2018 Mining Standard but slightly distinct in terms of timelines and the need for flexibility in approach depending on historical circumstances (i.e., as the scoring guidelines and guidance notes will detail, it may not be possible to retroactively conduct a full asset inventory or household survey as per the expectations for entities under 2.4A).

2.4B.4.2. In the case of identified historical physical and/or economic <u>displacement</u>, the entity develops and implements a <u>DRP</u> (or equivalent) that is scaled to the scope of impacts and the identifiability/proximity of impacted people and communities. This plan, at a minimum:

- a. Is developed by competent professionals with land acquisition/resettlement expertise;
- Describes how affected people, including different genders, ages, ethnicities, and any potentially vulnerable groups, will be involved in an ongoing process of consultation concerning the development, implementation, and monitoring and evaluation of the plan;
- c. Describes the strategies to be undertaken to remediate the impacts of displacement, paying particular attention to the needs of different genders, ages, ethnicities, and any potentially vulnerable groups, including:

- i. If relevant, how any un-remediated impacts on human rights will be remediated;
- ii. If relevant, measures to compensate for physical and economic displacement that align with criteria 2.4A.5 and 2.4A.6 to the extent possible;
- iii. If relevant, measures and methodology used to determine compensation equivalent to full replacement value for land and other assets to the extent possible; and
- iv. If relevant, establish a displacement remediation framework in a transparent, consistent, and equitable manner;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;²¹³
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE for 2.4B.4.2: This is similar to requirement 2.4.3.3 in the 2018 Mining Standard but, given the nature of historical resettlements and this chapter's focus on remediation, it refers to a DRP rather than a RAP/LRP.

2.4B.4.3. Clear remediation eligibility criteria including a temporal timeframe for eligibility are established and information regarding the timeframe and eligibility criteria is well-documented and actively communicated to the operation's stakeholders at the outset of remediation activities.

NOTE for 2.4B.4.3: This is similar to requirement 2.4.3.2 in the 2018 Mining Standard but refers to timeframes associated with remediation rather than resettlement process.

2.4B.4.4. The <u>entity</u> takes steps to integrate <u>gender</u> progressive approaches in the development of <u>remediation</u> measures as appropriate to the context, including:

- a. Measures to address gender inequality in terms of access to or control of resources or assets;
- b. Ensuring gender responsive livelihood restoration approaches; and
- c. Ensuring adequate female representation on community-based remediation or <u>grievance</u> evaluation committees, if any.

NOTE for 2.4B.4.4: Equivalent of 2.4A.4.4 in 2.4A. We are proposing to add this to more actively encourage gender sensitive resettlement planning and implementation. In the 2018 Standard, such gender considerations were contained within the guidance notes.

2.4B.4.5. The DRP is made publicly available in a manner that is appropriate to the affected population.

NOTE for 2.4B.4.5: Equivalent of 2.4A.4.6 in 2.4A. We are proposing to add this requirement for public sharing of the DRP to mirror the introduction of similar requirements for RAP/LRP expertise in 2.4A.

2.4B.5. Specific Measures Related to Physical Displacement

[See requirement 2.4B.4.2.c.ii]

NOTE for 2.48.5: 2.48.4.2.c.ii requires entities to incorporate into their DRP measures to compensate for physical and economic displacement that align with criterion 2.4A.5 and 2.4A.6 in 2.4A to the extent possible. Attempting to make 'historical' variants of these criteria is not effective, as the extent to which entities can approximate the original criteria (and therefore what a reasonable 'modified' criteria would include) will vary greatly depending on the situation. We are therefore proposing to summarize the relevant criteria from 2.4A in the guidance notes as a guide for entities conducting self-assessments as well as auditors evaluating the extent to which entities with historical displacement have attempted to and succeeded in meeting the relevant criteria given the circumstances of the displacement.

²¹³ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

2.4B.6. Specific Measures Related to Economic Displacement

[See 2.4B.4.2.c.ii]

NOTE for 2.4.6: See above explanation for criterion 2.4B.5.

2.4B.7. Displacement Remediation Plan Agreements and Implementation

2.4B.7.1. If a historical land acquisition process resulted in the <u>displacement</u> of <u>Indigenous Peoples'</u> communities (as identified in 2.4B.1.1) the entity establishes mutually agreed processes for Indigenous Peoples to raise concerns related to past and present impacts or concerns related to displacement and to determine provisions for the <u>mitigation</u> and <u>remediation</u> of past and present impacts in a manner that is acceptable to Indigenous Peoples.²¹⁴

NOTE for 2.4B.7.1: This is similar to requirement 2.4A.7.1 in Chapter 2.4A but slightly distinct in terms of timelines and the need for flexibility in approach depending on historical circumstances.

2.4B.7.2. Prior to negotiating specific <u>remediation</u> activities with affected people (if applicable), the <u>entity</u> provides or facilitates access to resources necessary to participate in an informed manner. This includes, at minimum:

- a. Copies of the DRP (based on results of consultations outlined in Criteria 2.4B.3.1);
- b. Details on what to expect at various stages of the <u>displacement</u> remediation process (e.g., timelines for various components including payment of compensation or implementation of remediation programming, how to access the <u>grievance mechanism</u>, etc.); and
- c. Access to independent legal experts or others to ensure that affected people understand the content of any proposed agreement and associated information.

NOTE for 2.4B.7.2: This is similar to requirement 2.4A.7.3 in Chapter 2.4A but adapted to refer to DRP processes, rather than RAP/LRP. Requirement 2.4A.7.2 in Chapter 2.4A was not relevant for historical displacement so there is no equivalent.

2.4B.7.3. All <u>displacement remediation</u> discussions, measures, and activities and their implementation are documented.

NOTE for 2.4B.7.3: This is the equivalent of requirement 2.4.7.8 in Chapter 2.4A but it has been adapted to refer to remediation rather than resettlement processes. Requirements 2.4A.7.3 - 2.4A.7.7 in 2.4A were not relevant for historical displacement so there is no equivalent. There is also no historical equivalent for 2.4A.7.9 in Chapter 2.4A.

2.4B.8. Displacement Remediation Monitoring and Evaluation

2.4B.8.1. (Critical Requirement)

To the extent possible and if relevant and desired by historically affected people or communities, procedures to monitor and evaluate the implementation of the <u>DRP</u> are established. Monitoring and evaluation are appropriate to the scale and scope of agreed-upon <u>displacement remediation</u> activities. These procedures are designed and implemented by <u>competent professionals</u> with expertise and experience in monitoring and evaluation of land acquisition and <u>resettlement</u>.

NOTE for 2.4B.8.1: This is the equivalent of requirement 2.4A.8.1 in Chapter 2.4A but adapted to refer to remediation rather than resettlement processes (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

²¹⁴ Refer to Chapter 2.2, requirement 2.2.4.1, regarding developing a mutually agreed process to remediate for past impacts.

2.4B.8.2. To the extent possible and if relevant and desired by historically affected people or communities, monitoring and evaluation indicators will incorporate both input and outcome related criteria that are substantively and directly linked to the objectives of the <u>DRP</u>.

NOTE for 2.4B.8.2: This is the equivalent of requirement 2.4A.8.2 in Chapter 2.4A but adapted to refer to remediation rather than resettlement processes and outcomes.

2.4B.8.3. The <u>entity</u> reports to affected people and other relevant <u>stakeholders</u> as appropriate on progress made toward implementation of the <u>DRP</u>.

NOTE for 2.4B.8.3: This is the equivalent of requirement 2.4A.8.3 in Chapter 2.4A but adapted to refer to remediation rather than resettlement processes and outcomes.

2.4B.8.4. When the <u>entity</u> determines that its <u>DRP</u> has been successfully and fully implemented, a completion audit is commissioned and undertaken to determine if the objectives of the <u>DRP</u> have been met (to the extent possible and if relevant and desired by historically affected people or communities). The completion audit:

- a. Is carried out by external livelihood restoration and/or resettlement experts as applicable;
- b. Includes a review of the mitigation measures implemented by the entity and a comparison of implementation outcomes against the requirements of this DRP;
- c. Clearly demonstrates that the objectives of the DRP have been successful and therefore the monitoring process can be terminated; and
- d. Is made available to affected people and their advisors.

NOTE for 2.4B.8.4: This is the equivalent of requirement 2.4A.8.4 in Chapter 2.4A but adapted to refer to remediation rather than resettlement processes and outcomes.

2.48.8.5. If the completion audit determines that the objectives of the <u>DRP</u> have not been met, a corrective action plan is developed and implemented (to the extent possible and if relevant and desired by historically affected people or communities). This plan includes concrete measures to be implemented and a timeline budget for doing so, and provisions for a second completion audit that meets the requirements of 2.4.8.4 when the objectives of the correction action plan are deemed to have met the objectives of the <u>DRP</u>.

NOTE for 2.4B.8.5: This is the equivalent of requirement 2.4A.8.5 in Chapter 2.4A but adapted to refer to remediation rather than resettlement processes and outcomes.

2.4B.9 Private Sector Responsibilities Under Government-Managed Resettlement

2.4B.9.1. Where land acquisition was the responsibility of the government, the <u>entity</u> conducts due diligence and impact assessment per requirements 2.4B.1.1 - 2.4B.1.3 and, to the extent possible <u>collaborates</u> with government (if and where necessary and possible) to incorporate affected people into the <u>DRP</u> per the requirements of this chapter.

NOTE for 2.4B.9.1: This is the equivalent of requirement 2.4A.9.1 in Chapter 2.4A but adapted to refer to remediation rather than resettlement processes and outcomes and to put less emphasis on a 'supplemental plan' and more on incorporation of affected people into remediation activities.

NOTES

This chapter draws primarily on the International Finance Corporation's (IFC) Performance Standard 5 (PS5) – Land Acquisition and Involuntary Resettlement, which applies to involuntary physical and/or economic displacement resulting when an entity acquires land rights or land use rights in a host country legal context where the entity would ultimately have recourse to expropriation or other compulsory procedures. However, recognizing that the IFC PS were most recently updated in 2012, this chapter goes beyond the requirements of PS5 to reflect a more up-to-date conception of international best practice in resettlement, as captured by other standards on which this chapter draws, referenced throughout.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Customary Rights

Rights that arise from a behavior or act that is repeated over time under the belief that it is obligatory, and due to repetition and acceptance acquire the force of law within a geography or society. Such rights may be based on patterns of long-standing land and resource usage in accordance with Indigenous Peoples' and local communities' customary laws, values, customs, and traditions. Such rights apply to the lands, resources, and territories that Indigenous Peoples and local communities have traditionally owned, occupied, or otherwise used. They do not apply to lands, territories, and resources that these groups have acquired in other ways, such as by purchase or part of a compensation package. These rights are a collective human right of Indigenous Peoples and local communities that exists whether or not a title from the State has been issued.

Source: Accountability Framework. https://accountability-framework.org/the-framework/contents/definitions/

Displacement Remediation Plan

Remediation refers to both the processes of providing remedy for an adverse impact and the substantive outcomes that can counteract, or make good, the adverse impact. Referring to historical land acquisition and displacement, this means a plan designed to remediate (through whatever means are most appropriate in the context) the adverse impacts of displacement caused by historical land acquisition processes. This plan should, to the extent possible, endeavor to achieve the objectives of a Resettlement Action Plan or Livelihoods Restoration Plan (see respective definitions).

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Expropriation

The legal (according to host country laws) taking of land without the consent of the owner by an expropriating authority (often the host government) for the purposes of using said land for public interest. Definitions of public interest vary by country, but typically mining is considered to be in the public interest.

In-Kind Compensation

In the context of resettlement, in-kind compensation refers to compensating project-affected people for lost assets with similar or equivalent assets (e.g., offering replacement land for lands acquired by a project/operation, rather than simply paying cash compensation for land value).

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Temporary Transitional Resettlement

Temporary transitional resettlement occurs when entities permanently acquire lands and clear people from those lands before providing them with replacement lands/residential structures, thus requiring them to move to a transitional temporary location until their permanent location/assets are ready.

Voluntary Displacement:

Displacement that occurs as a result of voluntary land transactions (i.e., market transactions in which the seller is not obliged to sell, and the buyer cannot resort to expropriation or other compulsory procedures sanctioned by the legal system of the host country if negotiations fail) that lead to the relocation of willing sellers.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically

robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the company should take into account the concerns and views expressed by stakeholders in the final decision.

Displacement (Economic/Physical)

A process by which the development of a project or operation causes people to lose land or other assets, or access to resources. This may result in physical and/or economic displacement, defined below.

- *Economic Displacement:* the loss of assets or access to assets that leads to a loss of income sources or other means of livelihood (i.e., the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering). Economic displacement results from an action that interrupts or eliminates people's access to jobs or productive assets, whether or not the affected people must move to another location.
- *Physical displacement:* the relocation or loss of shelter (i.e., residential housing) as a result of project- or operation-related land acquisition and/or restrictions on land use.

Source: Adapted from IFC. 2012. Performance Standard 5

REVISED. We are proposing to combine definitions of physical and economic displacement under the broader category of 'displacement' as we more often refer to it in this general sense in the text.

Forced Eviction

The permanent or temporary removal against their will of individuals, families and/or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection.

Free, Prior and Informed Consent

Consent based on: engagement that is free from external manipulation, coercion and intimidation; notification, sufficiently in advance of commencement of any activities, that consent will be sought; full disclosure of information regarding all aspects of a proposed project or activity in a manner that is accessible and understandable to the people whose consent is being sought; acknowledgment that the people whose consent is being sought can approve or reject a project or activity, and that the entities seeking consent will abide by the decision.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism(s)

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Host Communities

With respect to resettlement, any communities receiving displaced people.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which the project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules, regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project or operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Indigenous Peoples

An official definition of "indigenous" has not been adopted by the United Nations system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of "indigenous" includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic or political systems; maintain distinct languages, cultures and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as: tribes, first peoples/nations, aboriginals, Adivasi and Janajati. All such terms fall within this modern understanding of "indigenous."

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples, and could make it challenging to audit.

Involuntary Displacement

Displacement is considered involuntary when affected people or communities do not have the right to refuse land acquisition or restrictions on land use that result in physical or economic displacement. This occurs in cases of (i) lawful expropriation or temporary or permanent restrictions on land use (see also 'Forced Eviction') and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail. See also definition for 'Voluntary Displacement.

Source: IFC. 2012. Performance Standard 5.

REVISED. We are proposing to change this definition from 'Involuntary Resettlement' to 'Involuntary Displacement' in recognition that resettlement - particularly historically - is a process by which displaced households are physically moved to another location which may or may not have occurred following displacement.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Livelihood Restoration Plan

A plan that establishes the entitlements (e.g., compensation, other assistance) of affected people and/or communities who are economically displaced, in order to provide them with adequate opportunity to reestablish their livelihoods.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce its extent, with any residual impact then requiring remediation.

Replacement Cost

The market value of the assets plus transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. Market value is defined as the value required to allow affected communities and people to replace lost assets with assets of similar value.

Resettlement

Resettlement is the "comprehensive process of planning for and implementing the relocation of people, households and communities from one place to another for some specific reason, together with all associated activities, including: (a) the provision of compensation for lost assets, resources and inconvenience; and (b) the provision of support for livelihood restoration and enhancement, re-establishment of social networks, and for restoring or improving the social functioning of the community, social activities and essential public services." Source: Vanclay, F. 2017. "Project-induced displacement and resettlement: from impoverishment risks to an opportunity for development?" Impact Assessment and Project Appraisal, 35:1, 3.

REVISED. We are proposing to alter this definition which, previously, was more accurately defining the act and experience of *displacement* (voluntary or involuntary transfer of land/assets to a purchaser resulting in a need for reestablishment of these assets elsewhere, if relevant [see definition above]) rather than *resettlement* (which is a potential but not automatic or inherent strategy to mitigate the impacts of displacement). We are proposing this in recognition of the fact that resettlement - particularly historically - is a process of planning through which displaced households are physically moved to another location which may or may not have occurred following displacement.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Resettlement Action Plan

A plan designed to mitigate the adverse impacts of displacement by providing for the relocation of people. These plans typically involved: identifying livelihood restoration opportunities; developing a resettlement budget and schedule; and establishing the entitlements of all categories of affected people (including host communities). Such a plan is required when resettlement involves physical displacement of people.

Source: Adapted from IFC. 2012. Performance Standard 5, paragraph 19.

REVISED. We are proposing to add some details concerning what is typically included in a RAP to better align with relevant requirements within the Standard.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?
Chapter 2.5 Community Emergency Preparedness and Response

NOTES ON THIS CHAPTER: We are proposing to rename this chapter Community Emergency Preparedness and Response. It was 'Emergency Preparedness and Response' in the 2018 Mining Standard.

Proposed additions and changes:

The requirements in this draft chapter take a different approach compared to the IRMA 2018 Mining Standard, which did not outline many specific requirements related to emergency response planning, but rather, expected that sites follow the UN Awareness and Preparedness for Emergencies and the Local Level (APELL) guidance for mining. The reference to that external document made it very difficult to audit, because there were not clear metrics against which all entities would be consistently measured.

This proposed new chapter provides such metrics (unless otherwise noted, the requirements are NEW). The new requirements have been drawn from the UN APELL guidance for mining, and also UN APELL general guidance, International Labour Organization (ILO) Convention 174, and the Global Industry Standard on Tailings Management (GISTM).²¹⁵ [These are referenced in the requirements below]

This approach was tested in the draft IRMA Mineral Processing Standard, and feedback on that draft has helped to inform this proposed chapter.

Note, as well, that we have moved emergency preparedness and response measures that pertain to on-site accidents and unwanted events into Chapter 3.2 – 'Occupational Health and Safety,' as emergency preparedness and response plans for workers would often not require the engagement of outside entities (unless the accident was large enough to affect external stakeholders or, accidents within the site boundary necessitated outside resources).

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Modern mines and mineral processing operations have the potential for accidental releases that create risks for nearby communities and the environment. In some cases, the results can be catastrophic, such as the release of fluids and tailings from the failure of a tailings impoundment. There are, however, other risks associated with mines and mineral processing sites in general because these sites require the transport and use of hazardous materials such as petroleum and chemicals, and create the potential for catastrophic explosions, fires, releases of gas, transport-related spills of hazardous materials or chemicals.

²¹⁵ United Nations Environment Programme. 2001. Awareness and Preparedness for Emergencies and the Local Level (APELL) for Mining. Technical Report 41. <u>https://preparecenter.org/wp-content/uploads/2021/04/Apell-mining-UNEP.pdf</u>

United Nations Environment Programme. 2015. Awareness and Preparedness for Emergencies and the Local Level (APELL), 2nd Edition.

International Labour Organization. C174-Prevention of Major Industrial Accidents Convention, 1993. https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100 INSTRUMENT ID:312319

Occupational Health and Safety Assessment Series (OHSAS) 18001/2. Not freely available.

Global Tailings Review. 2020. Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Operating entities have direct responsibility for minimizing risks (through prevention, mitigation, and preparedness) and developing effective plans for responding to emergencies or major accidents. Entities should work with contractors and suppliers of hazardous materials to put adequate emergency response plans in place to deal with

both on-site and off-site accidents. They also have direct responsibility for minimizing risks from tailings storage facilities and other similar high-risk facilities (also referred to as critical facilities). It is also important for entities to coordinate and communicate with communities that could be affected by these accidents, both to protect health and safety in these communities and so that the emergency resources in the communities are available if needed.

OBJECTIVES/INTENT OF THIS CHAPTER

To work with communities and other stakeholders to plan for and be prepared to respond effectively to industrial emergency situations that may affect off-site resources or communities, and to minimize the likelihood of accidents, loss of life, injuries, and damage to property, environment, health and social well-being.

TERMS USED IN THIS CHAPTER

Accessible = Accident NEW = Affected Community = Breach Analysis NEW = Collaborate = Consultation = Contractor = Critical Facility NEW = Displacement = Emergency Scenario NEW = Emergency Situation NEW = Entity NEW = Exploration NEW = Facility = Hazard NEW = Hazardous Material NEW = Livelihoods = Mineral Processing NEW = Mining NEW = Operation NEW = Site NEW = Stakeholder = Supplier = Unwanted Event NEW = Vulnerable Groups

These terms appear in the text with a dashed underline. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

As per IRMA Chapter 1.1, the entity is also responsible for ensuring that <u>contractors</u> with which it works (e.g., those involved with transport of bulk <u>hazardous materials</u> and wastes that could cause an off-site emergency situation) comply with relevant requirements in the IRMA Standard.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

All operations with significant off-site risks have an emergency response plan developed with affected communities (2.5.3.1) and there must be testing and drills of the plan that includes community stakeholders (2.5.4.3).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Community Emergency Preparedness and Response Requirements

2.5.1. Identify Key Emergency Response Stakeholders and Capacity Needs

2.5.1.1. The entity identifies <u>contractors</u>, <u>suppliers</u>, public sector agencies, first responders, local authorities and institutions, and key individuals and organizations in potentially <u>affected communities</u> (hereafter referred to as "key <u>stakeholders</u>") that should be involved in emergency preparedness and response planning for industrial <u>accidents</u> and <u>unwanted events</u> related to the <u>project/operation</u>.

2.5.1.2. The entity <u>consults</u> with key <u>stakeholders</u> to determine their roles and responsibilities with respect to emergency preparedness and response, and the current resources available for key stakeholders to respond to emergencies related to the project/operation.

2.5.1.3. If deficiencies in resources or weaknesses in community response capabilities are identified, the <u>entity</u> collaborates with key <u>stakeholders</u> to develop and implement a plan to build capacity and resources necessary to facilitate effective emergency preparedness and response.

2.5.2. Identify and Assess Risks and Emergency Scenarios

2.5.2.1. The <u>entity consults</u> with key <u>stakeholders</u> to compile a comprehensive list of foreseeable industrial <u>accidents</u> and foreseeable <u>unwanted events</u> related to the <u>project/operation</u> that could pose risks to individuals or communities (i.e., health, safety, <u>livelihoods</u>, local economy), cultural heritage, property, or the environment.²¹⁶

2.5.2.2. If there are any <u>critical facilities</u> that store or dispose of liquids or wastes (e.g., water dams, tailings facilities, etc.), the <u>entity</u> shares information on <u>facility</u> breach analyses and worst-case failure scenarios.²¹⁷

NOTE ON 2.5.2.2: This aligns with GISTM [15.1.C]. The term critical facility was introduced in the new IRMA Chapter 4.X (see glossary at the end of this chapter for a definition).

2.5.2.3. The entity collaborates with key stakeholders to:

- a. Assess the level of risk with each potential <u>emergency scenario</u> based on the potential severity of consequence and probability of occurrence of each possible <u>accident</u> or <u>unwanted event</u>, including, but not limited to the potential credible failure of <u>critical facilities</u>;
- b. Identify and agree on key emergency scenarios to prioritize in the emergency preparedness and response plan, taking into consideration those that pose the greatest risk but also the greatest concern to communities; and
- c. Identify measures to prevent and, if that is not possible, minimize the negative consequences that could occur from all potential key emergency scenarios.

NOTE ON 2.5.2.3: As mentioned above, the term critical facility was introduced in the new IRMA Chapter 4.X (see glossary at the end of this chapter for a definition). 2.5.2.3.a will use information generated in Chapter 4.X regarding the failure consequence classification of the critical facilities to inform the prioritization process.

²¹⁶ "Foreseeable industrial accidents" related to the project/operation include but are not limited to potential credible failures of project/operation facilities (see proposed Chapter 4.X). "Foreseeable unwanted events" related to the project/operation, including but not limited to those involving transport of hazardous materials (see Chapter 4.1).

²¹⁷ For example, for tailings facilities, entities share tailings or water dam breach analyses and runout or inundation analyses for both the worstcase "sunny day" and worst-case storm-event scenarios of the loss of all tailings and water from the facility, and for the worst-case failure mode scenarios in terms of rate and volume of discharge from the facility. (These evaluations are required in proposed Chapter 4.X, criterion 4.X.1).

2.5.2.4. The evaluation of emergency scenarios and assessment of risks are updated if there is a material change in the proposed <u>project/operation</u> or changes in the social, environmental or local economic context that could create new risks, or affect the probability or consequences of a potential <u>accident</u> or <u>unwanted event</u>, and emergency preparedness response plans are updated accordingly.

2.5.3. Emergency Preparedness and Response Planning

2.5.3.1. (Critical Requirement)

If significant risks to communities and/or the environment are identified, an emergency preparedness and response plan is developed in collaboration with key stakeholders. The plan:

- a. Includes warning stages and measures, if appropriate,²¹⁸ and response measures to be taken in the event that industrial <u>accidents</u> or <u>unwanted events</u> occur, including immediate actions to save lives, protect <u>vulnerable groups</u> (e.g., children, the elderly, or people with disabilities), provide medical assistance, supply humanitarian aid, and minimize environmental harm;
- b. Includes contact information for all key stakeholders and the actions to be taken to communicate with key stakeholders during warning stages and if an industrial accident or unwanted event were to occur;
- c. Assigns actions to be taken by responsible staff (i.e., of the entity) and key stakeholders;
- d. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan; and
- e. Is publicly accessible in languages and formats that are understandable to community members.

NOTE ON 2.5.3.1: Requirement 2.5.1.1 in the 2018 Mining Standard required an emergency response plan, and that requirement was critical, so we have designated this one critical, too (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above). There was also a critical requirement in the 2018 Mining Standard to collaborate with potentially affected communities in the development of the emergency preparedness and response plans (2.5.2.1). This aspect is also integrated into the proposed 2.5.3.1.

The original requirement in the 2018 Standard has been expanded to include more details on what the plan includes. Several elements (sub-requirements a, d and e) were added to increase consistency with other management-type plans in the IRMA Standard.

Sub-requirements 2.5.3.1.a and b align with ISO 174 (Article 9), and sub-requirement 2.5.3.1.b generally aligns with requirement 13.4 in the GISTM, although we added more specificity (e.g., that special measures be taken to protect vulnerable groups).

2.5.4. Education, Training, and Testing

2.5.4.1. Periodically, the <u>entity</u> undertakes public awareness raising efforts to share information about the hazards and risks related to the operation and proposed emergency response measures. Information is communicated to potentially affected <u>stakeholders</u> in languages and formats that are understandable to them.

2.5.4.2. If relevant, emergency-response-related communications and media training takes place for relevant spokespeople within the entity and the community.

2.5.4.3. (Critical Requirement)

The following exercises are performed to test emergency response plans and document lessons learned:

a. Table top emergency response simulations occur annually or more frequently;

²¹⁸ Warning stages and measures could include, for example, Warning Level 1: no emergency situation is imminent, but certain indicators have been met (e.g., water level in tailings facility is above maximum operating level). Measure: Transfer some water to alternative storage pond, inspect impoundment. Alert environmental regulator and local authorities. Warning Level 2: imminent overtopping of tailings dam. Measure: stop discharging to tailings facility. Implement communications plan, set up incident command center, begin evacuation procedures and other procedures in emergency response plan.

- b. Drills and exercises with key community stakeholders occur every two years or more frequently; and
- c. If relevant, on an annual basis or more frequently, early warning systems in communities are tested.

NOTE ON 2.5.4.3: There was a similar requirement in the 2018 Mining Standard for testing emergency response plans (2.5.1.2). That requirement has been expanded to include table top emergency response simulations, testing of any early warning systems, and documentation of lessons learned.

It also includes engagement by the community in testing the plan, which was previously included in requirement 2.5.2.1 in the 2018 Mining Standard. Requirement 2.5.2.1 was a critical, so we have designated this one as critical too (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

2.5.5. Evaluation and Review

2.5.5.1. Emergency preparedness and response plans are evaluated annually and updated as necessary, taking into consideration:

- a. Changes in personnel and key stakeholders and/or changes in contact information;
- b. Challenges encountered or deficiencies identified during table top simulations or in-person drills;
- c. Lessons learned from actual accidents or incidents at the operation or other similar operations; and
- d. Grievances or input received from key stakeholders.

2.5.5.2. On annual basis, contact information for key <u>stakeholders</u> listed in the emergency response plan is reviewed and, if necessary, updated.

2.5.6. Response To and Recovery From Accidents and Unwanted Events

2.5.6.1. In the event of an actual emergency situation:

- a. Emergency preparedness and response plans are implemented including immediate actions are taken to save lives, protect <u>vulnerable groups</u>,²¹⁹ provide medical assistance, supply humanitarian aid, and minimize environmental harm;
- b. When the critical elements of the situation are stabilized, the entity:
 - In <u>collaboration</u> with affected individuals and communities (hereafter "affected people") and their advisors, assesses social, environmental and local economic impacts, and the temporal nature of the impacts (e.g., short-, medium- and long-term);
 - ii. In collaboration with affected people and their advisors, develops and implements an action plan to provide, as needed, restoration, reconstruction and recovery, and indicators to enable measurement of progress over time;
 - iii. Enables participation of affected people in the restoration, reconstruction and recovery activities;
 - iv. In collaboration with affected people and their advisors, develops and implements a monitoring program; and
 - v. Provides funding to affected people to hire independent legal and/or technical advisors;
- c. On a schedule agreed with affected peoples and their advisors, the entity reviews monitoring data and evaluates if measures in the action plan are being effectively implemented. If they are not, the entity, with collaborates with affected people and their advisors to develop and implement corrective actions; and
- d. If emergency accidents or events may result in temporary or permanent physical or economic displacement, the entity undertakes actions in alignment with Chapter 2.4.

²¹⁹ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement in particular, potentially vulnerable groups would include those most susceptible to (or unable to adapt to) a security-related event.

NOTE ON 2.5.6.1: NEW. This will only be relevant in the event that an accident or unwanted event occurs that affects communities or the environment. Some of the requirements align with concepts in GISTM Principle 14, which requires engagement with stakeholders, assessment of impacts after immediate safety and survival needs have been met, working with stakeholders on reconstruction and recovery plans, including affected people in reconstruction/recovery activities, and collaborating on monitoring progress and adapting plans if necessary.

2.5.7. Public Liability Accident Insurance

2.5.7.1. Operations are covered by a public liability accident insurance policy for unplanned <u>accidents</u> or <u>unwanted</u> events.²²⁰ The insurance coverage remains in force for as long as the entity has legal responsibility for the site/operation.

NOTE ON 2.5.7.1: This combines requirements 2.5.3.1, 2.5.3.2 and 2.5.3.3 from in the 2018 Mining Standard.

The intent of including an accident insurance requirement in the 2018 Standard was to require entities to obtain liability insurance in an amount sufficient to address an unplanned catastrophic accident, and the damage to people, property, livelihoods/economies and the environment that would result.

The importance of liability insurance cannot be overlooked. In January 2022, it was estimated that the compensation costs related to the Brumadinho tailings dam failure had cost the company US\$3.66 billion (it is unclear what those numbers might be today).²²¹ Without coverage, that amount could send a company into bankruptcy, and as a result not only might those affected by the catastrophic event not be compensated, but the interim work to stabilize and maintain the site could also be affected, creating even more risk of harm.

As written, however, 2.5.7.1 does not require entities to (1) estimate the cost of the worst-case catastrophic event that could happen at the operation, or (2) have insurance in an amount that covers the full costs of a worst-case scenario.

IRMA has now added requirements for entities to carry out "failure consequence classifications", which involve estimating the human, economic, and environmental resources at risk if a facility were to fail (see proposed Chapter 4.X, requirement 4.X.1.7), which is informed by consultations with stakeholders (requirement 4.X.1.6). Based on those estimates, the compensation costs associated with the worst-case catastrophic event at an operation could be calculated.

CONSULTATION QUESTION 2.5-1: Should IRMA add requirements that the liability insurance needs to be in an amount sufficient to cover the costs related to the worst-case scenario for the failure of an operation's critical facilities (i.e., sufficient compensate affected peoples and communities, and restore livelihoods/economies and the environment)?

CONSULTATION QUESTION 2.5-2: It has been suggested to IRMA that there might be other financial instruments that could be put in place that would enable a company to cover the costs related to a major catastrophic incident. Do you know of any other financial instruments that have been used to cover the cost of major accidents/incidents? (Can you provide actual examples of alternative instruments being used?)

Conversely, would you have any objections to expanding this requirement to include other financial instruments? If so, why?

NOTES

²²⁰ Unplanned accidental events may include, but are not limited to: flood damage, landslides, subsidence, waste facility failures, major spills of process solutions, leaking tanks, etc.

²²¹ 24 January 2022. "Brumadinho mining disaster compensation cost reaches US\$3.66bn for Brazil's Vale," BNAmericas. https://www.bnamericas.com/en/news/brumadinho-mining-disaster-compensation-cost-reaches-us366bn-for-brazils-vale

The requirements in this chapter largely follow the guidance from the *United Nations Environment Programme, Awareness and Preparedness for Emergencies at the Local Level (APELL)* for Mining Technical Report No. 41 (2001).

Additional guidance is also taken from: Part III of International Labour Organization (ILO) *Convention 176 on the Safety and Health in Mines, 1995*; Part III and Part V of ILO *Convention 174 on Prevention of Major Industrial Accidents, 1993*; and the Occupational Health and Safety Assessment Series (OHSAS) 18001/2 and the Global Industry Standard on Tailings Management.²²²

Note that emergency response plans are included in Chapter 3.2—Occupational Health and Safety. If so desired, entities can combine the plan developed as part of this chapter into a single plan that covers all emergency preparedness and response plans.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Accident

An event that results in injury, ill health, fatality or damage to property or the environment.

Breach Analysis

A study that assumes a failure of a critical facility and estimates its impact. Breach analyses must be based on credible failure modes. The results should determine the physical area impacted by a potential failure, flow arrival times, depth and velocities, duration of flooding, and depth of material deposition. The breach analysis is based on scenarios which are not connected to probability of occurrence. It is primarily used to inform emergency preparedness and response planning and the consequence of failure classification. The classification is then used to inform the external loading component of the design criteria.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Critical Facility

A facility that has a high, very high or extreme failure consequence classification, or a significant consequence classification that includes potential loss of life.

Emergency Scenario

A description of a possible unwanted event or emergency situation that could pose an immediate risk to health, safety, life, property, or environment.

United Nations Environment Programme. 2015. Awareness and Preparedness for Emergencies and the Local Level (APELL), 2nd Edition.

²²² United Nations Environment Programme. 2001. Awareness and Preparedness for Emergencies and the Local Level (APELL) for Mining. Technical Report 41. <u>https://preparecenter.org/wp-content/uploads/2021/04/Apell-mining-UNEP.pdf</u>

International Labour Organization. C174-Prevention of Major Industrial Accidents Convention, 1993. https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100 INSTRUMENT ID:312319

Occupational Health and Safety Assessment Series (OHSAS) 18001/2. Not freely available.

Global Tailings Review. 2020. Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Emergency Situation

Any situation arising from a sudden and unexpected event that poses an immediate risk to health, safety, life, property, or environment and requires immediate corrective action to restore normal operation.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Hazard

A potentially dangerous phenomenon, substance, human activity or condition. It may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Source: International Federation of Red Cross and Red Crescent Societies. https://www.ifrc.org/document/hazard-definitions

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health, or environmental hazard.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Unwanted Event

A situation or condition where there may be or is a loss of control of a hazard that leads to harm.

Source: Adapted from the Government of Western Australia, <u>Department of Mines</u>, <u>Industry Regulation and Safety</u>. <u>https://www.dmp.wa.gov.au/Safety/What-is-a-hazard-and-what-is-4721.aspx</u>

EXISTING DEFINITIONS

Accessible

In reference to grievance mechanism or engagement processes, accessible means these mechanisms or processes being known to all stakeholder groups for whose use they are intended, and providing adequate assistance for those who may face particular barriers to access.

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision that best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle, the company should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Displacement (Economic and / or Physical)

A process by which the development of a project or operation causes people to lose land or other assets, or access to resources. This may result in physical and / or economic displacement, defined below. See also 'Involuntary Displacement' and 'Voluntary Displacement'.

- *Economic Displacement:* the loss of assets or access to assets that leads to a loss of income sources or other means of livelihood (i.e., the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering). Economic displacement results from an action that interrupts or eliminates people's access to jobs or productive assets, whether or not the affected people must move to another location.
- *Physical displacement:* the relocation or loss of shelter (i.e., residential housing) as a result of project- or operation-related land acquisition and/or restrictions on land use.

Source: Adapted from IFC. 2012. Performance Standard 5.

REVISED. We are proposing to combine definitions of physical and economic displacement under the broader category of 'displacement' as we more often refer to it in this general sense in the text.

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Inform

The provision of information to inform stakeholders of a proposal, activity or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Suppliers

Those who are provide goods, services or materials to the project.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Chapter 2.6 Planning and Financing Reclamation and Closure

NOTES ON THIS CHAPTER: This chapter has gone through fairly extensive restructuring in an effort to streamline the chapter. In particular, requirements that referred to post-closure activities and financial assurance have been wrapped into the requirements that relate to closure, as there was already a lot of overlap (and some duplication).

Proposed additions and changes:

- Criterion 2.6.1 on Exploration Reclamation was deleted, and exploration was integrated into the requirements below, and a requirement relating to complaints was deleted (as it duplicated requirements in Chapter 1.4)
- Criterion 2.6.5 on Post-Closure Planning and Monitoring was deleted. The requirements were moved into requirement 2.6.1.2, which lays out the details of what needs to be in the reclamation and closure plan. See sub-requirements 2.6.1.2 (j), (k) and (l).
- Criterion 2.6.6 on Post-Closure Water Treatment was deleted, and the requirements contained within were moved to Chapter 4.2 on Water Management so that all water-related requirements could be consolidated (see 4.2.4.3, 4.2.4.4 and others). However, the calculating of costs and financial assurance for long-term water treatment are still included in Chapter 2.6 See 2.6.1.4.i and 2.6.3.1.c.
- Criterion 2.6.7 on Post-Closure Financial Surety has been deleted. The criterion was deemed redundant because the reclamation and closure plan includes post-closure activities and the estimation of post-closure costs, and requirement 2.6.3.1 on financial assurance requires that financial assurance be in place for closure and post-closure activities.
- And a couple of new requirements were developed from previously existing sub-requirements to ensure that adequate attention is paid to these elements during audits. In particular, see the proposed requirements on interim fluid and site management (2.6.1.2) and concurrent reclamation (2.6.1.3). And several requirements combined where there was overlap in intent. These are described in the notes below.

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

PARTICIPATE IN AN EXPERT WORKING GROUP ON THIS CHAPTER

If you are interested in participating in an Expert Working Group on Planning and Financing Reclamation and Closure (in particular, related to the issue of financial assurance), please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net).

BACKGROUND

Globally the mining industry uses a variety of terms to describe the period following the cessation of mining or mineral processing operations, including reclamation, decommissioning, rehabilitation, and restoration. As the necessity for post-reclamation activities became evident, some jurisdictions have added the terms closure and post-closure to describe activities that take place separate from and/or following those other actions. At present there is no uniformly accepted terminology, however IRMA has defined and uses the terms reclamation, closure, and post-closure for the purposes of the requirements in this Standard.

Reclamation refers to the process of achieving stability, hydrologic balance, protection of water resources and converting disturbed land to a productive post-mining land use (or establishing the potential for productive use) and includes removal or isolation of hazardous material and waste, decommissioning and removal of buildings and other structures, removal and disposal of polluted soils, adjustment and stabilization of landforms (earthwork including backfilling, grading, recontouring, stormwater controls), creation of suitable conditions for the introduction of desired flora and fauna (topsoil and revegetation), and any other planned mitigation such as wetlands construction or water diversions.

Closure refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve sitesafety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

Post-closure refers to the period after the reclamation and closure activities in the plan have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, environmental monitoring, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

TERMS USED IN THIS CHAPTER

Affected Community Alien/Non-Native Species NEW Closure Confidential Business Information Competent Professionals NEW Concurrent Reclamation NEW Consultation Contamination NEW Contractor Credible Methods NEW Disposition NEW Contractor Credible Methods NEW Disposition NEW Ecological Processes Ecosystem Entity NEW Exploration NEW Facility Financial Assurance NEW Hazardous Material NEW Hazardous Waste NEW Holding Costs Interim Fluid and Site Management NEW Long-term Water Treatment Major Modification NEW Mineral Processing NEW Mining NEW Mitigation Operation NEW Pit Lake Pollution NEW Post-Closure Practicable Process Water Project NEW Reclamation NEW Restoration Revegetation Site NEW Stakeholder Stormwater Subsidence

These terms appear in the text with a dashed underline. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

A site reclamation and closure plan, including a post-closure plan if applicable, provides an overall framework to guide all actions and decisions taken during the life cycle of a mining or mineral processing operation. It is now widely recognized that the objectives and impacts of reclamation and closure must be considered from project inception. A reclamation and closure plan should define a vision of the end result of the process and set concrete objectives to implement that vision. At any point in time, a reclamation and closure plan must include only techniques that rely on proven technologies. Future changes to the reclamation and closure plan can be anticipated, but the use of entirely new technologies should not be relied upon until they have been proven.

When evaluating the adequacy of reclamation and closure plans the following should be considered: (1) the final post-reclamation land and other uses that are appropriate for the site; (2) how reclaimed lands should be stabilized, re-vegetated and ecosystem functionality restored; (3) the timing of reclamation processes; (4) whether open pits should be backfilled with waste if it can be done in a manner that does not degrade the environment; and (5) how much money should be set aside to guarantee that reclamation and closure will be accomplished, how should that money be invested or valued in terms of discount rate, and what form of financial assurance should be required for this guarantee to be effective in practice.

OBJECTIVES/INTENT OF THIS CHAPTER

To protect long-term environmental and social values, and ensure that the costs of site reclamation and closure are not borne by affected communities or the wider public.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

For proposed projects, only a conceptual plan is required (2.6.1.1), and <u>financial assurance</u> does not need to be in place during the project development phases but does need to be in place before ground disturbance/construction begins.

<u>Reclamation</u> and <u>closure</u> plans for exploration and permitting phases may not need all of the elements listed in 2.6.1.1. For example, if there were no constructed facilities, then demolition and disposal would not be necessary during exploration reclamation. Entities can provide evidence and a rationale to auditors as to why certain sub-requirements are not relevant in their circumstances, and the auditors will make a final determination.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

A comprehensive <u>reclamation</u> and <u>closure</u> plan is in place (2.6.1.1) and <u>financial assurance</u> is in place to cover the costs associated with the reclamation, closure and <u>post-closure</u> activities in the reclamation and closure plan (2.6.3.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Planning and Financing Reclamation and Closure Requirements

2.6.1. Reclamation and Closure Planning

NOTE FOR 2.6.1: The previous criterion 2.6.1 related to exploration-related reclamation in the 2018 Mining Standard has been deleted. Exploration phase requirements are included in the requirements below, where applicable.

2.6.1.1. (Critical Requirement)

A <u>reclamation</u> and <u>closure</u> plan is developed and implemented during <u>exploration</u> and <u>operations</u>, and a conceptual plan is developed during <u>project</u> development that contains, as relevant:²²³

a. A general statement of purpose, and description of the <u>post-closure</u> land and <u>facility</u> use objectives that, to the extent possible, align with affected communities' preferred <u>post-closure</u> land and facility uses;²²⁴

²²³ Reclamation and closure plans for exploration and permitting phases may not need all of these elements. For example, if there are no constructed facilities, then demolition and disposal would not be necessary during exploration reclamation. Entities can provide evidence and a rationale to auditors as to why certain sub-requirements are not relevant in their circumstances, and the auditors will make a final determination.

²²⁴ Post-closure land use and facility use should have been discussed affected communities as part of the Environmental and Social Impact Assessment (ESIA) process in Chapter 2.1 (see requirements 2.1.3.1.h and 2.1.3.2). However, if was not done during ESIA, then to meet this requirement entities must demonstrate that these discussions occurred and were taken into consideration in developing the post-closure land

- b. Site location and background site characterization information;²²⁵
- c. A description of the entire project/operation, including all facilities and individual site features;²²⁶
- d. Earthwork, including permanent stabilization measures and final topography of the reclaimed lands;
- e. Water management:
 - i. Source and pathway characterization including modeling of geochemistry and hydrology to identify the potential release of contaminants during closure;²²⁷
 - ii. Source mitigation measures to prevent the degradation of water resources;²²⁸
 - iii. Stormwater runoff/run-on management;²²⁹
- f. Ecological restoration:
 - i. Plant material selection for the preferred post-closure land use, prioritizing native species as appropriate;
 - ii. A defined period, no longer than 10 years after the facility is no longer is used, when all planned revegetation tasks will be completed;
 - iii. Quantitative revegetation standards based on analogous sites with clear measures to be implemented if these standards are not met within a specified time;
 - iv. Plans for control of noxious weeds and alien/non-native species;
 - v. Planned activities to restore ecosystem processes, including clear objectives and indicators that will be used to demonstrate that objectives have been achieved;²³⁰
- g. Polluted soil remediation;²³¹
- h. Hazardous material and hazardous waste disposal;²³²
- i. Facility and equipment decommissioning (e.g., decontamination, demolition, <u>disposition</u>, clean-up and/or disposal), if not used for other purposes;
- j. Post-closure monitoring and maintenance of facilities:
 - i. Inspection of surface stability (open pits) and/or underground mine workings subsidence;
 - ii. Monitoring and maintenance of waste facilities including effectiveness of revegetation, stormwater controls, and any cover and/or seepage capture systems; and
 - iii. For facilities where long-term risks have not been eliminated (e.g., some <u>tailings</u> facilities), mechanisms for contingency and response planning and implementation.
- k. Post-closure water management:
 - i. Post-closure operation, inspection and maintenance of <u>mitigation</u> measures, including but not limited to, source controls and/or capture and treatment needed to prevent degradation of ground

use objectives if appropriate. Consultations would not be appropriate, e.g., when host country laws are in place that designate/decree the postclosure end uses.

²²⁵ Many of the IRMA chapters require elements of site characterization, so this plan should summarize that information. See Chapter 4.1, criterion 4.1.1; proposed Chapter 4.X, requirements 4.X.1.2, 4.X.1.3; Chapter 4.3, criterion 4.2.1 and 4.2.2; Chapter 4.3, criterion 4.3.1; and proposed Chapter 4.XX, 4.X.X.1.

²²⁶ This should be informed by IRMA Chapter 4.1, criterion 4.1.1 and proposed Chapter 4.X, criterion 4.X.1.

²²⁷ This should be informed by IRMA Chapter 4.2 [4.2.2.5 and 4.2.3.2.a (conceptual site models).

²²⁸ This should be informed by IRMA Chapter 4.2, requirement 4.2.4.1.

²²⁹ This should be informed by IRMA Chapter requirement 4.X, requirement 4.X.2.1 and 4.2, requirement 4.2.4.1.

²³⁰ There may already be indictors for restoration of some areas of (or possibly the entire) site if important biodiversity and/or priority ecosystem services may be or have been affected by mining-related activities. These indicators would be in the biodiversity and ecosystem services management plans in Chapter 4.6 (see requirements 4.6.3.3 and 4.6.3.4).

²³¹ If soil pollution from air emissions (Chapter 4.3), or polluted soil is identified during operations (proposed Chapter 4.XX), decommissioning of equipment/facilities.

²³² This should be informed by IRMA Chapter 4.1 (Waste and Materials Management), criteria 4.1.4 and 4.1.5.

water and surface water, including measures related to <u>pit lake</u> and/or underground mine water quality;²³³

- ii. Post-closure water capture and treatment using treatment technology proven to be effective for similar water chemistry and under similar conditions and at a similar scale to the water that will need to be treated; ²³⁴
- Post-closure monitoring of surface waters, groundwaters, and biota, including a sufficient number of sampling sites to detect <u>pollution</u> from closed facilities and detect changes in water quality or ecosystem health at compliance and off-site locations;²³⁵
- iv. The plan includes monitoring for at least 25 years beyond the time when active mitigation ceases and water quality is no longer predicted to exceed IRMA water quality criteria;²³⁶
- 1. Post-closure monitoring of terrestrial resources, if necessary (e.g., to determine ongoing impacts or effectiveness of restoration efforts);
- m. Opportunities for affected communities to review the reclamation and closure plan (see 2.6.1.7); and
- n. The role of the community in post-closure monitoring and maintenance (if any); and
- o. A schedule for all activities indicated in the plan, including <u>concurrent reclamation</u> and closure activities (see 2.6.1.2).

NOTE FOR 2.6.1.1: REVISED. We combined requirements 2.6.2.1 and 2.6.2.2 from the 2018 Mining Standard because 2.2.1.1 was a general statement of the need for a reclamation and closure plan with expectations that overlapped with sub-requirements in 2.6.2.2.

We are proposing that some sub-requirements that were previously in 2.6.1.2 in the 2018 Mining Standard be deleted or changed as follows:

- The requirement now states that the various sub-elements need to be included in the reclamation and closure plan "if relevant". As the footnote indicates, this is because certain elements may not yet be applicable for plans developed for exploration activities, or for proposed development projects. Our intention is to develop guidance on which elements may or may not be relevant for the different phases. Some ideas on guidance can be found in the draft IRMA-Ready Standard Mineral Exploration and Development (see note for 2.6.1.4 in that draft Standard).²³⁷
- 2.6.1.1.a includes language to replace a previous requirement that said the plan needed to include the "agreed-upon post-mining land use and facility use." This has been changed to "to the extent possible" to recognize that there may be cases where government regulations may conflict with the post-closure land use vision of the community, or where the preferred land uses are not practicable, would compromise reclamation and closure objectives or create safety issues. However, we are requiring that there needs to be evidence that entities have consulted with communities to understand the community's preferred uses for the site post-closure, if appropriate, and that the entity includes these preferences in their plans to the extent possible. Consultations would not be appropriate when host-country laws are in place that designate or decree the post-closure end uses. As noted in the footnote, such consultation should have happened as part of the Environmental and Social Impact Assessment process (See Chapter 2.1,

²³³ Measures related to pit lake water quality might include measures to prevent birds, wildlife, livestock or people from coming in contact with pit lake water if that water exceeds certain water quality criteria; or measures to prevent pit lake waters from contaminating the environment.

²³⁴ The prediction of the necessity and volume of long-term water treatment occurs in IRMA Chapter 4.2 (Water Management), requirement 4.2.3.2.c and 4.2.3.3.

²³⁵ The prediction of the duration of long-term water treatment occurs in IRMA Chapter 4.2 (Water Management), requirement 4.2.3.3).

IRMA water quality criteria are found in Chapter 4.2, Tables 3.1a to h. Alternatively, the mine may meet baseline or background water quality values as per Chapter 4.2 (see 4.2.6.1).

²³⁶ The prediction of the necessity and volume of long-term water treatment occurs in Chapter 4.2 (Water Management), requirement 4.2.3.3).

²³⁷ See the draft IRMA-Ready Standard for Responsible Mineral Exploration and Development. pp. 98, 99. <u>https://responsiblemining.net/wp-content/uploads/2021/12/IRMA-Ready-Draft-1.0-December2021-All-Stages.pdf</u>

requirement 2.1.3.1.h) but if not, the consultation would need to occur and be integrated into the plan, to fully meet this requirement.

- A sub-requirement related to interim operations and maintenance actions has been moved to 2.6.1.3.
- We are proposing to add control of alien/non-native species to sub-requirement 2.6.1.1.f.iv, as it has been identified as a gap by IRMA stakeholders. We are proposing the following definition:

Alien/Non-Native Species:

Animals, plants or other organisms introduced by humans, either intentionally or accidentally, into areas outside their natural range. Some of these species become established and negatively impact native biodiversity. These species are classified as invasive alien species. (Source: IUCN. https://www.iucn.org/resources/issues-brief/invasive-alien-species-and-sustainable-development)

- 2.6.1.1.f.v changed wording from "restore natural habitats" to "restore ecosystem processes" because our definition of natural habitats suggests that they are habitats that have not been modified by human activity. Also added that there be indicators so that the entity (and stakeholders) understands what needs to happen for ecosystem processes to be restored. This is similar to the requirement for quantitative revegetation standards in g.ii.
- 2.6.1.1.g NEW. Added this because soil remediation may be needed due to deposition of airborne contaminants, or it may be required when facilities are demolished and removed.
- 2.6.1.1.i changed wording from facility demolition and disposal to "facility and equipment decontamination, demolition, disposition and disposal." Disposition was added because some of the materials may be able to be used for other purposes, rather than being disposed of.
- 2.6.1.1.j and 2.6.1.1.k more detail has been added regarding what information on post-closure plans need to be included. These expectations were previously in 2.6.5.1, 2.6.5.2, 2.6.5.3 and 2.6.5.4 in the 2018 Mining Standard.
- 2.6.1.1.1 is NEW. It has been added because if some indicators of ecosystem health or the success of restoration measures require monitoring beyond closure, those elements need to be included in the reclamation and closure plan.

2.6.1.2. Concurrent reclamation is carried out as follows:

- a. The following activities are implemented on a concurrent or progressive basis, or a rationale is documented for why they are not practicable:
 - i. Topsoil salvage to the maximum extent practicable, and topsoil storage in a manner that preserves its capability to support plant regeneration;²³⁸
 - ii. Concurrent or progressive geotechnical stabilization of site features and waste sites;
 - iii. Control of noxious weeds and alien/non-native species;
 - iv. Revegetation, prioritizing use of native/local species as appropriate; and
- b. Actions are assigned to responsible staff.

NOTE FOR 2.6.1.2: NEW. We are proposing to create this standalone requirement from the previous subrequirement 2.6.2.2.i in the 2018 Mining Standard, which required that the reclamation and closure plan include plans for concurrent or progressive reclamation and revegetation.

While many elements in the reclamation and closure plan cannot be undertaken until closure, this requirement pulls out the actions that can be done concurrently, and can be verified by auditors while on site.

²³⁸ A similar expectation is found in the proposed Chapter 4.XX – Soil and Land Management (requirement 4.XX.4.3). If these concurrent measures are included in a soils management plan, and that plan is being implemented and funded, then they do not necessarily need to be included in this plan.

We have added to 2.6.1.2.a.iv that native species be prioritized "as appropriate. This is in recognition that while preference should be given to native species, sometimes there may be value in the short-term use of non-native species."²³⁹

Our proposed definition of **concurrent reclamation** is:

A reclamation activity that is undertaken at the same time as mining and/or mineral processing activities, prior to the end of the operation's life, that contributes to the final reclamation and closure goals, and the post-closure land use objectives. Also may be referred to as 'progressive reclamation' or 'contemporaneous reclamation'.

CONSULTATION QUESTION 2.6-1: Do you agree with the addition of this requirement? Are there other activities you would suggest be included in the list of concurrent reclamation activities that can be commenced/undertaken during the operations phase?

2.6.1.3. An interim fluid and site management plan (or equivalent) is documented, and it is implemented if operations at a mine/mineral processing site are suspended or unexpectedly cease. The plan includes, at minimum:

- a. Information on how process water systems, interceptor wells, seepage collection systems and stormwater management systems would be operated and maintained to prevent releases and continue to meet environmental compliance obligations;
- b. Process water flow charts showing electrical system requirements, pump operations, seepage collection and interceptor well operations, and applicable operation and maintenance requirements;
- c. Information on site management including:
 - i. Measures to stabilize excavations and workings;
 - ii. Measures to isolate or control toxic or hazardous materials;
 - iii. Provisions for the storage or removal of equipment, supplies and structures;
 - iv. Measures to maintain the site in a secure, safe and clean condition;
- d. Provisions to monitor fluid and site conditions during periods of non-operation;
- e. A schedule of anticipated periods of temporary <u>closure</u> during which the <u>interim fluid and site</u> <u>management</u> plan will be implemented, including provisions for notifying regulators of unplanned or extended temporary closures; and
- f. The plan is updated as necessary, including when major process water system changes occur that would affect the interim actions necessary to prevent fluid releases.

NOTE FOR 2.6.1.3: NEW. The concept of interim fluid and site management (also sometimes referred to as "care and maintenance") was included as 2.6.2.2.h in the 2018 Mining Standard.

Our proposed definition for **interim fluid and site management** is:

The management of process fluids and associated facilities and management of the site to ensure it remains in a safe and stable condition during unanticipated periods of temporary closure such as a suspension of operations, and for periods of anticipated seasonal closure where there is potential to recommence operations in the future. Also may be referred to as 'care and maintenance'.

An interim fluid and site management plan is important to have in place due to the potential impacts on water and safety if an operation were to be unexpectedly suspended/cease operating. The Covid-19 pandemic was accompanied by temporary shut-downs, but other events such extreme weather and, more generally, the

²³⁹ For example, FutureTerrains writes that, "Given the perturbed nature of mine sites, it may be necessary to go against the conservation grain by using non-local/non-native species to achieve restoration aims beyond what is possible using (the usually preferred) local/native species, e.g., to provide rapid ground cover to reduce soil erosion, or nurse trees to aid the establishment of more sensitive species. This may also conflict with regulation in jurisdictions that require the use of native/local species." <u>https://futureterrains.org/mineclosureperspectives-ecological-restoration/</u>

cyclical nature of mineral/metal commodity prices can also result in suspension or unexpected cessation of mining and mineral processing operations.²⁴⁰

We are proposing to create this more detailed standalone requirement to more clearly specify expectations, and ensure that interim measures do not get overlooked in the auditing of 2.6.1.1. The provisions themselves do not need to be in a standalone plan (they can be integrated into the reclamation and closure plan), but they will be reported on and scored separately.

2.6.1.4. The <u>reclamation</u> and <u>closure</u> plan(s) includes a detailed determination of the estimated concurrent and final reclamation and closure and <u>post-closure</u> costs, based on the assumption that reclamation and closure will be carried out by a regulatory agency using a third-party <u>contractor</u>, and include, at minimum:

- a. Earthwork (see 2.6.1.1.d.);
- b. Source mitigation measures to prevent the degradation of water resources (see 2.6.1.1.e);
- c. Stormwater runoff/run-on management (see 2.6.1.1.e);
- d. Costs to carry out <u>revegetation</u> and ecological <u>restoration</u> efforts until areas can be demonstrated to be meeting revegetation standards and indicators of restoration of ecosystem functionality (see 2.6.1.1.f.);
- e. Polluted soil remediation (see 2.6.1.1.g.)
- f. Disposal of hazardous materials and wastes (see 2.6.1.1.h.);
- g. Facility and equipment decontamination, demolition, disposition and disposal (see 2.6.1.1.i.);
- h. <u>Holding costs for interim fluid and site management</u> (see 2.6.1.3) that would be incurred by a regulatory agency if the <u>entity</u> were to declare bankruptcy. These costs are calculated based on the assumption that there would be a two-year period before final reclamation activities would begin;
- i. Post-closure water management, including, as relevant:
 - i. If <u>water treatment</u> is required <u>post-closure</u>, the water treatment cost component is calculated conservatively, using an appropriate discount rate and for a period of at least 100-years (see 2.6.3.3);
 - ii. Estimated costs for long-term surface and groundwater monitoring and biotic monitoring, at a sufficient number of sites to detect changes in water quality and aquatic ecosystem health for at least 25 years beyond the time when IRMA water quality criteria (or other applicable criteria) are predicted to be exceeded;²⁴¹ and
 - iii. Operation and maintenance costs for water management and treatment (including treatment plant waste disposal, or ongoing measures related to pit lake water quality, etc.); ²⁴²
- j. Indirect Costs:
 - i. Mobilization/demobilization;
 - ii. Engineering redesign, procurement and construction management;
 - iii. Contractor overhead and profit;
 - iv. Agency administration; and
 - v. Contingency; and

²⁴⁰ Allianz Global. 2020. "Coronavirus: Temporary care and maintenance status in the mining industry," <u>https://www.agcs.allianz.com/news-and-insights/expert-risk-articles/coronavirus-loss-prevention-mining.html</u>; ICMM. 2019 Integrated Mine Closure. pp. 70, 71. https://www.icmm.com/website/publications/pdfs/environmental-stewardship/2019/guidance_integrated-mine-closure.pdf?cb=60008

²⁴¹ The prediction of the duration of long-term water treatment occurs in IRMA Chapter 4.2 (Water Management), requirement 4.2.3.3).

IRMA water quality criteria are found in Chapter 4.2, Tables 4.2 (a to h). Alternatively, the mine may meet baseline or background water quality values as per Chapter 4.2, requirement 4.2.6.1.

²⁴² Measures related to pit lake water quality might include, for example, ongoing treatment, e.g., to manage acidity, maintenance of measures to prevent birds, wildlife, livestock or people from coming in contact with pit lake water if that water exceeds certain water quality criteria, or measures to prevent pit lake waters from contaminating the environment. If pit lakes exist, they would also need to go through a risk assessment in Chapter 4.2 (Water Management), as per criterion 4.2.3.

k. The estimated costs take into account inflation, and include a multi-year cost inflation that corresponds to the number of years until the reclamation and closure plan and costs are next scheduled to be reviewed (see 2.6.1.6).²⁴³

NOTE FOR 2.6.1.4: REVISED. This was 2.6.2.3 in the 2018 Mining Standard. Some proposed change include:

• Added more detail in 2.6.1.4.i, which previously referred only to post-closure costs for long-term water treatment. We moved expectations from 2.6.7.2 from the 2018 Mining Standard here, because they related to calculation of post-closure costs and are more relevant here.

In 2.6.1.4.i.iii, we added a reference to pit lake water quality. This is to integrate costs related to requirement 2.6.5.4 from the 2018 Mining Standard (now 2.6.1.1.k.i), which refers to providing adequate measures to protect organisms and the environment if pit lakes have poor quality.

2.6.1.5. <u>Reclamation</u> and <u>closure</u> costs are calculated by professional engineers using a <u>credible method</u> (i.e., a credible engineering cost estimate method) or the costs are reviewed by a third-party <u>competent professional</u>.

NOTE FOR 2.6.1.5: NEW. There was no requirement in the 2018 Mining Standard to either use competent professionals or credible methods for calculating costs associated with reclamation and closure. We are proposing that the calculation of these costs requires experience and familiarity with reclamation and closure costs from other sites to ensure that the estimated costs are realistic and credible. If this is not done, then they must be reviewed by someone who is a competent professional.

2.6.1.6. The <u>entity</u> reviews and updates <u>reclamation</u> and <u>closure</u> plan(s) and estimated costs at least every five years or more often (e.g., if there is a proposed <u>major modification</u>, or a change in conditions such as a <u>post-closure</u> water quality issue not predicted or accounted for in the existing plan).

NOTE FOR 2.6.1.6: REVISED. This was 2.6.2.4 in the 2018 Mining Standard. Replaced financial assurance with estimated closure costs, as the financial assurance is covered in 2.6.3.1.

Added that the concurrent or progressive reclamation plan also be updated. The requirement to share a concurrent or progressive reclamation progress report, which used to be part of this requirement, was moved to 2.6.4.1.c.

2.6.1.7. If not otherwise provided for through a regulatory process:²⁴⁴

- a. For proposed mineral development projects, the entity:
 - i. Provides <u>stakeholders</u> with at least 60 days to comment on the proposed <u>reclamation</u> and <u>closure</u> plan prior to the commencement of the construction of a mine or <u>mineral processing</u> facility the entity; and
 - ii. Offers resources to affected communities for capacity building and training to enable meaningful stakeholder engagement;²⁴⁵
- b. During operations, the entity:
 - i. Provides stakeholders with the opportunity to review and provide feedback on the reclamation and closure plans (including the interim fluid and site management plan and the concurrent reclamation plan) and updates, and the implementation of concurrent reclamation activities;
 - ii. Provides stakeholders with the opportunity to comment on the form and adequacy of the <u>financial</u> <u>assurance</u>; and

²⁴³ For example, if the next scheduled review of the reclamation and closure plan (and costs) is not for five years (i.e., the maximum allowed in 2.6.1.6), then the costs in current plan reflect the current cost plus five years x rate of inflation. This is to ensure that the financial assurance at any time during those five years is sufficient to cover the full costs of reclamation and closure (taking into account inflation).

Alternatively, if financial assurance is held by a regulatory body, and they require increases in the amount of financial assurance to account for inflation, then the multi-year cost inflation is not necessary in the plan itself.

²⁴⁴ Depending on the phase of mineral development, some of these sub-requirements may not be relevant.

²⁴⁵ For more on meaningful stakeholder engagement see Chapter 1.2, requirement 1.2.2.1.

- iii. Offers resources to affected communities for capacity building and training to enable meaningful stakeholder engagement;
- c. Prior to completing the final reclamation and closure plan the entity:
 - i. Provides <u>stakeholders</u> with at least 60 days to comment on the final reclamation and closure plan and adequacy of the <u>financial assurance</u>;
 - ii. Offers resources to <u>affected communities</u> for capacity building and training to enable meaningful stakeholder engagement; and
 - iii. Provides affected communities and interested stakeholders with the opportunity to propose independent experts to provide input to the entity on the design and implementation of the plan and adequacy of financial assurance; and
- d. Prior to release of part or all of the financial assurance communities and/or their independent experts have the opportunity to provide input on the adequacy of the completion of reclamation and closure activities.

NOTE FOR 2.6.1.7: REVISED. Most of the elements in this requirement were previously in 2.6.2.5, 2.6.4.5 and 2.6.4.6 in the 2018 Mining Standard. A few words changed (e.g., added mineral processing and changed from financial surety to financial assurance).

The various expectations have been separated out by phase of development (e.g., project development, operations, and prior to the finalization of the reclamation and closure plan when the operation is close to closure), to try to make it clear that depending on the phase of mineral development some of the sub-requirements may not be relevant. Note that the original requirement in the 2018 Standard only required access to independent experts prior to completion of the final reclamation and closure plan, and so that element is only included in 2.6.1.8.c. Note, also that we are proposing that the resources for capacity building are provided to stakeholders from affected communities, not all stakeholders, as those living in affected communities are the ones who have the most to gain (or lose) if reclamation is or is not done well.

2.6.1.7.b is NEW. We are proposing that there be opportunities to provide feedback on the implementation of concurrent reclamation that occurs during operations, as well as the interim fluid and site management plan, and the form and adequacy of the financial assurance. In the 2018 Mining Standard there was a long lag time between when stakeholders would have the opportunity to provide feedback (once prior to construction and once just prior to the beginning of final reclamation and closure). Due to the long life cycle of most operations, we are proposing that these opportunities be provided more frequently. We have tied the frequency to the frequency of the updates in the plan.

CONSULTATION QUESTION 2.6-2: Do you agree that stakeholders should be provided with the opportunity to provide input on reclamation, and reclamation and closure plans, throughout the operation's life cycle? If so, does it make sense to tie this opportunity to when the plans are updated?

2.6.2. Backfilling as a Part of Reclamation

NOTE FOR 2.6.2: This was criterion 2.6.3 in the 2018 Mining Standard.

2.6.2.1. Open surface features such as trenches and pits used for drilling mud, bulk sampling or geotechnical sampling are completely backfilled and regraded to original contours, or to contours that are compatible with the <u>post-closure</u> land use objectives (see 2.6.1.2.d).

NOTE FOR 2.6.2.1: NEW. A similar requirement was proposed in the draft IRMA Ready Standard for Exploration and Development. We are proposing to add it here, given that this proposed new standard covers the exploration phase.

2.6.2.2. For projects/operations with open pit mining operations the reclamation and closure plan includes the partial or complete backfilling of open pits if:

- a. A pit lake is predicted to exceed the water quality criteria in IRMA Chapter 4.2;²⁴⁶ and
- b. The entity and key <u>stakeholders</u> have agreed that backfilling would have socioeconomic and environmental benefits; and
- c. It is economically viable.

NOTE FOR 2.6.2.2: This was requirement 2.6.3.1 in the 2018 Mining Standard. Updated language to distinguish these open pits from the pits in 2.6.2.1.

2.6.2.3. For projects/operations with underground exploration features or underground mining operations the reclamation and closure plan includes backfilling of voids to the extent practicable if:

- a. Subsidence is predicted to affect lands not owned by the entity; and
- b. The mining method allows.

NOTE FOR 2.6.2.3: This was requirement 2.6.3.2 in the 2018 Mining Standard. Updated language to incorporate exploration features.

2.6.3. Financial Assurance

NOTE FOR 2.6.3: This was criterion 2.6.4 in the 2018 Mining Standard. The criterion title was changed from 'Financial Surety for Mine Closure' to 'Financial Assurance.' We selected the term financial assurance as being a more generic and applicable term because surety bonds are just one form of financial assurance.

The proposed definition of Financial Assurance is:

A financial mechanism or instrument to ensure that funds are available for a regulatory authority (or functional equivalent) to ensure that the required reclamation, decommissioning, monitoring, cleanup or other activities at a specific facility or site are undertaken if the responsible entity is unable or unwilling to perform the required actions contained in the reclamation and closure plan. Acceptable mechanisms or instruments for financial assurance are limited to forms of cash (commercial deposits, trusts), irrevocable letters of credit from an established bank, surety bonds and insurance policies from bonded insurers, and trust funds.

Also, the following changes to this criterion are being proposed:

- We deleted a requirement that said "self-bonding and corporate guarantees shall not be used" (requirement 2.6.4.3 in the 2018 Mining Standard), because it was duplicative, in intent, with another requirement that says, financial assurance needs to be "independently guaranteed, reliable and readily liquid" (requirement 2.6.3.1.b in this proposed standard). As seen in the definition, under this rubric, acceptable mechanisms or instruments for financial assurance are limited to forms of cash (commercial deposits, trusts), irrevocable letters of credit from an established bank, surety bonds and insurance policies from bonded insurers, and trust funds.
- We deleted a requirement that the terms of the financial assurance must guarantee that the financial assurance is not released until the site is stable and public comment is taken (2.6.4.6 in the 2018 Mining Standard) because it duplicates other requirements. For example, the reclamation and closure plan includes the planned site stabilization expectations, and 2.6.3.1, below, says that financial assurance needs to be in place to cover those activities (so if the stabilization activities are not yet completed the financial assurance would not be released). Public comment on financial assurance is covered in 2.6.1.8.d.

2.6.3.1. (Critical Requirement)

Financial assurance is:

a. In place throughout the project/operation life cycle;²⁴⁷

²⁴⁶ See Chapter 4.2, requirement 4.2.3.2 for prediction of water quality, and requirement 4.2.6.1 for requirements related to maintaining water quality at baseline/background or at levels protective of current and future end uses of water.

²⁴⁷ For proposed projects, financial assurance is in place before ground disturbance begins.

- b. Independently guaranteed, reliable, and readily liquid;²⁴⁸ and
- c. Sufficient to cover the costs of interim fluid and site management, reclamation (including concurrent reclamation), closure and post-closure activities estimated in the most current reclamation and closure plan.

NOTE FOR 2.6.3.1: REVISED. This combines requirements 2.6.4.1 and 2.6.4.2 in the 2018 Mining Standard.

Also, language in this requirement has been revised to make it clear that the amount of financial assurance needs to match the most current reclamation and closure plan (which contains the most up-to-date cost estimates). In the 2018 Mining Standard there was a requirement with a similar intent that said that financial assurance needed to be "Sufficient to cover the reclamation and closure expenses for the period until the next financial surety review is completed," but we think the proposed language is clearer.

CONSULTATION QUESTIONS

Background: The rationale behind financial assurance is to ensure that sufficient funds are available to guarantee that sites will be decommissioned and disturbed areas and affected resources will be restored, remediated and/or reclaimed to an acceptable and stable condition. If the entity successfully completes reclamation and closure according to the requirements of the reclamation and closure plan, the funds are released back to them. If the entity fails to reclaim the site as planned, and all means are exhausted to compel the company to reclaim the site, then the funds are forfeited and used to reclaim the land, typically under the supervision of a regulatory authority.²⁴⁹

There are some jurisdictions, however, where the regulatory system does not require financial assurance for mining-related operations, or governments may not have the capacity to implement effective reclamation and closure or administration of activities. Without a regulatory agency willing and/or able to step in to oversee or carry out the reclamation and closure, it is not clear how any of the financial assurance instruments such as surety bonds or trust funds would work, as there needs to be a third-party beneficiary, which is typically a government entity (the party responsible for receiving and administering the funds). Mining is occurring and is likely to continue to occur in these jurisdictions, and so IRMA is grappling with what would be considered "best practice" financial assurance expectations for mines in those locations.

Our proposed definition of Financial Assurance describes it as "A financial mechanism or instrument to ensure that funds are available for a regulatory authority (or functional equivalent) to ensure that the required reclamation, decommissioning, monitoring, cleanup or other activities at a specific facility or site are undertaken..."

A 'functional equivalent' would have to address all aspects attributable to a regulatory authority including having governmental permission to undertake the work, a duty or at least a commitment to carry out the work in accordance with host country laws and in the public interest, etc. IRMA is open to any examples of how this might work.

This has been a topic of an IRMA working group, and no resolution has yet emerged that has satisfied all of the various stakeholder groups. IRMA is seeking input on these issues and offers these questions to support a range of input. Commenters may offer insights on these questions or suggest any other proposals to address these issues:

CONSULTATION QUESTION 2.6-3

²⁴⁸ The intent of this requirement is to ensure that funds will be available, irrespective of the entity's finances at the time of closure, or in the event of bankruptcy that occurs during operations.

²⁴⁹ Examples of various options are found in: Cheng, L and Skousen, J.G. 2017. "Comparison of international mine reclamation bonding systems with recommendations for China." International Journal of Coal Science & Technology, Volume 4, pp. 67-79. Open Access: https://link.springer.com/article/10.1007/s40789-017-0164-3

Note: This question has been asked specifically by NGO Sector leaders concerned with transparency of risks where mining operations lack government-supported financial systems.

Question: Should IRMA leave the requirement 2.6.4.3 from the 2018 Standard unchanged (i.e., *"Self-bonding or corporate guarantees shall not be used"*)? In that case, if self-bonding is used, the most the entity can score on this requirement would be *"partially meets"* (and that would only happen if the site fully meets sub-requirement b). Or are there other ways to sufficiently highlight the financial risk of not having government-supported financial assurance in place?

CONSULTATION QUESTION 2.6-4: Should IRMA add that that self-bonds or corporate guarantees are not used "unless there is no other option available," and create some requirements that evaluate the credibility of any self-bond or corporate guarantee, so that stakeholders are provided with some information on the likelihood that funds would be available to cover the cost of reclamation and closure either at the end of the operation's life or if the entity were to go bankrupt prior to the planned closure date. There are existing approaches such as 'balance sheet tests,' which require periodic verification of compliance with financial health criteria.

CONSULTATION QUESTION 2.6-5: Are there realistic options for "Independently guaranteed, reliable, and readily liquid" that do not specifically require a government body to oversee financial management and reclamation execution? What are those options and how have then been implemented to date in practical terms? Are there examples of success? challenges?

CONSULTATION QUESTION 2.6-6

Note: this question has been asked specifically by Mining Sector leaders seeking solutions where government supported systems are not in place or may not be sufficiently robust.

Question: Should IRMA consider provision of guarantees by corporates of sufficient creditworthiness that have secured an independently assessed "investment grade" credit rating by one of the recognized credit ratings agencies? What are the benefits and shortcomings of this approach?²⁵⁰

PARTICIPATE IN AN EXPERT WORKING GROUP ON THIS CHAPTER

If you are interested in participating in an Expert Working Group on Planning and Financing Reclamation and Closure (in particular, related to the issue of financial assurance), please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net

2.6.3.2. Conservative assumptions are used to calculate long-term Net Present Value (NPV) calculations of any financial assurance as follows:

- a. Calculations use a net discount rate of 3% or less,²⁵¹ unless the entity holding the <u>financial assurance</u> can document that a higher long-term net discount rate can be achieved; and
- b. NPV calculation are carried out until the difference in the NPV between the last two years in the calculations is US \$10.00 or less (or its equivalent in other currencies).

NOTE FOR 2.6.3.2: This was requirement 2.6.7.4 in the 2018 Mining Standard. Changed language from financial surety to financial assurance.

2.6.4. Disclosure

²⁵⁰ Some financial instruments are held by banks which face credit risks in a number of areas like regulatory fines, losses from fraud, being targets of cyber-attacks, bank runs from loss of depositor confidence, defaults by one or more of its borrowers and a collapse in asset values (including collateral assets). These can be company-specific or economy wide effects beyond the control of any bank, both of which can result in sudden liquidity crunches that can affect a bank's ability to meet its financial obligations. In some jurisdictions, a guarantee issued by an independent commercial bank may be of weaker credit worthiness than that of some multinationals. In that case, a parent corporate guarantee would be superior to a bank guarantee in credit terms.

²⁵¹ Net discount rate = Interest minus inflation. (Example: if you can get 6% interest, but inflation is 3%, net discount rate = 3%).

NOTE FOR 2.6.4: NEW. This criterion has been added to make this chapter more consistent with the format of other chapters. The 2018 Mining Standard only mentioned taking practicable steps to minimize the volume of polluted water to be treated. We added here that companies need to demonstrate that they have and action plan and funding in place to fulfill that commitment.

2.6.4.1. The following information is publicly available, or a publicly available access to information (or equivalent) policy that commits the entity to providing stakeholders with this information upon request is in place and shared with stakeholders:²⁵²

- a. The most recent version of the final reclamation and closure plan;
- b. The most recent version of the interim fluid and site management plan;
- c. Concurrent reclamation progress reports;
- d. Information on the form and terms of <u>financial assurance</u> (confidential information may be withheld with adequate rationale); ²⁵³ and
- e. The results of financial assurance reviews (confidential information may be withheld with adequate rationale).²⁵⁴

NOTE FOR 2.6.4.1: REVISED. We have retained the option that information can be proactively made public, or it can be provided to stakeholders upon request (both options were in the original requirement). Note that we refer to an access to information policy (or equivalent). That change is related to a proposed requirement in Chapter 1.2 (see explanation in Chapter 1.2, <u>Note for requirement 1.2.4.3</u>).

Sub-requirements 2.6.4.1 (a) and (b) align with 2.6.2.6, sub-requirement (c) aligns with 2.6.2.4 and sub-requirement (e) aligns with 2.6.4.4 from the 2018 Mining Standard.

NEW elements include:

- The disclosure of tailings-specific information in 2.6.4.1.c, added to align with proposed 2.6.1.5.
- Disclosing the form and terms of any financial assurance in 2.6.4.1.e. Requirement 2.6.4.5 in the 2018 Mining Standard (now incorporated in 2.6.1.6) required companies to provide stakeholders an opportunity to comment on the adequacy of financial assurance. This proposed requirement provides stakeholders with information on which to base such comments.

CONSULTATION QUESTION 2.6-7: Sub-requirements 2.6.4.1.d and 2.6.4.1.e allow for the withholding of confidential information (similar to 2.6.4.5 in the 2018 Mining Standard). We are wondering, however, if such a caveat is necessary. Do you believe that there is any information relating to financial assurance that should be considered confidential business information? If so, we would appreciate examples, so that we can consider adding them in our guidance.

NOTES

²⁵² As per Chapter 1.2, requirement 1.2.4.3, an access to information policy is proposed to be required in the revised IRMA Standard. It is expected that this policy could include the relevant provisions related to stakeholder access to entity-generated information and data on reclamation and closure.

²⁵³ If the entity deems certain financial assurance information to be confidential business information it makes data available to the IRMA auditor to satisfy the auditor that the grounds for confidentiality are reasonable. If certain information is not included for confidential reasons, the fact that the information has been withheld is disclosed to stakeholders along with the non-confidential financial assurance information.

As per IRMA Chapter 1.4, companies are required to have an operational-level grievance mechanism, which would provide a means for stakeholders to initiate dialogue and seek a resolution with a company if the withholding of confidential information makes it difficult or impossible for stakeholders to adequately review the company's calculations.

²⁵⁴ Ibid.

There is a great deal of literature available on best practices in reclamation planning, and these sources provide the necessary detail to guide such planning.²⁵⁵ Guidance is also available on calculating <u>financial assurance</u> and on the risks and benefits of different forms of <u>financial sureties</u>.²⁵⁶

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Alien/Non-Native Species

Animals, plants or other organisms introduced by humans, either intentionally or accidentally, into areas outside their natural range. Some of these species become established and negatively impact native biodiversity. These species are classified as invasive alien species.

Source: IUCN. https://www.iucn.org/resources/issues-brief/invasive-alien-species-and-sustainable-development

Concurrent Reclamation

A reclamation activity that is undertaken at the same time as mining and/or mineral processing activities, prior to the end of the operation's life, that contributes to the final reclamation and closure goals, and the post-closure land use objectives. Also may be referred to as 'progressive reclamation' or 'contemporaneous reclamation'.

Contamination

The presence of a substance where it should not be or at concentrations above background, but not necessarily high enough to have an adverse impact on ecosystem and/or human health. See also 'Pollution'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Disposition

The process of selling, donating, or recycling all or part of a facility or equipment once it has been decommissioned.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

²⁵⁶ E.g., ICMM. 2005. Financial Assurance for Mine Closure and Reclamation. <u>https://www.icmm.com/website/publications/pdfs/mine-closure/282.pdf</u>; ICMM. 2006. Financial Assurance for Mine Closure and Reclamation - Guidance Paper. <u>https://www.icmm.com/website/publications/pdfs/mine-closure/23.pdf</u>; Sassoon, M. 2009. Financial Surety: Guidelines for the Implementation of Financial Surety for Mine Closure. (World Bank Group's Oil, Gas, and Mining Policy Division). pp. 7, 9, 10 and 41. <u>http://siteresources.worldbank.org/INTOGMC/Resources/7_eifd_financial_surety.pdf</u>; Kuipers, J. 2000. Hardrock Reclamation Bonding Practices

in the Western United States. <u>https://www.csp2.org/files/reports/Hardrock%20Bonding%20Report.pdf;</u> USDA. 2004. Training Guide for Reclamation Bond Estimation and Administration. <u>https://www.fs.fed.us/geology/bond_guide_042004.pdf</u>

²⁵⁵ E.g., ICMM. 2008. Planning for Integrated Mine Closure: Toolkit. https://www.icmm.com/website/publications/pdfs/mine-closure/310.pdf

Financial Assurance

A financial mechanism or instrument to ensure that funds are available for a regulatory authority (or functional equivalent) to ensure that the required reclamation, decommissioning, monitoring, cleanup or other activities at a specific facility or site are undertaken if the responsible entity is unable or unwilling to perform required actions. Acceptable mechanisms or instruments for financial assurance are limited to forms of cash (commercial deposits, trusts), irrevocable letters of credit from an established bank, surety bonds and insurance policies from bonded insurers, and trust funds.

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health, or environmental hazard.

Hazardous Wastes

Wastes with properties or characteristics that make them a physical, health, or environmental hazard.

NEW. Added to Chapter 4.1 and others.

Interim Fluid and Site Management

The management of process fluids and associated facilities and management of the site to ensure it remains in a safe and stable condition during unanticipated periods of temporary closure such as a suspension of operations, and for periods of anticipated seasonal closure where there is potential to recommence operations in the future. Also may be referred to as 'care and maintenance'.

Major Modification

A proposed change in an existing operation that could create new risks or change the scale or scope of existing adverse impacts on the health or safety of workers or communities, human rights, the rights or interests of Indigenous Peoples, cultural heritage, livelihoods, or the environment.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Reclamation

The process of achieving stability, hydrologic balance and converting disturbed land and/or water resources to a productive post-mining (or post-mineral processing) land use, or establishing the potential for productive use. Components of reclamation may include: removal or isolation of hazardous material and waste, decommissioning and removal of buildings and other structures, removal and disposal of polluted soils, adjustment and stabilization of landforms (e.g., earthwork including backfilling, grading, recontouring, stormwater controls), creation of suitable conditions for the introduction of desired flora and fauna (topsoil placement, revegetation, ecological restoration), and any other planned mitigation (e.g., wetlands construction, water diversion, other).

Release

An unintentional, unpermitted emission of mine-influenced water to the environment. See also 'Discharge'.

Soil Remediation

The treatment of polluted soils to remove contaminants or convert them to harmless products using physical, chemical and biological processes. Ex-situ and in-situ remediation of soils are both commonly applied methods. Soil remediation may also include removal and deposition in repository.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a

decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Ecological Processes

Biophysical processes (e.g., hydrologic regimes, local climatic regimes, soil chemistry/nutrient cycling, fires, floods and other natural disturbance regimes, herbivory, predation, ecological corridors, migration routes) necessary for the habitat to persist in a landscape or seascape for the long term.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Holding Costs

The costs that would be incurred by a regulatory agency immediately after bankruptcy of a company responsible for maintaining a mine site and before reclamation begins. Examples of such costs include continuing water treatment, routine maintenance, and the other operating costs involved with holding a piece of severely disturbed land.

Long-Term Water Treatment

Long-term water treatment is defined as any water treatment that requires active water treatment after mine closure. After mine closure long-term water treatment is assumed to be required until it can be empirically demonstrated that water treatment is no longer needed.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce its extent, with any residual impact then requiring remediation.

Source: Adapted from UN Office of the High Commissioner for Human Rights. 2012. *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide.*

Pit Lake

Lake formed in a mine pit when mine dewatering pumpage ceases.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Practicable

Practicable means giving equal weight to environmental, social, and economic benefits and costs. This is not a technical definition. It is the discussion between the affected parties on the balance between these interrelated costs and benefits that is important.

Process Water

Water that is used to process ore using hydrometallurgical extraction techniques. It commonly contains process chemicals.

Restoration

Measures taken to assist the recovery of ecosystems that have been degraded, damaged or destroyed. Involves efforts to re-establish an ecosystem's composition, structure and function, intended to bring it back to its original (pre-disturbance) state or to a healthy state close to the original.

Revegetation

Revegetation is the task of reseeding or replanting forbs, grasses, legumes, and other plants (sometimes including shrubs and trees) so as to provide cover to decrease erosion, provide for soil stability, and provide forage for wildlife or livestock or to otherwise return the site to a useable state.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Stormwater

Industrial stormwater (also known as contact water) is runoff of rainfall, snow, or snowmelt that has contacted mined or mineral processing materials (e.g., waste rock, tailings, mine openings, mine processing facilities, and associated mining roads). Non-industrial stormwater (also known as non-contact water) is runoff of rainfall, snow, or snowmelt from land and impervious surface areas that do not contain mined or mineral processing materials.

REVISED. Now also references mineral processing.

Subsidence

Subsidence is a sinking of the ground surface that results in a fracture of the surface which could change surface water hydrology, or pose a threat to human health or property.

Water Quality Criteria

Numerical concentrations or a narrative statement recommended to support and maintain a designated water use. Criteria are based on scientific information about the effects of water pollutants on a specific water use. Source: Adapted from UNEP. 2015. *Compendium of Water Quality Regulatory Frameworks: Which Water for Which Use?*

Chapter 3.1 Fair Labor and Terms of Work

NOTES ON THIS CHAPTER: This chapter has structural changes, as well as several additions and deletions.

Proposed additions and changes:

- There has been reorganization of some requirements (3.1.1.1 and 3.1.1.2) to distinguish between things that we expect all entities to do or have done, and things we expect would be written in a policy stating how the entity would behave if a certain situation that had never arisen were to arise (e.g., a legal strike). Absent this 'policy' focus, if the circumstance had never arisen at a site, there was nothing to audit and marking these requirements as 'not relevant' did nothing to encourage/ensure good practices (e.g., non-interference in legal strike) amongst entities.
- We added nuance to existing requirements, for example adding explicit reference to 'equal pay for equal work' under the non-discrimination section (requirement 3.1.2.1), adding additional requirements for retrenchment planning (3.1.4.1), requiring entities to prioritize the most severe grievances, to actively inform stakeholders that using the grievance mechanism does not preclude use of other mechanisms, and to explicitly inform workers of their options for external recourse (beyond the grievance process) (3.1.5.1), requiring that entities utilize an internationally recognized methodology to calculate living wages (3.1.9.1), and strengthening or supplementing requirements related to benefits and working conditions across several requirements in criterion 3.1.9 and 3.1.10.
- We are proposing written policies in several areas where it was not sufficiently clear before (i.e., 3.1.7.1. on child labor). For the criteria on child labor and forced labor, we removed guidance that entities should shift their supply chain over time if use of child/forced labor persisted and instead specified that entities should take responsibility for ensuring such situations are remedied (3.1.7.5 and 3.1.8.3). We added requirements obligating entities to conduct risk assessments for child labor (3.1.7.4) and forced labor (3.1.8.2), as previously this was not an explicit requirement under this chapter (rather the obligation was under Chapter 1.3 on human rights).
- We are proposing a new anti-harassment criterion (3.1.3) as previously this was only mentioned in terms of disciplinary actions and treatment of women but did not address relations between all workers.
- We added requirements relating to training of employees or supervisors on various policies/procedures (i.e., 3.1.2.2 on non-discrimination, 3.1.3.2 on anti-harassment, 3.1.5.5 on grievance/whistleblowing mechanisms, 3.1.6.4 on disciplinary actions) and obligations of the entity to socialize policies/procedures where a requirement to do so didn't previously exist (i.e., 3.1.6.3 on disciplinary actions).
- We added reference to a whistleblower mechanism and changed the name of criterion 3.1.5 from 'Grievance Mechanisms' to 'Worker Grievance and Whistleblower Mechanisms' to reflect the inclusion of an explicit whistleblower requirement (3.1.5.2) and to more clearly distinguish between the worker grievance mechanism covered primarily in this chapter, and the stakeholder grievance mechanism that is the subject of Chapter 1.4. We also introduced additional requirements relating to the worker grievance mechanism (e.g., 3.1.5.6) drawing on similar sub-requirements for the stakeholder grievance mechanism in Chapter 1.4.
- Finally, we added new requirements to the sections on wages and benefits (3.1.9), and working hours (3.1.10) that require entities to document wages, benefits, and deductions (3.1.9.8) as well as hours worked (3.1.10.5), and meet sub-requirements relating to workers' living accommodations (3.1.9.9) and break times (3.1.10.4).

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Responsible employers provide fair wages and respectful workplaces. However, historically, a portion of the labor force has been the subject of mistreatment such as child and forced labor, discrimination, inadequate wages, and lack of respect for workers' rights.

In 1919, the International Labour Organization (ILO) was formed to protect workers' rights. Since that time, several internationally recognized human rights of workers have been enumerated and incorporated into laws world-wide.

These include the UN International Bill of Human Rights, and the ILO Declaration on Fundamental Principles and Rights at Work and eight core ILO conventions that cover: freedom of association and the right to collective bargaining; the elimination of all forms of forced or compulsory labor; the abolition of child labor; and the elimination of discrimination in respect of employment and occupation. In addition to acknowledging the need to safeguard the human rights of workers, companies are increasingly recognizing the need to provide working hours and wages that promote a high quality of life for workers and their families.

The fundamental principles and rights of workers have been incorporated into various voluntary standards to protect labor rights and ensure fair working conditions (e.g., International Finance Corporation Performance Standard 2; Social Accountability International SA8000;

TERMS USED IN THIS CHAPTER

Child Labor Company Union Consultation Contractors Control Corporate Owner Credible Methodology NEW Entity NEW Exploration NEW Forced Labor Grievance Grievance Mechanism Hazardous Work Host Country Law Indigenous Peoples Living Wage Mineral Processing NEW Mining NEW Operation NEW Project NEW Remediation/Remedy Retrenchment Serious Human Rights Abuses Site NEW Suppliers Trafficking in People Whistleblower Worker Workers' Health and Safety Representative NEW Workers'

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

Global Reporting Initiative). Within any responsible labor standard and verification system, there is an inextricable link between the role of workers and the practice of freedom of association. Workers with first-hand knowledge of environmental, human rights and labor practices must have the right to participate in the verification process without fear of employer retribution. This can be best guaranteed by workers having the right to freely establish or join trade unions of their choosing without employer interference and through protections provided in collective bargaining agreements.

OBJECTIVES/INTENT OF THIS CHAPTER

To maintain or enhance the social and economic wellbeing of workers and respect internationally recognized workers' rights.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

IRMA recognizes that some of the requirements of this chapter may be included in a collective bargaining agreement (CBA). Where this is the case, the CBA will take precedence over IRMA requirements, as long as the union that negotiated them is deemed by auditors - based on the evaluation of all evidence presented in relation to this chapter including stakeholder interviews - to be a legitimate representative body.

As per IRMA Chapter 1.1, the entity is also responsible for ensuring that <u>contractors</u> with which it works comply with relevant requirements in the IRMA Standard.²⁵⁷

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter

²⁵⁷ The definition of contractors includes relevant subcontractors (i.e., those involved in providing services to contractors as part of their services to the entity/operation), and contracted workers.

that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CONSULTATION QUESTION 3.1-1

Background: Throughout Chapter 3.1, reference is made to 'workers' as a general category, with equivalent obligations relating to contractors being derived implicitly in Chapter 1.1 (requirement 1.1.3.1), which obligates entities to ensure that contractors meet IRMA requirements that are relevant to them.

In some of the requirements below, we specifically mention contractors. Where contractors are mentioned, it is the entity's responsibility to carry out an action (e.g., ensuring that contractors are informed of the entity's policy, or undertaking and assessment of risks related to contractors, etc.).

Where contractors are not explicitly mentioned, then as per Chapter 1.1 it would be expected that contractors themselves have systems in place to meet the IRMA requirements. For example, a contractor that has its own direct employees who are working at a mine/mineral processing site (or a broker that hires out contracted workers to the entity) would be expected to be paying fair wages and benefits. The entity's responsibility in such cases would be carrying out some monitoring to make sure that is happening.

Question: Are there any requirements in this chapter that are not currently the entity's responsibility that you believe should be (for example, should the entity have a grievance mechanism for contractors, or should it be the responsibility of the contractor to provide such a mechanism for its subcontractors/employees who are working at the project/operation)?

Conversely, are there any requirements in Chapter 3.1 that you believe should not be applied to or expected of contractors?

CRITICAL REQUIREMENTS IN THIS CHAPTER

<u>Workers'</u> freedom of association (3.1.1.1) and collective bargaining (3.1.1.2) are respected; the <u>entity</u> develops and implements an effective anti-harassment policy (or its equivalent) (3.1.3.1); workers have access to operational-level mechanisms that allows them to raise and seek resolution or <u>remedy</u> for complaints and <u>grievances</u> that may occur in relation to workplace-related issues (3.1.5.1); the entity has a policy prohibiting <u>child labor</u> (3.1.7.1); and the entity develops and implements a policy (or equivalent) on the avoidance of <u>forced labor</u> and the <u>trafficking of people</u> (3.1.8.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Fair Labor and Terms of Work Requirements

3.1.1. Respect for Freedom of Association and Collective Bargaining

NOTE FOR 3.1.1: In the 2018 Mining Standard, criterion 3.1.1. was called 'Human Resources Policy' - the requirement in this criterion (3.1.1.1) asked for a human resources policy that aligned with the terms of this chapter. In the proposed update to the Standard this is redundant as we now ask for policies for specific subject areas throughout. Therefore, both the criterion and requirement have been removed.

In the 2018 Mining Standard, the equivalent criterion to the current 3.1.1 was called 'Workers Organization and Agreements.' In that version of the standard, the various elements in 3.1.1.1 and 3.1.1.2 are found in a number of individual requirements. Because these elements are all associated with freedom of association or collective bargaining in good faith, we have combined them to act as indicators that companies are, indeed, respecting these rights. In the 2018 Mining Standard, the requirement to respect freedom of association and collective bargaining was a critical requirement, so we have made both 3.1.2.1 and 3.1.2.2 critical requirements in this proposed Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

3.1.1.1. (Critical Requirement)

The entity respects the rights of workers to freedom of association by:

- a. Informing workers of:
 - i. Their right to freedom of association under national labor and employment law (if relevant); and
 - ii. That they are free to join (or refrain from joining) a <u>workers' organization</u> of their choosing without any negative consequences or retaliation from the <u>entity</u>;
- b. Providing <u>workers' representatives</u> with access to facilities needed to carry out their functions in the workplace, including provision of access to designated non-work areas during organizing efforts for the purposes of communicating with <u>workers</u>, and provision of accommodations for <u>workers' representatives</u> at sites, where relevant;²⁵⁸
- c. Developing and implementing a policy on freedom of association (or equivalent) that includes commitments to:
 - i. Remain neutral in any legitimate unionizing or worker-organizing effort;
 - ii. Not produce or distribute material that disparages legitimate trade unions; and
 - iii. Not establish or support a "company union" that has the effect of undermining legitimate worker representation; and
- d. Where national law substantially restricts <u>workers' organizations</u>, allowing <u>workers</u> to develop alternative mechanisms to express their <u>grievances</u> and protect their rights regarding working conditions and terms of employment, and not attempting to influence or control these mechanisms.

NOTE FOR 3.1.1.1: REVISED. This requirement draws on requirements 3.1.2.1, 3.1.2.2, 3.1.2.4, 3.1.2.5, and components of 3.1.2.6 from the 2018 Mining Standard.

In 3.1.1.1.a.ii, we clarified that workers must be free to join <u>or not join</u> a workers' organization, in recognition that there may be pressure at some sites to join an organization where workers would otherwise choose not to do so.

We re-organized 3.1.1.1 to distinguish between those points we expect would be written in a policy (e.g., how the entity *would* behave in during an organizing effort or in the event of a legal strike, even if neither has not occurred) and those that are actions we expect all entities to have taken. In the 2018 Mining Standard there are a number of requirements - including this one - that are difficult to audit as written, because if the entity tells auditors, for example, that there have not been any efforts to organize at the operation then the auditor has two choices – mark as 'fully meets' the requirement that the entity remains neutral during worker organization efforts (which is not accurate, since the entity would remain neutral) or mark it as not relevant (which is more accurate, but is problematic because IRMA is trying to promote this best practice, and while there may not have been an organizing effort in the past one could happen). Requiring entities to make policy commitments to remain neutral during organization efforts demonstrates a respect for and intention to uphold the practice).

²⁵⁸ For example, at remotely located sites.

3.1.1.2. (Critical Requirement)

The entity demonstrates respect for the rights of workers to collective bargaining by:

- a. During worker induction:
 - i. Informing workers of their right to collective bargaining under national labor and employment law, if relevant;
 - ii. Informing workers of their rights under an applicable collective bargaining agreement (CBA), if relevant; and
 - iii. Providing workers with a copy of the CBA and the contact information for the appropriate trade union (or workers' organization) representative, if relevant;²⁵⁹
- b. Negotiating in good faith with workers' representatives and workers' organizations and providing them with information needed for meaningful negotiation in a timely manner; and
- c. Developing and implementing a policy on collective bargaining (or equivalent) that includes commitments to:
 - i. Respect the terms and agreements of CBAs;
 - ii. Not use short-term contracts or other measures to undermine a CBA or avoid or reduce obligations to workers under applicable labor and social security laws and regulations;²⁶⁰
 - iii. Not impose sanctions on workers, workers' representatives or workers' organizations participating in a legal strike;²⁶¹ and
 - iv. Not hire replacement workers in order to prevent, undermine or break up a legal strike, support a lockout, or avoid negotiating in good faith. The entity may, however, hire replacement workers to ensure that critical maintenance, health and safety, and environmental control measures are maintained during a legal strike.

NOTE FOR 3.1.1.2: This requirement draws on requirements 3.1.2.3, 3.1.2.6, 3.1.2.7, 3.1.2.8, 3.1.2.9, and 3.1.2.10 from the 2018 Mining Standard.

In the 2018 Mining Standard there are a number of requirements - including this one - that are difficult to audit as written, because if the entity tells auditors, for example, that they do not hire replacement workers to undermine a legal strike but there has never been a legal strike at the site, then the auditor has two choices – mark as 'fully meets' the requirement that the entity does not hire short term workers to undermine a legal strike were to a provide no evidence of this beyond perhaps a verbal guarantee that if a legal strike were to occur that the entity would not hire short term workers) or mark it as not relevant (which is more accurate, but is problematic because IRMA is trying to promote this best practice, and while there may not have been a legal strike in the past one could happen). Requiring entities to explicitly make policy commitments to remain neutral during organization efforts demonstrates a respect for and intention to uphold the practice.

We therefore re-organized 3.1.1.2. to distinguish between those points that we expect would be written in a policy (i.e., what an entity *would do* in the event of a legal strike, for example, which may or may not have occurred) (see 3.1.2.2.d) and those that are actions we expect all entities to take or have taken.

We also added a guidance note (currently footnote #3) that clarifies the conditions under which short-term contracts may constitute a violation of sub-requirement 3.1.2.2.d.iv.

²⁵⁹ If the entity has another process in place that meets the intent of this requirement - e.g., allowing unions to speak to all new recruits during induction - then this can fulfil the requirement to 'provide contact information for unions'.

²⁶⁰ Short-term contracts can be used under certain circumstances, i.e., for fixed-term service providers (i.e., a consultant or specialist contracted to meet a specific, time-constrained need), or to meet temporary business needs. However, the use of successive short-term contracts (without benefits) for the same person/role or similar behavior may indicate that there is an intent to avoid labor obligations or to undermine the CBA and will be investigated as such by auditors.

²⁶¹ Nothing in this requirement shall remove the right of an entity to seek enforcement action when workers, workers' representatives or workers' organizations are operating in contravention to laws or regulations.
3.1.2. Non-Discrimination and Equal Opportunity

NOTE FOR 3.1.2: This was criterion 3.1.3 in the 2018 Mining Standard.

3.1.2.1. The entity develops and implements a policy on non-discrimination and equal opportunity (or equivalent) that:

- a. States that discrimination in the workplace is not acceptable;
- b. States that employment relationships are based on the principles of equal opportunity, fair treatment, equal pay for equal work,²⁶² and non-discrimination, and that employment decisions are not based on personal characteristics that are unrelated to inherent job requirements;²⁶³
- c. Only includes exceptions with respect to hiring and recruitment in the case of:
 - i. Targets or quotas mandated by law; or
 - ii. <u>Entity</u> targets for the employment of local residents, <u>Indigenous Peoples</u>, or individuals who have been historically disadvantaged, if there are explicit goals and justification for such targets.
- d. Is communicated to all employees (e.g., managers, supervisors, workers) and contractors.

NOTE FOR 3.1.2.1: REVISED. This was requirement 3.1.3.1 in the 2018 Mining Standard. We combined previous requirements 3.1.3.1 and 3.1.3.2, the latter which provided the exceptions to 3.1.3.1 as these should be audited and scored as one requirement.

We added sub-requirements (a) and (d) - similar requirements are found in the RBA/RMI ESG Standard for Mineral Supply Chains.²⁶⁴

We added in the concept of 'equal pay for equal work' to sub-requirement (b) as an objective indicator of the success of the entity's efforts to ensure non-discrimination. While often used in relation to gender disparities in remuneration, we will include guidance that auditors are to ensure equal pay for equal work across a number of categories (see footnote 289). Insofar as it relates to gender, it is important to note that this criterion is complementary to a new proposed chapter on Gender Equality and Gender Protections, which contains additional requirements relating to gender in the workplace. If this proposed chapter is not approved for inclusion as a stand-alone chapter in Version 2.0 of the IRMA Standard, we will assess which requirements, if any, from that chapter should be incorporated into this chapter (3.1).

We removed 3.1.3.3 of the 2018 Mining Standard, "The operating company shall take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to female workers", as we now have an anti-harassment policy criterion below that fulfills this intent (3.1.3).

CONSULTATION QUESTION 3.1-2: Other standards have included requirements aimed at ensuring genderbased discrimination, such as not requiring women to undergo pregnancy or virginity tests as a condition of employment.²⁶⁵ IRMA currently proposes to include this as guidance notes for 3.1.2.1 above, i.e., as

²⁶² Equal pay for equal work refers to the right of women and men to receive equal remunerate for work of equal value - this means men and women working in identical or similar jobs should receive the same pay, as well as when working in different jobs that can be shown to be of equal value in terms of required skills, qualifications, working conditions, level of responsibility, and effort required by the job (see Equal Pay International Coalition web site, "Equal pay for work of equal value," https://www.equalpayinternationalcoalition.org/equal-pay/).

²⁶³ "Employment relationships" include: recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. "Personal characteristics unrelated to inherent job requirements" may include: gender, race, nationality, ethnicity, social class, religion or belief, disability, HIV status, age, sexual orientation, marital status, parental status, worker status (e.g., local vs. migrant workers, temporary versus permanent workers), political affiliation, union membership, or veteran status.

²⁶⁴ Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VI-3. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

²⁶⁵ E.g., Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VI-3. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

something that auditors should investigate as something that may be indicative of discriminatory practices. Are there other similar discriminatory recruitment/hiring practices you have experienced or seen that we should be including in this guidance?

3.1.2.2. All employees (e.g., managers, supervisors, workers) and contractors are trained on the above policies and procedures as appropriate to their role.

NOTE FOR 3.1.2.2: NEW. We added this requirement to ensure that policies are not only implemented in a top-down manner, but also understood by the workers themselves.

3.1.3. Anti-Harassment

NOTE FOR 3.1.3: NEW. This criterion did not exist in the 2018 Mining Standard. See explanatory note for creating a criterion for anti-harassment below (note for 3.1.3.1).

3.1.3.1. (Critical Requirement)

The entity develops and implements an anti-harassment policy (or its equivalent) that:

- a. States that corporal punishment, harsh or degrading treatment, sexual or physical harassment, mental, physical or verbal abuse, coercion, or intimidation, particularly with regard to female workers, are not acceptable in the workplace; and
- b. Is communicated to all employees, workers and contractors and available to them on an ongoing basis.

NOTE FOR 3.1.3.1: REVISED. This replaces requirement 3.1.3.3 in the 2018 Mining Standard, which said "The operating company shall take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to female workers." That requirement was a critical requirement, and so we have made 3.1.3.1 critical, since it is this requirement that best captures that intent (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

We wanted to make it clear that the behaviors listed in 3.1.3.1.a are not appropriate for anyone at the site (i.e., workers, supervisors, contractors), and so they all need to be aware of this policy. Previously, the only prohibition on these actions was in relation to disciplinary activities.

3.1.3.2. The entity provides mandatory training for all supervisors on the anti-harassment policy.

NOTE FOR 3.1.3.2: NEW. See note for 3.1.3.1.

3.1.4. Retrenchment

- 3.1.4.1. Prior to implementing any collective dismissals (i.e., retrenchment):
 - a. The entity carries out an analysis of alternatives to retrenchment; and
 - b. If the analysis does not identify viable alternatives to retrenchment, develops and implements a retrenchment plan that:
 - i. Is developed in <u>consultation</u> with <u>workers</u>, their organizations, and, where appropriate, community leaders and/or the government;
 - ii. Includes measures to reduce the adverse impacts of retrenchment on workers;
 - iii. Outlines a clear timeline and budget for each stage of retrenchment; and
 - iv. Incorporates the principle of non-discrimination by developing objective, fair, and transparent criteria by which workers will be chosen for dismissal.

NOTE FOR 3.1.4.1: REVISED. This requirement was 3.1.4.1 in the 2018 Mining Standard.

We added NEW expectations in this requirement (sub-requirements b.ii to b.iv) to better approximate international best practice on retrenchment planning – this includes references to objective, fair, and transparent criteria, the requirement for a clear timeline and budget, and reference to consultations with community leaders if necessary.

- 3.1.4.2. All workers subject to retrenchment:
 - a. Receive notice of dismissal and severance payments mandated by law and collective agreements;
 - Receive outstanding back pay, social security benefits, and pension contributions and benefits upon or before termination of the working relationship, or in accordance with a timeline agreed through a collective bargaining agreement; and
 - c. Receive payments directly, or through an appropriate institution that provides certain benefits to workers (e.g., pension or health funds). Where payments are made to such institutions for the benefit of workers, the workers are provided with evidence of such payments.

NOTE FOR 3.1.4.2: REVISED. This was 3.1.4.2 in the 2018 Mining Standard. We restructured this to more clearly lay out the expectations, and added clarifying language that this requirement refers specifically to workers *subject to retrenchment* (not regular acts of dismissal). Removed the language that payments be made in a timely manner, since we state outright that payments need to occur upon or before termination.

3.1.5. Worker Grievance and Whistleblower Mechanisms

NOTE FOR 3.1.5: REVISED. We changed the name of this criterion from 'Grievance Mechanisms' to 'Worker Grievance and Whistleblower Mechanisms' to reflect the inclusion of an explicit whistleblower requirement (3.1.5.2) and to more clearly distinguish between the worker grievance mechanism covered primarily in this chapter, and the stakeholder grievance mechanism that is the subject of Chapter 1.4. In the guidance notes in both this chapter and 1.4, we will clarify this distinction and state how both Chapter 3.1 and Chapter 1.4 are to be audited if the mechanism for workers and communities/stakeholders are one in the same, or distinct.

3.1.5.1. (Critical Requirement)

The <u>entity</u> provides a <u>grievance mechanism</u> for <u>workers</u> (and their organizations, where they exist) to raise workplace concerns. The mechanism is underpinned by a grievance procedure (or equivalent) that:

- a. Provides for the involvement of an appropriate level of management in the oversight of grievances;
- b. Outlines how grievances and communications with complainants are tracked, recorded, acknowledged, investigated, and equitably resolved in a timely manner, including general timeframes for each phase of the process;
- c. Provides that workers will face no retaliation relating to any grievance submitted; ²⁶⁶
- d. States that severe grievances such as those involving gender-based violence or other human rights abuses will be prioritized;
- e. Outlines how complainants can file anonymous grievances and how the confidentiality of a complainant's identity will be protected, if requested by the complainant;
- f. States that participation in an operational level grievance mechanism does not preclude a complainant from seeking redress through administrative, judicial, or other non-judicial remedies, and that no remedy provided by an operational-level grievance mechanism requires or implies that complainants waive their right to seek recourse for the same complaint through other available mechanism; and
- g. Lists options for recourse if a complainant does not find the resolution of their grievance satisfactory and/or if the mechanism is deemed inadequate or inappropriate for handling grievances pertaining to serious human rights abuses; and
- h. States that workers' representatives can be present at any proceedings or discussions relating to a grievance, if requested by the aggrieved worker.

NOTE FOR 3.1.5.1: REVISED. This was requirement 3.1.5.1 in the 2018 Mining Standard, and was a critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This

²⁶⁶ Retaliation can take the form of termination of employment, demotion, unfair/discriminatory/unequal assignment of work-related tasks seen as undesirable, withholding of benefits or rejection of valid requests for leave, etc.

Chapter,' above). We divided sub-requirement (a) from the 2018 Mining Standard into sub-requirements (a), (b), and (c), above, as they are distinct processes that exist independently of one another.

We added two NEW sub-requirements: (d) which requires prioritization of the most severe grievances; and (g) which requires entities to explicitly inform stakeholders of their options for external recourse, pursuant to sub-requirement (f).

In sub-requirement (f), we similarly clarified the need for entities to explicitly state (in a written procedure) that utilizing the grievance mechanism does not preclude recourse to other procedures; without an explicit statement to this effect auditors can only look for workers that have both utilized the grievance mechanism and sought recourse to alternative mechanisms (whether successfully or unsuccessfully), which in many cases might be difficult to identify. Furthermore, if workers do not know this is an option, they are unlikely to avail themselves of it, therefore there is nothing to audit.

In sub-requirement (h), we clarified that there needs to be an explicit statement in a written grievance mechanism procedure that workers' representatives can be present at proceedings/discussions. Previously this requirement was difficult to audit because, absent a requirement for this to be made explicit to workers, it was possible workers would not know this was available to them and if they did not know this was available, they were unlikely to ask for it, and if they did not ask for it, there was nothing to audit. We therefore altered the language to put the onus on the entity to explicitly state this option, in line with similar changes in other chapters where things were 'upon request' of affected stakeholders (see Chapter 1.2, <u>Note for requirement 1.2.4.3</u>).

CONSULTATION QUESTION 3.1-3: Working group feedback suggested that an independent third-party should be involved in the assessment of more grievances to ensure that resolutions are unbiased, impartial, and fair to all parties involved. Is this considered best practice and, if so:

1. Under what conditions should this be required (i.e., is it applicable to only the most serious grievances or to all grievances)?

2. At what point in the grievance process should an independent third-party be brought in?

3. Who should make the determination of an independent third-party should become involved?

3.1.5.2. The entity establishes a formal, confidential, and documented whistleblower process to enable workers and contractors to raise concerns regarding the unlawful or unethical activity or behavior (e.g., bribery, corruption, willfully ignoring safety standards) of an employee or contractor.²⁶⁷ The entity does not retaliate in any way against a whistleblower who, in good faith, has reported such issues.

NOTE FOR 3.1.5.2: NEW. We added this requirement in response to a noted gap in terms of best practice; previously there were no provisions pertaining to whistleblowing. This was added in the proposed IRMA Mineral Processing Standard but under Chapter 1.5 on Anti-Corruption rather than under Chapter 3.1. We are proposing to include it here, since it is an aspect of the grievance mechanism for workers. A whistleblower mechanism was added in the draft IRMA Mineral Processing Standard because it is required in other standards, for example, Responsible Jewellery Council's Code of Practices and the RBA/RMI ESG Standard for Mineral Supply Chains.²⁶⁸

²⁶⁷ See also requirement 1.5.5.1.c in Chapter 1.5 on Financial Transparency and Anti-Corruption and requirement 4.X.4.1.f. in proposed Chapter 4.X on Management of Physical Stability.

²⁶⁸ Responsible Jewellery Council. 2019. Code of Practices. Requirement 11.2.d. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-</u> <u>COP-2019-V1.2-Standards.pdf</u>; and Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VII-17.

https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf

3.1.5.3. The <u>entity</u> informs <u>workers</u> of the <u>grievance mechanism</u> and informs workers and <u>contractors</u> of the whistleblowing process at the time of recruitment/hiring and makes procedures easily accessible to them on an ongoing basis in languages and formats that are understandable to them.²⁶⁹

NOTE FOR 3.1.5.3: REVISED. This was 3.1.5.2 in the 2018 Mining Standard. We added reference to a whistleblowing mechanism (in addition to the grievance mechanism) and added language to ensure that grievance and whistleblowing procedures and the mechanisms themselves are available in appropriate languages and formats (particularly where grievance mechanisms are designed at the corporate level, materials may be in English or another language that is not appropriate for workers). Previously whistleblowing protections/mechanisms were only addressed in Chapter 1.5 on Bribery and Corruption; however, as they relate to workers and working conditions it was appropriate to include it here as well. The guidance notes will indicate that auditors can consider the same evidence for both chapters.

3.1.5.4. The entity maintains a record of all concerns submitted through the grievance and whistleblower mechanisms, communications with involved parties, final resolutions, and the entity's actions taken to respond to and/or resolve the issue.

NOTE FOR 3.1.5.4: REVISED This was 3.1.5.3 in the 2018 Mining Standard. We added reference to a whistleblowing mechanism (in addition to the grievance mechanism). Previously, whistleblowing protections/mechanisms were only addressed in Chapter 1.5 (in requirements related to bribery and corruption); however, because whistleblowing can also occur in relation to behaviors in the workplace it was appropriate to include it here as well. The guidance notes will indicate that auditors can consider the same evidence for both chapters.

3.1.5.5. Relevant personnel (i.e., those managing <u>grievances</u> or whistleblowing incidents) are informed of and understand the proper procedures for handling grievances or concerns expressed through the grievance or <u>whistleblower</u> mechanisms.

NOTE FOR 3.1.5.5: NEW. We added this requirement, which in the 2018 Mining Standard was included only in Chapter 1.4 – 'Grievance Mechanism and Access to Remedy'). In this proposed update to the IRMA Standard we have separated the worker grievance mechanism requirements from the broader community/stakeholder mechanism. Therefore, it was necessary to bring this requirement over from Chapter 1.4.

3.1.5.6. Periodically, workers:

- a. Are provided with clearly communicated opportunities to provide input on how to make the grievance/whistleblower mechanisms more trusted and accessible; and
- b. Receive feedback on how their input was considered.

NOTE FOR 3.1.5.6: NEW. We added this requirement, which in the 2018 Mining Standard was included only in Chapter 1.4. As mentioned in the note for 3.1.5.5, because of the separation of worker and community grievance mechanisms it was necessary to bring this requirement over from Chapter 1.4.

3.1.6. Disciplinary Actions

NOTE FOR 3.1.6: REVISED. We changed the name of this criterion from 'Disciplinary Procedures' to 'Disciplinary Actions' to better reflect the content of the chapter.

3.1.6.1. The entity develops and implements a disciplinary policy (or equivalent) that:

- a. States that the entity does not use corporal punishment, harsh or degrading treatment, sexual or physical harassment, mental, physical or verbal abuse, coercion, or intimidation during disciplinary actions;²⁷⁰ and
- b. Is communicated to all employees, workers and contractors and available to them on an ongoing basis.

²⁶⁹ Guidance: This can be done at the time of recruitment, hiring or during induction trainings.

²⁷⁰ If the anti-harassment or another policy in 3.1.3.1 includes references to not using the listed behaviors during disciplinary actions, then a separate policy would not be necessary.

NOTE FOR 3.1.6.1: REVISED. This was 3.1.6.2 in the 2018 Mining Standard. We modified this requirement to specifically ask for a written disciplinary action policy. In doing so, we separated the policy component out from the procedures that flow from it (now covered in 3.1.6.2) to be consistent with other structural changes to the Standard. The Responsible Steel Standard also requires a disciplinary policy.

We added sub-requirement (b) because workers should be aware of behavior that is not acceptable by their supervisors, and also their rights in terms of not being subject to degrading treatment (per the prohibited actions listed in 3.1.6.1).

3.1.6.2. The entity develops and implements disciplinary procedures (or their equivalent) which:

- a. Provide specifics pertaining to the disciplinary actions associated with each type of infraction;
- b. Details the process that will be followed in the event of a disciplinary action (including timelines for resolution, appeals process, proper documentation, etc.); and
- c. Keeps records of all disciplinary actions taken.

NOTE FOR 3.1.6.2: REVISED This combines 3.1.6.1 and 3.1.6.3 in the 2018 Mining Standard.

We added sub-requirement (a) to expand on what the procedures should detail (under the 2018 Mining Standard no such specifics were given).

3.1.6.3. The entity provides mandatory training for all supervisors on the disciplinary policy and procedures.

NOTE FOR 3.1.6.3: NEW Added this requirement for supervisor training on disciplinary procedures as previously there was no requirement that facilitated top-down understanding and capacity in this regard.

3.1.7. Child Labor

3.1.7.1. (Critical Requirement)

The entity develops and implements a policy on the avoidance of child labor (or equivalent) that:

- a. States that:
 - i. Children (i.e., people under the age of 18)²⁷¹ are not hired to do <u>hazardous work</u> (e.g., working at heights or in confined spaces, or where there is exposure to hazardous substances²⁷²) or any other work defined as a worst form of child labor by ILO Convention 182 (Worst Forms of Child Labor) and ILO Recommendation 190 (Worst Forms of Child Labor);²⁷³ and
 - ii. Children (i.e., people under the age of 15, or the minimum age outlined in national law, whichever is higher) are not hired to do any work (hazardous or otherwise) for the entity; and
- b. Stipulates the entity's expectations of contractors and suppliers vis-à-vis the above commitments;
- c. Is communicated internally, and is communicated to contractors, labor brokers (if relevant), and suppliers.

²⁷¹ Age 18 is the dividing line between childhood and adulthood according to the major ILO child labor conventions (Nos. 138 and 182), and the United Nations Convention on the Rights of the Child (CRC). Although many cultural traditions and personal characteristics could argue for a higher or lower age, in first crafting and then in ratifying these Conventions the international community has determined that people under 18 are children and have the right to special protection. (International Labor Organization. 2011. Children in Hazardous Work: what we know, what we need to know. <u>http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_155428.pdf</u>

²⁷² Examples of hazardous work activities include work (i) with exposure to physical, psychological, or sexual abuse; (ii) underground, underwater, working at heights, or in confined spaces; (iii) with dangerous machinery, equipment, or tools, or involving handling of heavy loads; (iv) in unhealthy environments exposing the worker to hazardous substances, agents, processes, temperatures, noise, or vibration damaging to health; or (v) under difficult conditions such as long hours, late night, or confinement by employer. (Source: IFC. 2012. Performance Standard 2: Labor and Working Conditions. Footnote 12. Available at: https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards)

²⁷³ International Labour Organization (ILO). C182, Works Forms of Child Labour Convention, 1999 (No. 182). Available at, <u>https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100 ILO CODE:C182</u>; International Labour Organization (ILO) "R190 -Worst Forms of Child Labour Recommendation, 1999 (No. 190)", available at, <u>https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100 INSTRUMENT ID:312528:NO</u>

NOTE FOR 3.1.7.1: REVISED This requirement combines the content from the critical requirement in the 2018 Mining Standard 3.1.7.2 and 3.1.7.3 (specifying the relevant ages for legal (15-18 yrs) and non-legal (under 15 yrs) child labor into this criterion. We added this explicit requirement for a written policy relating to child labor as previously this was not made explicit.

We do not believe that this changes the intent of the 2018 critical requirement, as a policy prohibiting child labor would by definition have had to specify what ages constitute 'child' labor, and any prohibition by the entity of labor under a certain age (whether or not it is written into a policy) would have to have been based on some sort of shared understanding (i.e., a policy) about what ages are and are not appropriate (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

We added reference to ILO Conventions 182 and 190, as there may be other forms of labor that are not fitting for persons under the age of 18 other than the examples provided. We will add guidance on this.

CONSULTATION QUESTION 3.1-4: ILO 138 allows for 'light work' for children 2 years beneath the legal working age in the country (14 or 15, depending on the country) so 12- to 13-year-olds in some, and 13- to 14-year-olds in others. Other standards take differing positions on this. For example, the RBI/RMI standard prohibits labor under the age of 15 "unless the exceptions recognized by the ILO apply".²⁷⁴ However, the Towards Sustainable Mining (TSM) 'Preventing Child and Forced Labour Protocol' states that while there are exceptions are not applicable to mining.275 Can you think of any situations in which provisions should be made for "light work" by children under the age of 15 (according to the ILO-approved age scheme indicated above) in the context of mining entities?

3.1.7.2. The entity documents the ages of all workers.

NOTE FOR 3.1.7.2: This was 3.1.7.1 in the 2018 Mining Standard.

3.1.7.3. When a child between 15 and 18 years is legally performing non-hazardous work, the entity assesses and minimizes the risks to the child's physical or mental health and ensures the national labor authority or, if that is not possible, the entity itself, conducts regular monitoring of the child's health, working conditions, and working hours.

NOTE FOR 3.1.7.3: REVISED. This was 3.1.7.4 in the 2018 Mining Standard. We added the ages into the requirement to add clarity.

3.1.7.4. The entity carries out an assessment of the risk of <u>child labor</u> amongst their <u>contractors</u> and in their supply chain.²⁷⁶

NOTE FOR 3.1.7.4: NEW We are proposing to add this requirement for a risk assessment to be done to evaluate the potential for child labor amongst contractors and suppliers. Under the 2018 Mining Standard, there was no explicit requirement for a risk assessment in this chapter, but rather it was expected that this risk determination would be made under the auspices of Chapter 1.3 (Human Rights Due Diligence). However, this created the potential that it could be overlooked, especially if two different auditors were auditing the two chapters.

²⁷⁴ Responsible Business Association. 2021. Environmental, Social & Governance (ESG) Standard for Mineral Supply Chains. Requirement VII.3. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

²⁷⁵ Towards Sustainable Mining (TSM) 'Preventing Child and Forced Labour Protocol', Mining Association of Canada (June 2019), p.3. Available at: <u>https://mining.ca/wp-content/uploads/dlm_uploads/2023/04/Preventing-Child-and-Forced-Labour-Protocol-English.pdf</u>

²⁷⁶ This can be a stand-alone assessment or it could be conducted as part of the human rights risk assessment, per requirement 1.3.2.1.

If the project/operation is located in or sourcing minerals from a conflict-affected and high-risk area, child labor should be one of the issues assessed in the <u>conflict risk assessment</u>. If child labor is identified as a risk, the due diligence outlined in Chapter 3.4 applies. The due diligence steps in Chapter 3.4 are intended to align with the OECD Due Diligence Guidance on Responsible Mineral Supply Chains from Conflict Affected and High-Risk Areas (2016). <u>https://mneguidelines.oecd.org/mining.htm</u>

The assessment may still be done as part of the human rights risk assessment in Chapter 3.1, but now the verification that the risk child labor has been assessed will be evaluated and reported in this chapter.

3.1.7.5. Where the risk assessment conducted in 3.1.7.4 indicates there is a high risk of <u>child labor</u> amongst <u>contractors</u> or <u>suppliers</u> in the project's/operation's supply chain, the <u>entity</u> develops and implements procedures to monitor its contractors and suppliers to determine if children below the minimum age for hazardous or non-hazardous work are being employed. If any cases are identified:

- a. The child is removed immediately from his or her job; and
- b. <u>Remediation</u> procedures are developed and implemented that provide the child with support in his or her transition to legal work or schooling and take into consideration the welfare of the child and the financial situation of the child's family.

NOTE FOR 3.1.7.5: REVISED This requirement combines 3.1.7.5 and 3.1.7.6 from the 2018 Mining Standard. We added specific reference to 'contractors' (in addition to supply chain) and We also replaced reference to entities "taking appropriate measures" to address any identified child labor to being specific about what those measures entail.

We are also proposing to remove reference to entity obligations to shifting supply chain over time where remedy to child labor in the supply chain is not possible. The motivation for this was to encourage operations to always take action to address incidents of child labor, as some for remedy should always be possible, rather than simply shifting suppliers, as shifting suppliers does nothing to improve the lives of those who have been harmed.

A similar change is proposed for forced labor, below. See <u>CONSULTATION QUESTION 3.1-5</u>, below.

3.1.8. Forced Labor and Trafficking of People

NOTE FOR 3.1.8: REVISED. We changed the name of this criterion from 'Forced Labor' to 'Forced Labor and the Trafficking of People' to better reflect the content of the chapter.

3.1.8.1. (Critical Requirement)

The <u>entity</u> develops and implements a policy (or procedures) on the avoidance of <u>forced labor</u> and the <u>trafficking</u> of people that:

- a. Includes the following practices:
 - i. Workers are not required to pay fees or deposits associated with their recruitment or employment;
 - ii. Workers are not charged fees for food, clothing, transportation, health checks, documentation, or supplies as part of their recruitment;
 - iii. Workers are issued written contracts to workers in appropriate local language(s) for review prior to employment;²⁷⁷
 - iv. The entity does not retain or restrict access to official identity papers and personal documentation originals provided by workers as part of the employment process;
 - v. The entity does not unreasonably restrict the movement of workers or their access to basic liberties;
 - vi. Workers are allowed to terminate their employment without penalty if reasonable notice is given per the worker's contract; and
- b. Stipulates the entity's expectations of contractors and suppliers vis-à-vis the above commitments;
- c. Is communicated internally, and is communicated to contractors, labor brokers (if relevant), and suppliers.

²⁷⁷ Guidance notes: foreign workers must be provided with a copy of their contract prior to leaving their country of origin, and no substitutions or changes to the content of the contract can be made upon arrival in the receiving country. An exception to this is if changes are required to meet local laws and result in equal or more favourable terms for the employee. A similar approach is utilized in the Responsible Minerals Initiative's 'Environmental, Social & Governance (ESG) Standard for Mineral Supply Chains' (June 2021).

NOTE FOR 3.1.8.1: NEW. In the 2018 Mining Standard, the original requirement on forced labor (3.1.8.1) stated "The <u>entity</u> does not employ <u>forced labor</u> or participate in the <u>trafficking of people</u>." We are proposing to replace it to provide more clarity on expectations (and a requirement that is more auditable) relating to forced labor and trafficking. These include specifics related to recruitment practices ([a] to [c]), treatment of workers ([c] to [e]) and employment termination (f), all of which are adopted from the RBA/RMI ESG Standard for Responsible Mineral Supply Chains.²⁷⁸

This was a critical requirement in the 2018 Mining Standard and it remains critical in this version of the Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

We also added a footnote to sub-requirement (c) that will ultimately go in the guidance notes specifying entity obligations vis-a-vis foreign workers and presentation of work contracts.

3.1.8.2. The entity carries out a risk assessment of the risk of forced labor and the trafficking of people amongst their contractors and in their supply chain.²⁷⁹

NOTE FOR 3.1.8.2: NEW. As with child labor, we are proposing to include a requirement for a risk assessment to be done specifically examining forced and trafficked labor amongst contractors/in the supply chain (new 3.1.8.2). We included specific reference to 'contractors' (in addition to supply chain). See note for requirement 3.1.7.4 above.

3.1.8.3. Where the risk assessment conducted in 3.1.8.2 determines that there is a risk of forced or trafficked labor, the entity develops and implements procedures to monitor its <u>contractors</u> and <u>suppliers</u> to determine if forced labor or trafficked workers are being employed. If any cases are identified, the entity ensures the following are provided to the worker subject to forced labor, as appropriate to the situation:

- a. Shelter and accommodation;
- b. Medical and health-care services and counselling;
- c. Mental health and psychosocial support;
- d. Legal assistance;
- e. Financial assistance; and
- f. Repatriation assistance or reintegration into the labor market.²⁸⁰

NOTE FOR 3.1.8.3: REVISED. This was 3.1.8.2 in the 2018 Mining Standard.

We added explicit reference to contractors (in addition to suppliers), and also replaced reference to the entity "taking appropriate measures" to address any identified forced labor, as it was not clear what would constitute appropriate measures. Sub-requirements (a) through (f) were added to enumerate appropriate measures. These recommendations come from the International Organization for Migration (see footnote for sub-requirement [f]).

CONSULTATION QUESTION 3.1-5

If the project/operation is operating in or sourcing minerals from a conflict-affected and high-risk area, forced labor should be one of the issues assessed in the <u>conflict risk assessment</u>. If forced labor is identified as a risk, the due diligence outlined in Chapter 3.4 applies. The due diligence steps in Chapter 3.4 are intended to align with the OECD Due Diligence Guidance on Responsible Mineral Supply Chains from Conflict Affected and High-Risk Areas (2016). <u>https://mneguidelines.oecd.org/mining.htm</u>

²⁸⁰ Adapted from the International Organization for Migration (IOM) "Remediation Guidelines for Victims of Exploitation in Extended Mineral Chains" (2018), available at https://publications.iom.int/system/files/pdf/remediation_guidelines.pdf and the ILO "Combating forced Labor: A Handbook for Employers & Business" (2015), available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/--- declaration/documents/publication/wcms 101171.pdf

²⁷⁸ Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. VII-4, VII-6, and VII-7. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

²⁷⁹ This can be a stand-alone assessment or it could be conducted as part of the human rights risk assessment, per requirement 1.3.2.1.

Background: We are proposing to remove reference to entity obligation to shift to other suppliers where remedy to forced or trafficked labor in the supply chain is not possible. The motivation for this was to encourage operations to take action to reduce forced and trafficked labor and improve the lives of those who have been harmed, as some for remedy should always be possible, rather than simply shifting suppliers. The language is open enough that either the entity could carry out remediation, or the contractor/supplier could do it (but the entity would need to ensure, through monitoring or other methods, that it is being done).

Question: Do you agree that entities should to take responsibility for remediation of identified cases of child labor or forced labor amongst their contractors and suppliers, either through their own actions or by applying leverage/pressure on contractors and suppliers to provide remediation? Or are there cases where entities should immediately shift to other contractors/suppliers? Should IRMA provide a timeline by which entities (and their contractors/suppliers) have to remediate child/forced labor per the above sub-requirements?

3.1.9. Wages, Benefits, and Other Compensation

NOTE FOR 3.1.9: REVISED. This criterion heading has been expanded from the 2018 Mining Standard, which was simply called 'Wages'. We are now proposing to include all requirements that relate to benefits here, also. And we are proposing to include a requirement related to compensation (e.g., for lost time due to illness or injury), here, as all of these categories relate to payments to workers (or their families).

3.1.9.1. When workers are members of a workers' organization that has negotiated a collective bargaining agreement (CBA), wages are paid according to the terms of the agreement. If any workers are not covered by a CBA, then:

- a. Entities determine and demonstrate what constitutes a living wage using a credible methodology;²⁸¹ and
- b. Wages paid to workers not part of a CBA meet or exceed the higher of applicable legal minimum wage(s), or the living wage.²⁸²

NOTE FOR 3.1.9.1: REVISED. There may be situations where sites have both workers covered by a CBA, and those who are not. We have therefore changed the language to make it more clear of the expectation in such situations.

We are also proposing a NEW requirement that entities must proactively determine and demonstrate what constitutes a living wage. In the 2018 Mining Standard, there was no explicit obligation to do so, which did not encourage understanding on behalf of entities as to how their wages fit into the socioeconomic reality of their workers' lives (i.e., ability to live a decent life on the wages being paid), and address a more challenging aspect, with the requirement as previously written. Without any determination by the entity on whether or not a living wage is being paid, it puts the onus on auditors to make this determination. We are proposing that it is not the job of the auditors to carry out studies to verify the truth of an entity's claim that it is paying a living wage; it is the obligation of the entity to provide that evidence to the auditors.

3.1.9.2. Overtime hours are paid at a rate defined in a CBA, where relevant, or the higher of the either the overtime rate outlined in national law or a rate that is at least 125% of the regular hourly wage.

NOTE FOR 3.1.9.2: REVISED. The 2018 Mining Standard did not specify a minimum for overtime pay. The ILO's minimum recommend threshold for overtime pay is 125% of regular pay.²⁸³ We are proposing that if the rate suggested by the ILO is higher than any rate outlined in national law, then that is what should be paid.

²⁸¹ The determination of whether the wages paid to an entity's workers constitute a 'living wage' within the specific country context must draw on internationally established best practice and/or external reports or expertise concerning determination of a living wage. The Anker Methodology is the most prominent approach to calculating living wage (see <u>https://ankerresearchinstitute.org</u> and "The Anker Methodology for Estimating a Living wage: <u>https://globallivingwage.org/about/anker-methodology/</u>); however, any methodology that meets the definition of a credible methodology will be accepted.

²⁸² In some jurisdictions there are different minimum wage levels set for different types of workers.

²⁸³ International Labour Organization (ILO), 2004, Conditions of Work and Employment Programme. Social Protections Sector. Available at, <u>https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_170708.pdf</u>

3.1.9.3. Unless otherwise provided for in a CBA, the <u>entity</u> provides all workers the following benefits, at a minimum:

- a. An annual paid holiday of at least three working weeks per year, after achieving one year of service;²⁸⁴
- b. A paid gender-neutral parental leave period of no less than 18 weeks for the primary caregiver, and one week for secondary caregiver, at full pay; and
- c. Paid medical leave with a sufficient wage replacement rate to prevent poverty and ensure essential needs can be met during leave-taking.

NOTE FOR 3.1.9.3: REVISED. This was requirement 3.1.10.2 in the 2018 Mining Standard. We have moved this requirement out of criterion 3.1.10 'Working Hours' and into this criterion, because it is more related to benefits than working hours.

The requirement in the 2018 Mining Standard only required that the outlined benefits related to certain types of leave only needed to be provided <u>if not covered in a CBA or in national law</u>. That wording implied that, as long as there was some provision in national law, then that is all that needed to be met, even if that provision was weaker than IRMA's expectations. However, we are proposing here to set some best practice expectations for these benefits and create the expectation that IRMA's requirements be met <u>regardless of</u> what is required in host country law (unless the host country law is stronger, in which case the legal requirements should be met).

- Sub-requirement 3.1.9.3.a is unchanged.
- Sub-requirement 3.1.9.3.b has been REVISED. The 2018 Mining Standard only required 14 weeks of
 maternity leave and did not require that it be paid. We are proposing this revision so that the requirement
 aligns more closely with expectations in ILO Convention 183 Maternity Protection Convention, including
 that "Cash benefits shall be at a level which ensures that the woman can maintain herself and her child in
 proper conditions of health and with a suitable standard of living."²⁸⁵ However, IRMA is proposing that full
 pay be provided for two reasons; 1) calculating what level of cash benefits "ensure the [parent] can
 maintain themselves and [their] child" is subjective and difficult for the auditor to verify; 2) a review of
 current best practice amongst mining companies and other standards suggests that 'full pay' is common
 practice (Responsible Steel Standard and RBA/RMI both indicate 'paid' parental leave).
- Sub-requirement 3.1.9.3.c is NEW. The proposed language outlines a minimum standard meant to ensure that workers who are ill (but not as the result of a work-induced illness that is covered in 3.1.9.4, below) are able to afford to take time off.

CONSULTATION QUESTION 3.1-6

Background: Based on research pertaining to parental leave policies across six major mining companies, the following types of leave were identified that are not currently included in the IRMA standard:

- Paid leave for domestic violence (10 days)
- Paid parental leave at full duration/benefits for parents experiencing stillbirth or death of the child.
- Paid parental leave applicable to either natural births or adoption.

Question: Should IRMA require that entities provide these forms of leave to workers? If so, should this be provided to all workers, or only to certain categories (i.e., full time permanent, core services, etc.).

CONSULTATION QUESTION 3.1-7: Should IRMA strive to set a higher standard for paid medical leave (in 3.1.9.3.c) or be more specific about minimum number of weeks/months of paid medical leave and a lower

²⁸⁴ A worker whose length of service in any year is less than that required for the full entitlement shall be entitled in respect of that year to a holiday with pay proportionate to his or her length of service during that year. (Based on ILO C132 – Holidays with Pay Convention (Revised), 1970 (No. 132). <u>http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:::NO:12100:P12100_ILO_CODE:C132:NO</u>

²⁸⁵ International Labour Organization (ILO), Convention 183 – Maternity Protection Convention. Available at https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C183_

limit to the wage replacement rate? Given the wide variation in paid medical leave (see, for example, https://www.worldpolicycenter.org/sites/default/files/WORLD Report - Personal Medical Leave OECD Country Approaches 0.pdf) any thoughts on acceptable standards would be welcome.

- 3.1.9.4. Workers are provided with compensation for work-related injuries and illnesses as follows:
 - a. In countries where workers' compensation is not provided through government schemes or a collective bargaining agreement:²⁸⁶
 - i. The entity compensates workers for work-related injuries or illnesses at a rate that, at minimum, covers medical expenses and wages during the recovery and rehabilitation period;²⁸⁷
 - ii. The entity covers the cost of worker rehabilitation to facilitate an expeditious return to work;
 - iii. If a worker is not able to return to work due to the severity of a work-related injury or illness, the entity compensates for lost earnings until the worker qualifies for an adequate pension (i.e., 2/3 or more of the salary they would otherwise normally receive if healthy and working);²⁸⁸ or
 - iv. If an occupational illness manifests after a worker has retired, the entity or its corporate owner compensates the worker for related medical expenses, unless the entity or its corporate owner can establish that the illness was not connected to the worker's employment at the operation.²⁸⁹
 - b. Where a worker dies as a result of a work-related injury or illness, the entity, at minimum:
 - i. Covers the cost of funeral expenses and transportation of the worker's body;
 - ii. Provides compensation to the family of the deceased work that is equal to or greater than three months of the worker's salary; and
 - iii. Offers to pay for counselling or other forms of psychological support for family members.

NOTE FOR 3.1.9.4: REVISED (and NEW to this chapter). This was previously requirement 3.2.4.4 in Chapter 3.2 – 'Occupational Health and Safety' in the 2018 Mining Standard. We are proposing to move it here so that we consolidate all requirements related to payments to workers in one place. Also, some content in the requirement has been modified.

There were three sub-requirements in the original (a), (b) and (c). We moved sub-requirement (b) related to worker rehabilitation into sub-requirement (a), as it also applied to the situation where national law or CBA did not address health and safety-related costs. It is now 3.1.9.4.a.ii.

The content in 3.1.9.4.a.ii was also REVISED. Previously it said that an entity needed to ensure that workers have free or affordable access to rehabilitation programs. However, it was unclear what was meant by "affordable" access. If the injury was suffered while on the job, then it would seem reasonable that the entity should pay for the rehabilitation.

Sub-element 3.1.9.4.b.iii is NEW. It has been added as this is a practice that is occurring at some mine and mineral processing sites where fatalities have occurred. See note for 3.2.6.2.

CONSULTATION QUESTION 3.1-8: Further to <u>CONSULTATION QUESTION 3.1-1</u> above pertaining to contractor obligations in general, what would be the appropriate expectations for <u>contractors</u> who suffer injury or illness when engaged in work at a mining or mineral processing operation? Should the entity that owns/operates the

²⁸⁶ Many, but not all countries have workers' compensation schemes. For example, a 2002 report found that 136 countries had worker compensation programs, meaning that approximately 60 did not. (Eleson, R. 2002. International Workers' Compensation. Prepared for the Indiana Compensation Rating Bureau. <u>http://compclues.icrb.net/file/29dbcff9-2752-4fed-bfdc-422c8c403483</u>)

²⁸⁷ If medical expenses are fully covered by health insurance, then companies are not required to provide additional compensation.

²⁸⁸ If the government does not provide for an "adequate pension," the entity would be expected to supplement the government pension so that a worker was receiving equivalent to 2/3 or more of the salary he or she would otherwise receive; if no government pension program exists, the entity would be expected to pay compensation equivalent to 2/3 or more of the salary the worker would otherwise normally receive if healthy and working. Normally, this requirement can be met by providing the appropriate public or private disability insurance coverage.

²⁸⁹ If medical expenses are fully covered by health insurance or relevant compensation schemes covering occupational health matters, then companies are not required to provide additional compensation.

site be accountable for providing compensation (if not covered by government programs), or is it the employer of the contractor (or labor broker) who should provide that compensation? And/or in the case of self-employed independent contractors, would there be no compensation guaranteed at all?

3.1.9.5. All workers are provided with written and understandable information about wages (overtime rates, deductions and bonuses) and benefits before they enter employment, and for the pay period each time they are paid.

NOTE FOR 3.1.9.5: This was 3.1.9.3 in the 2018 Mining Standard.

3.1.9.6. Wages are paid in a manner that is reasonable for workers (e.g., bank transfer, cash, or check).

NOTE FOR 3.1.9.6: This was 3.1.9.4 in the 2018 Mining Standard.

3.1.9.7. Deductions from wages are not made for disciplinary purposes unless one of the following conditions exist:

- a. Deductions from wages for disciplinary purposes are permitted by host country law, and the law guarantees the procedural fairness of the disciplinary action; or
- b. Deductions from wages for disciplinary purposes are permitted in a freely negotiated CBA or arbitration award.

NOTE FOR 3.1.9.7: This was 3.1.9.5 in the 2018 Mining Standard.

3.1.9.8. Employee wages, benefits, and deductions are recorded and documented.²⁹⁰

NOTE FOR 3.1.9.8: NEW This was proposed in the draft IRMA Mineral Processing Standard. Other standards require keeping such records, and this makes sense as these records will be necessary to demonstrate conformity with the IRMA Standard.

3.1.9.9. Entity-provided accommodations for workers, if applicable, meet the following requirements:

- a. Rental arrangements including any fees for accommodations or services are discussed during recruitment and are clearly specified in employment contracts;
- b. Rental rates do not exceed of local norms/market conditions;
- c. Workers and <u>contractors</u> are not required to sign up for rental of accommodations that exceed the period of employment; and
- d. There are no fees or penalties for leaving accommodations early, e.g., if workers or contractors voluntarily terminate their employment before their contract is up; and
- e. Workers and contractors are provided with a reasonable period of time to vacate the premises when the contract of employment is terminated.

NOTE FOR 3.1.9.9: NEW. We added this requirement to address a gap wherein rules for rental accommodations for workers were not addressed. We have included it in this section as it relates to payments that may be made to the entity by workers where rental situations exist.

Sub-requirements (b), (c), and (d) are similar to expectations included in the RBA/RMI ESG Standard for Mineral Supply Chains.²⁹¹

²⁹⁰ We will add guidance notes stating that auditors need to check that benefits such as social security, pension and other contributions required by national law are being paid, and that the entity is paying legally mandated deductions from workers' wages to the government as required by national laws. (As per Chapter 1.1, companies are required to comply with host country laws)

²⁹¹ Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VII-16. https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains June32021_FINAL.pdf

Note also that in IRMA Chapter 3.2 – 'Occupational Health and Safety' (requirement 3.2.4.6)) we are proposing additional requirements related to accommodations that are based on international best practices developed by the IFC/EBRD and ILO.²⁹² Sub-requirements 3.1.9.9.a and 3.1.9.9.e are from that guidance.

3.1.10. Working Hours

NOTE FOR 3.1.10: REVISED. In the 2018 Mining Standard, this criterion was called 'Working Hours and Leave'; however, we have moved requirements relating to leave up to criterion 3.1.9 ('Working Hours, Benefits, and other Compensation'.

Also, in the 2018 Mining Standard, all expectations related to working hours were included in a single requirement. We are proposing to separate them out here, so that they get adequate attention and it is clear in the audit reports how an entity is performing on each element.

3.1.10.1. Regular working hours do not exceed eight hours per day, or 48 per week. Where workers are employed in shifts the 8-hour day and 48-hour week may be exceeded, provided that the average number of regular hours worked over a 3-week period does not exceed 8 hours per day and 48 hours per week.

NOTE FOR 3.1.10.1: This requirement was 3.1.10.1.a in the 2018 Mining Standard.

3.1.10.2. Workers are provided with at least 24 consecutive hours off in every 7-day period unless:

- a. A freely negotiated CBA is in force that allows variances to the rest period above; and
- b. A process is in place, carried out in <u>collaboration</u> with <u>workers' health and safety representatives</u>, to assess the potential impacts of the alternative rest schedule on the health, safety and welfare of workers; <u>mitigation</u> measures are developed to minimize the impacts; monitoring takes place to determine the effectiveness of the mitigation; and if impacts to worker health, safety or welfare are occurring, the 24 consecutive hours off in every 7-day period is reinstated until another assessment can be undertaken.

NOTE FOR 3.1.10.2: REVISED. This requirement was 3.1.10.1.b and 3.1.10.1.d in the 2018 Mining Standard.

The language in 3.1.10.2.b is different than the language in the 2018 Mining Standard, which said, "Through consultations with workers' representatives a risk management process that includes a risk assessment for extended working hours is established to minimize the impact of longer working hours on the health, safety and welfare of workers."

We are proposing more detailed language because typically risk management processes involve monitoring of effectiveness, and if mitigation strategies are not being effective, then corrective action is taken. We are proposing that the reasonable corrective action would be to return to the "safe" schedule until another assessment can be done.

3.1.10.3. Overtime hours are allowed for workers under the following conditions:

- a. Working overtime is always consensual; and
- b. Overtime is limited to 12 hours per week unless:
 - i. A freely negotiated CBA is in force that allows variances to overtime hours above; or
 - ii. A process is in place, carried out in <u>collaboration</u> with <u>workers' health and safety representatives</u>, to assess the potential impacts of allowing more than 12-hours of overtime per week on the health, safety and welfare of either those working the extra overtime, or on others <u>workers; mitigation</u> measures are developed to minimize the impacts; monitoring takes place to determine the

²⁹² See: International Labor Organization (ILO). ILO Helpdesk Factsheet on Workers' Housing. p. 2. <u>https://www.ilo.org/wcmsp5/groups/public/---</u> ed_emp/---emp_ent/---multi/documents/publication/wcms_116344.pdf; and International Finance Corporation (IFC) and European Bank for Reconstruction and Development (EBRD). 2009. Workers' accommodations: processes and standards. Guidance note by IFC and the EBRD. p. 20. <u>https://www.ebrd.com/downloads/about/sustainability/Workers_accomodation.pdf</u>

effectiveness of the mitigation; and if impacts to worker health, safety or welfare are occurring, the 12-hour-maximum overtime per week rule is reinstated until another assessment can be undertaken.

NOTE FOR 3.1.10.3: REVISED. This requirement was 3.1.10.1.c and d in the 2018 Mining Standard. See note for 3.1.10.2, above.

3.1.10.4. <u>Workers</u> are provided with appropriate time off for meals and breaks, including reasonable accommodations of the timing of breaks to allow for workers' religious practices.

NOTE FOR 3.1.10.4: NEW. The lack of a requirement for breaks was raised by stakeholders, and so we are proposing this new requirement as both Responsible Steel Standard and the Responsible Jewellery Council (RJC) Code of Practice require that workers be provided with breaks (see consultation question below). We have also added that accommodation also be made for workers' religious practices, as this is something mentioned in the RBA/RMI ESG Standard for Mineral Supply Chains.²⁹³

CONSULTATION QUESTION 3.1-9

Background: According to an International Labour Organization (ILO) fact sheet on rest periods, "Different forms of rest and annual leave are important for a workers physical and mental well-being. If structured properly, they can all have a positive impact on occupational health and safety as well as improve productivity in the workplace."²⁹⁴

The ILO fact sheet also says that "in practice, coffee and tea breaks can be given for 10 - 30 minutes and are organized in the middle of each half of the work shift. Meal breaks are organized around the middle of the full shift and the last from 30 minutes to 2 hours." Finally, the fact sheet says that "rest breaks can be included as working time and thus paid, as in Argentina, or they can be unpaid."

Neither the Responsible Steel nor RJC standards provide details on the length of breaks. Responsible Steel requires a policy that "all workers are provided with appropriate time off for meals and breaks," and RJC requires that if not covered by law, employees are provided with "at least one uninterrupted work break of reasonable duration if they work longer than six hours."²⁹⁵

Question: Would it be reasonable for IRMA to specify minimum break times as one of the following:

Option 1. Two coffee/tea breaks of at least 15 minutes duration, and a meal break of at least 30 minutes for each six hours worked?

Option 2. One (1) hour of total break time per six hours worked (apportioned as appropriate for the work being undertaken)?

Should these breaks be considered paid working time? If they are not paid, will that result in breaks not being taken (thus creating risks to worker health and safety)?

3.1.10.5. Worker hours worked (regular and overtime) and hours taken for annual, medical and parental leave are recorded and documented.

NOTE FOR 3.1.10.5: NEW. Other standards require keeping such records, and this makes sense as these records il be necessary to demonstrate conformity with the IRMA Standard.

²⁹³ Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VII-15. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

²⁹⁴ International Labor Organization (ILO). (No date). Fact Sheet: Rest Periods. <u>https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---</u> protrav/---travail/documents/publication/wcms_491374.pdf

²⁹⁵ ResponsibleSteel. 2022. ResponsibleSteel International Standard. V.2.0. Requirement 6.9.1.c. https://www.responsiblesteel.org/standard/

Responsible Jewellery Council. 2019. Code of Practices. Requirement 16.5. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-</u>2019-V1.2-Standards.pdf

NOTES

This chapter uses, as its basis, the International Finance Corporation's (IFC) Performance Standard 2 (PS 2) Labor and Working Conditions. In addition to aligning with IFC performance standard requirements, this chapter contains two other criteria related to Wages (3.1.10) and Working Hours and Leave (3.1.11), which contain requirements that are based, in part, on ILO conventions. Where IFC or ILO concepts have been integrated into IRMA criteria, they are referenced in IRMA explanatory notes.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Corruption

Any unlawful or improper behavior that seeks to gain a private advantage through illegitimate means. Any kind of bribery is a form of corruption; but corruption also includes abuse of power, extortion, fraud, deception, collusion, cartels, embezzlement, and money laundering.

Source: Adapted from Responsible Jewellery Council 2019. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Whistleblower

A person who raises concerns regarding the unlawful or unethical activity or behavior of a person or organization.

Workers' Health and Safety Representative

A worker chosen to facilitate communication with senior management on matters related to occupational health and safety, and to participate in and/or have access to information on health and safety risk assessments, monitoring, inspections and investigations. A representative is selected by other workers, or in unionized facilities may be selected by a recognized trade union.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Child Labor

Work that deprives children of their childhood, their potential, and their dignity, and that is harmful to physical and mental development. In most jurisdictions - and for the purposes of the IRMA Standard - child labor meeting this definition is all labor by children under the age of 15, and all labor by children between 15 and 18 years old that does not meet certain conditions (i.e., is not hazardous work - see definition below, does not occur during school hours, does not total more than 10 hours/day between work and school, etc.).

Company Union

A workers' organization that is dominated or controlled by an employer.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase).

REVISED. Added contracted worker as a type of contractor. Changed from mining to project/operation.

Corporate Owner(s)

The corporation(s) or other business institution(s) including any private or state-run enterprises that have complete or partial financial interest in or ownership of a project/operation.

REVISED. Changed wording from mining project to project/operation.

Forced Labor

Any work or service not voluntarily performed that is exacted or coerced from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements required to pay off a debt; or slavery or slavery-like practices. It also includes requirements of excessive monetary deposits, excessive limitations on freedom of movement, excessive notice periods, substantial or inappropriate fines, and loss or delay of wages that prevent workers from voluntarily ending employment within their legal rights.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses, stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Hazardous Work (in relation to child labor)

Work that, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic ,or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Living Wage

Remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and their family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs including provision for unexpected events.

Indigenous Peoples

A modern and inclusive understanding of "indigenous" includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic or political systems; maintain distinct languages, cultures and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions there may be a preference to use other terms such as: tribes, first people, First Nations, aboriginal peoples, ethnic groups, Adivasi and Janajati. All such terms fall within this modern understanding of "indigenous."

Remediation/Remedy (including in relation to human rights impacts or grievances)

Remediation and remedy refer to both the processes of providing remedy for an adverse impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

REVISED. Added reference to grievances.

Retrenchment

The elimination of a number of work positions or the dismissal or layoff of a number of workers by an employer, generally by reason of plant closing or for cost savings. Retrenchment does not cover isolated cases of termination of employment for cause or voluntary departure. Retrenchment is often a consequence of adverse economic circumstances or as a result of a reorganization or restructuring.

Serious Human Rights Abuses

Includes: i) any forms of torture, cruel, inhuman and degrading treatment; ii) any forms of forced or compulsory labor, which means work or service which is exacted from any person under the menace of penalty and for which said person has not offered himself voluntarily; iii) the worst forms of child labor (as per ILO Convention 182); iv) other gross human rights violations and abuses such as widespread sexual violence; v) war crimes or other serious violations of international humanitarian law, crimes against humanity, or genocide.

Suppliers

Those who provide goods, services and materials to the operation.

Trafficking in People/Human Trafficking

The recruitment, transportation, transfer, harboring or receipt of a person by means of the threat or use of force or other means of coercion, or by abduction, fraud, deception, abuse of power or of a position of vulnerability, or by the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation includes, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs. Women and children are particularly vulnerable to trafficking practices.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Workers' Organizations

Typically called trade unions or labor unions, these organizations are voluntary associations of workers organized on a continuing basis for the purpose of maintaining and improving their terms of employment and workplace conditions.

Workers' Representative

A worker chosen to facilitate communication with senior management on matters related to working conditions or other workers' concerns. A representative is selected by other workers, or in unionized facilities may be selected by a recognized trade union.

REVISED. Removed reference to occupational health and safety, as that is now covered by workers' health and safety representative, and revised second sentence.

Chapter 3.2 Occupational Health and Safety

NOTES ON THIS CHAPTER: We are proposing a significant expansion of this chapter – with 16 more requirements than the previous version. In reviewing this chapter's content we took into consideration the fact that in June 2022, the International Labour Convention adopted a resolution to include *a safe and healthy working environment* as the fifth of International Labour Organization's (ILO) fundamental principles and rights at work.²⁹⁶ Even though many in the mining industry have recognized the importance of worker health and safety, and even though IRMA's 2018 standard included such protections, the ILO recognition of safety and health at work as being a fundamental right led us to re-evaluate our requirements related to the rights of workers, such as the right to stop work, the right to training, the right to report accidents and dangerous occurrences, etc., and are proposing revisions to support the realization of those rights.

As part of our review, we also reviewed updates to Mining Association of Canada's Safety and Health Protocol (2021), and other minerals industry standards like the RBA ESG Due Diligence Standard for Mineral Supply Chains (2021) and Responsible Jewellery Council's Code of Practices (2019).

Additionally, first audits revealed some shortcomings with the IRMA chapter – in particular, some requirements were too general, and so more detail was needed to ensure that the intent would be met, and there would be consistent measurement of performance from site to site. While IRMA auditors are required to have competencies on the topics they are auditing, the auditors are not and cannot be experts on all of the particular hazards that may be present at large scale mines or mineral processing operations.

This has prompted IRMA to create proposed <u>Annex 3.2-A</u>, which enumerates the various hazards that are common at mines and mineral processing operations, so that auditors are aware and can determine if sites have adequately considered and controlled the range of hazards that may be present. Without this additional guidance, there is the potential that some entities and auditors may overlook major hazards, which could lead to consequences for workers, and also risks to IRMA if mines that score well on this chapter were to have major occupational health and safety events. This is not meant to place the burden on auditors. The entity being audited bears the sole responsibility for reducing and managing health and safety hazards in the workplace.

Proposed additions and changes:

- We are proposing to remove the flag from this chapter. There was one requirement that was being tested in the first audits, and there was no indication from those first audits that the flagged requirement was problematic. As a result, we are proposing that the requirements be incorporated into this version of the Standard (note that the previously flagged requirement on compensation related to injuries and fatalities has been moved to Chapter 3.1, into criterion 3.1.9 on 'Wages, Benefits, and Other Compensation,' so that all requirements related to payments to workers are consolidate in one place. See requirement 3.1.9.4.a.iv).
- A new policy requirement (3.2.1.1) and setting of performance targets (3.2.1.2.a)
- Addition of contractor requirements to manage contractors (3.2.1.3) and more references to contractors throughout because IRMA received feedback that it was not clear if/when there was a responsibility for an entity to apply OHS-related actions to contractors.
- Additional expectations related to joint health and safety committees (3.2.1.5)

²⁹⁶ ILO refers to these five principles as "an expression of commitment by governments, employers' and workers' organizations to uphold basic human values - values that are vital to our social and economic lives." <u>https://www.ilo.org/declaration/lang--en/index.htm</u>

The resolution recognizes the Occupational Safety and Health Convention, 1981 (No. 155) and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) as fundamental Conventions. <u>https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_874743.pdf</u>

- Separation of hazard identification (3.2.2.1) from risk assessment (3.2.2.2)
- Expanded list of mitigation procedures for specific situations (3.2.3.3), including infectious diseases (now 3.2.3.5, moved from Chapter 3.3)
- Emergency response requirements (3.2.3.6) were moved from Chapter 2.5, which now focuses on community emergency preparedness and response
- Added additional procedures relate to stop work authority (3.2.3.7), and reporting and investigations (3.2.3.8)
- Expanded requirements related to first aid requirements (3.2.4.4), and worker accommodations (3.2.4.6), and response to incidents and accidents (3.2.6.1)
- Additional requirements to support worker mental health (3.2.3.4) including after accidents (3.2.6.2.b)
- Significant expansion of worker training requirements (3.2.7.3, 3.2.7.4, 3.2.7.5)
- And additional expectations related to review and reporting on occupational health and safety performance (3.2.8.2 and 3.2.8.3)

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Occupational health and safety impacts related to the mining and mineral processing industries may include physical injuries, musculoskeletal disorders, noise-induced hearing loss, hand-arm vibration syndrome, skin cancer, dermatitis, heat exhaustion, hypothermia, eye disorders from radiation exposure, asphyxiation, pneumonia, respiratory disorders and lung diseases such as silicosis, damage to internal organs and other effects related to

chemical/metal exposures, decreased mental health and well-being, and others.²⁹⁷

Some key hazards related to mining include but are not limited to: exposure to dust, rocks falls, ground subsidence, vehicle collisions, equipment failures, explosions, release of noxious gases, catastrophic failure of mine infrastructure, ²⁹⁸ while key hazards related to mineral processing include, but are not limited to: exposure to dust, chemicals in liquid or gaseous form, exposure to high-temperatures and molten or caustic materials, conveyors and pulleys, equipment maintenance, failure of ventilation systems, drowning, falls and vehicle collisions.

Due to the many hazards and potential impacts associated with mining and mineral processing, a strong focus on occupational health and safety must be present at responsible mines.

In 1995, *Convention 176–Safety and Health in Mines* was adopted by the International Labour

TERMS USED IN THIS CHAPTER

Accident NEW
Biological Exposure Indices (BEI)
Closure
Competent Authority
Competent Professionals
Comprehensible
Consultation
Contractor
Control
Credible Methodology NEW
Emergency Scenario NEW
Emergency Situation NEW
Entity NEW
Exploration NEW
Facility
Gender NEW
Grievance
Hazard
Hazardous
Materials NEW
Health Surveillance
Hierarchy of Controls
NEW
Inform
Lagging Indicators NEW
Leading Indicators
NEW
Mineral Processing NEW
Mining NEW
Near-miss
Incidents NEW
Post-Closure
Practicable
Project NEW
Psychosocial Hazard NEW
Root Cause Analysis NEW
Safety Data Sheets NEW
Worker
Workers' Health and Safety
Representative NEW
Workers' Representative

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

²⁹⁷ ICMM. 2009. Good Practice Guidance on Occupational Health Risk Assessment. <u>https://www.icmm.com/website/publications/pdfs/health-and-safety/161212_health-and-safety_health-risk-assessment_2nd-edition.pdf</u>

²⁹⁸ ICMM website: "Preventing Fatalities." <u>https://www.icmm.com/en-gb/health-and-safety/safety/preventing-fatalities</u>

Organization (ILO).²⁹⁹ The convention set out international standards for occupational health and safety at mine sites including the need for: safety and health inspections, accident reporting and investigations, hazard assessment and management, and workers' rights to participate in workplace health and safety decisions, be adequately trained in their tasks, be informed of occupational hazards, and to remove themselves from dangerous workplace situations.

In 2022, the right to a safe and healthy working environment was added to the ILO's list of fundamental principles and rights at work, thus elevating the universal importance of health and safety protections in the workplace. 300

OBJECTIVES/INTENT OF THIS CHAPTER

To identify and avoid or mitigate occupational health and safety hazards, maintain working environments that protect workers' health and working capacity, and promote workplace safety and health.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

Requirement 3.2.3.6.d is only relevant for underground mining operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

Suitable personal protective equipment and clothing must be provided (3.2.4.3) and workers are informed of the hazards associated with their work, the health risks involved and relevant preventive and protective measures (3.2.7.4).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Occupational Health and Safety Requirements

3.2.1. Policy and Governance

NOTE FOR 3.2.1: This criterion has been created to include requirements related to policy and oversight of health and safety matters. Some requirements are new because a review of other standards demonstrates that a policy

²⁹⁹ International Labour Organization. 1995. Safety and Health in Mines Convention, 1995 (No. 176). www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C176

³⁰⁰ ILO now recognizes the Occupational Safety and Health Convention, 1981 (No. 155) and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) as fundamental Conventions. <u>https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---</u> <u>safework/documents/publication/wcms_874743.pdf</u>

commitment and performance targets are common expectations (e.g., see Mining Association of Canada Safety and Health Protocol³⁰¹), and some requirements have been moved from elsewhere in the chapter.

3.2.1.1. A health and safety policy (or equivalent) is in place and implemented at the project/operation that:

- a. Includes commitments to prioritize the health and safety of workers over production, and to demonstrate continuing improvement in health and safety performance over time, with the objective of achieving zero harm in the workplace;
- b. Is approved at the most senior level of the operation;
- c. Is communicated to all employees, and relevant contractors;³⁰² and
- d. Is publicly available.

NOTE FOR 3.2.1.1: NEW. This requirement was not in the 2018 Mining Standard.

3.2.1.2. A member of senior management is accountable for the development of a management system to support the achievement of the commitments in the health and safety policy, including:

- a. Setting of health and safety objectives and performance targets that include:
 - i. Separate targets for health and for safety;
 - ii. Separate targets related to lagging and leading indicators;³⁰³
 - iii. Separate targets for employees and, if relevant, contractors; and
- b. Implementing measures to support the achievement of health and safety objectives and targets.

NOTE FOR 3.2.1.2: REVISED. This was 3.2.1.1 in the 2018 Mining Standard. It has been revised to include that a member of senior management be accountable (i.e., responsible or answerable) for a health and safety management system that supports achievement of the policy commitments.

Management systems typically include assessment of what needs to be done, development of plans, processes, and procedures to achieve objectives, implementation of plans, and monitoring to ensure that tasks are performed correctly, consistently and effectively, or drive improvement in performance to achieve objectives and targets. Aspects of the management system are captured in subsequent requirements.

We are proposing the following definitions:

Leading Indicators

Measure precursors to harm (e.g., conditions, events or measures that precede an undesirable event, whether it is an accident, near-miss incident, or undesirable safety state), and are associated with proactive activities that identify hazards and assess, eliminate, minimize, and control risk in order to achieve a desired outcome or avoid unwanted outcomes.

Lagging Indicators

Measure outcomes and occurrences (e.g., the extent of harm that has occurred in the past). Reactive, tells you whether you have achieved a desired result (or when a desired safety result has failed) and provides historical information about health and safety performance.

3.2.1.3. A system is developed and implemented to manage the occupational health and safety of all contractors, including:

³⁰¹ Mining Association of Canada. 2021. Safety and Health Protocol (Toward Sustainable Mining). <u>https://mining.ca/wp-content/uploads/dlm_uploads/2021/08/Safety-and-Health-2020-EN.pdf</u>

³⁰² Relevant contractors would be those who physically work at or enter the site (e.g., to deliver goods or services) and, therefore, may be exposed to health and safety hazards.

³⁰³ For more on leading indicators, see: ICMM. 2012. "Overview of Leading Indicators for Occupational Health and Safety in Mining. <u>https://www.icmm.com/website/publications/pdfs/health-and-safety/2012/guidance_indicators-ohs.pdf</u>

- a. A signed contract that outlines how occupational health and safety of <u>contractors</u> will be managed in a manner that aligns with the requirements in this chapter.³⁰⁴ The contract delineates the <u>entity's</u> and the contractor's rights and responsibilities,³⁰⁵ and addresses at minimum:³⁰⁶
 - i. Identification of hazards associated with contracted work (see 3.2.2.1), including responsibility to notify the entity if the contractor proposes to introduce new or different tools, equipment, materials, chemicals or work processes that could pose a new <u>hazard</u> or elevated risk to contractors and/or entity personnel;
 - ii. Assessment of risks associated with contracted work (see 3.2.2.3);
 - iii. Development of controls for high-risk hazards associated with contracted work (see 3.2.3.1);
 - iv. Provision and oversight of the proper use of personal protection equipment (see 3.2.4.3);
 - v. The right of the entity to carry out inspections of work areas and work being conducted by contractors (see 3.2.5.1);
 - vi. Workplace monitoring and <u>health surveillance</u> and evaluation of the effectiveness of the <u>controls</u> (see 3.2.5.2);
 - vii. Reporting unsafe conditions and unwanted events to the entity and government authorities (see 3.2.6.1 and 3.2.6.2); and
 - viii. Training those carrying out contracted work on hazards, controls and any relevant plans and procedures that apply to them, such as stop work authority, and emergency response and reporting procedures (see 3.2.7.3);
- b. Clear stipulation of consequences if occupational health and safety performance of contractors does not meet the entity's expectations;
- c. A clear process for communicating with and receiving input from contractors on health and safety matters; and
- d. A documented system for monitoring contractor occupational health and safety performance, overseen by a member of senior management of the entity.

NOTE FOR 3.2.1.3: NEW. In the 2018 Mining Standard, only Chapter 1.1 laid out expectations for contractors, and in Chapter 3.2, we included the cross-reference table at the end of the chapter the following statement: "the operating company is responsible for ensuring that contractors involved in mining-related activities comply with the requirements of this chapter of the IRMA Standard, i.e., contract workers and any other workers who provide project-related work and services should be afforded a safe and healthful work environment."

In this revised version of Chapter 3.2, we are seeking to add greater clarity on what the expectations are related to contractors. This is especially important, because contractors make up a substantial proportion of the mining industry workforce, and while entities like mining companies may hire contractors to perform a service, the industry recognizes that this "does not absolve the hiring company of the obligation to provide a healthy and safe place of work."³⁰⁷

According to the National Mining Association (NMA) in the United States: "Contractors play a significant role in safety and health management at facilities whether there are contract miners or contractors performing project work. They often face very similar, if not more significant, risk than do company employees. If

³⁰⁴ The contract may be the same as the one required in Chapter 1.1 (requirement 1.1.3.1), as long as it contains the information in 3.2.1.3.

Management of contractors carrying out work may be done by either the entity or the contractor, or carried out in a collaborative manner. But the responsibilities must be clearly delineated.

³⁰⁵ Some companies create manuals for their contractors related to health and safety. See, for example, Freeport-McMoran. 2022. Contract Health, Safety and Environmental Manual. <u>https://www.fcx.com/sites/fcx/files/documents/suppliers/csm.pdf</u>

³⁰⁶ These need to be included unless clearly not relevant to the contracted work.

³⁰⁷ ICMM. 2022. An Approach to Contractor Engagement. p. 1. <u>https://www.icmm.com/website/publications/pdfs/health-and-safety/2022/briefing_an-approach-to-contractor-engagement.pdf</u>

contractors do not receive the appropriate instruction and direction to work safely, they can introduce new hazards to the workplace that put themselves and company workers at risk."³⁰⁸

The International Council on Mining and Metals (ICMM) has found that: "Inefficient, incomplete or inconsistent contractor management practices greatly increase the risk of costly delays, mistakes, and hazards to health, safety, equipment and the environment. At worst, this can lead to serious injury or death of workers and can irrevocably damage corporate reputation. Between 2018-2020 there were 381 fatalities in ICMM member companies, 211 of which were direct employees, and 170 were contractors."³⁰⁹

Both the NMA and ICMM have developed guidance related to contractor management as it relates to health and safety. Requirement 3.2.1.3 attempts to incorporate some of that guidance, while also ensuring that the intent expressed in the original 2018 IRMA Standard be upheld (i.e., that contract workers . . . who provide project-related work and services should be afforded a safe and healthful work environment).

3.2.1.4. A joint health and safety committee (or its equivalent) that includes workers' health and safety representatives and entity management is implemented to facilitate dialogue and worker participation in matters relating to occupational health and safety.

NOTE FOR 3.2.1.4. This was included in 3.2.3.4 in the 2018 Mining Standard.

3.2.1.5. The workers' health and safety representatives on the committee:

- a. Are selected by workers;³¹⁰
- b. Make up 50% of more of the number of members on the joint health and safety committee;
- c. Are entitled to take time from regular work duties, with pay, to carry out committee related responsibilities;
- d. Receive free training, access to resources, and recourse to advisers and independent experts, as necessary, to participate effectively; and
- e. Are provided with the opportunity to:
 - i. Participate in inspections and investigations conducted at the workplace by the employer and by the competent authority;
 - ii. Participate in the design and implementation of workplace monitoring and worker <u>health</u> <u>surveillance</u> programs;
 - iii. Monitor and investigate health and safety matters;
 - iv. Receive timely notice of accidents and dangerous occurrences; and
 - Access the following data and documentation: <u>hazard</u> identification, risk assessments, risk management plans, procedures, training materials, monitoring data, health surveillance results,³¹¹ inspection reports, and reports related to <u>unwanted events</u> (i.e., injuries, diseases, fatalities, accidents, and <u>near-miss incidents</u>) including those submitted to regulatory authorities.

NOTE FOR 3.2.1.5. REVISED. All of the sub-elements in 3.2.1.5.e were included in 3.2.3.5 and 3.2.6.1 in the 2018 Mining Standard.

Additional sub-requirements 3.2.1.5.a through 3.2.1.5.d are being proposed, however, as these joint committees serve as an important oversight role in the workplace, and thus contribute to the overarching goal of reducing harm. The additional sub-requirements are meant to add to the effectiveness of these committees.

³⁰⁸ National Mining Association. Core Safety, p. 86. <u>https://nma.org/wp-content/uploads/2016/09/CORESafety-Handbook.pdf</u>

³⁰⁹ ICMM. 2022. An Approach to Contractor Engagement. p. 1. <u>https://www.icmm.com/website/publications/pdfs/health-and-safety/2022/briefing_an-approach-to-contractor-engagement.pdf</u>

³¹⁰ This could include representatives selected by workers' organizations, or through elections by workers, or a combination of the two. It does not include workers appointed by the entity.

³¹¹ This would exclude any data protected for medical confidentiality reasons.

NEW elements include that:

- Workers' must be selected by workers themselves, not by the entity, i.e., could be through the workers' organizations, or via another mechanism such as elections (see 3.2.1.5.a).
- Workers have equal or more representation on committees as per ILO Recommendation 164, which states that "in joint safety and health committees, workers should have at least equal representation with employers' representatives."³¹² (See 3.2.1.5.b)
- Workers' health and safety representatives be entitled to take time from regular work duties, with pay (see 3.2.1.5.c). This is required by law in some jurisdictions, and is also included in ILO Recommendation 164.³¹³
- Workers' health and safety representatives receive training and resources to participate effectively (see 3.2.1.5.d). This is required by law in some jurisdictions, and is recommended practice by others, including ILO and other standard systems.³¹⁴

3.2.2. Health and Safety Hazard Identification and Assessment

- 3.2.2.1. A process is implemented to identify and document in a hazard register (or equivalent):
 - a. The hazards that are or may be associated with the project/operation,³¹⁵ including:
 - i. Safety, chemical, biological, physical, ergonomic, and psychosocial hazards (see Annex 3.2-A);
 - ii. Hazards associated with the design of the workplace, organization of work,³¹⁶ routine and nonroutine tasks, and foreseeable <u>emergency scenarios</u>; and
 - iii. External factors with the potential to exacerbate a hazard or affect the <u>entity</u>'s management of hazards;³¹⁷ and
 - b. The groups of people (e.g., workers, contractors, suppliers, visitors) who may be harmed by each hazard, and any individuals or sub-groups who may be particularly susceptible to the hazard (e.g., pregnant women, breastfeeding mothers, people of different ages, genders, health status, physical characteristics, ethnicities, etc.).³¹⁸

NOTE FOR 3.2.2.1. This requirement is NEW. Previously, the hazard identification step was combined with the risk assessment process as a whole. We are proposing to separate it out, primarily because if hazards are not identified in a comprehensive manner, there is the potential that important hazards may be overlooked when considering how best to eliminate and minimize serious health and safety risks to workers and others who

³¹² ILO. Occupational Safety and Health Recommendation, 1981 (No. 164)

https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100 ILO CODE:R164

³¹³ See table in Canadian Center for Occupational Health and Safety. "Health and Safety Committees."

https://www.ccohs.ca/oshanswers/hsprograms/hscommittees/creation.html#section-4-hdr; and see next footnote for ILO reference.

³¹⁴ ILO Recommendation 164 says: 12 (2) Workers' safety delegates, workers' safety and health committees, and joint safety and health committees or, as appropriate, other workers' representatives should-- (i) have reasonable time during paid working hours to exercise their safety and health functions and to receive training related to these functions" (ILO. Occupational Safety and Health Recommendation, 1981 (No. 164) https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R164). See also: Canadian Center for Occ. Health and Safety "Health and Safety Committees." Table 2. https://www.ccohs.ca/oshanswers/hsprograms/hscommittees/creation.html#section-4-hdr; United Autoworkers "Launching and Effective health and Safety Committee." p. 10. https://www.osha.gov/sites/default/files/2018-12/fy11_sh-2230-11_HandSCommitteeManual.pdf; and Responsible Business Alliance. 2021. ESG Standard for Mineral Supply Chains. Requirement VI-3. https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf

³¹⁵ The project/operation would include, for example, all associated processes, facilities, equipment, materials, procedures, infrastructure, systems, and services.

³¹⁶ For more context, see: Organization of Work Taxonomy. <u>https://www.cdc.gov/niosh/topics/workorg/taxonomy.html</u>

³¹⁷ External factors could include political, economic, social, technological, environmental or legal (PESTEL) influences.

³¹⁸ For example, see "Consideration of vulnerable populations in risk assessment." <u>https://www.canada.ca/en/health-canada/services/chemical-substances/fact-sheets/consideration-vulnerable-populations-risk-assessment.html</u>

may be present at a site. Furthermore, separating out this step ensures that it will be given adequate attention and review during audits.

The proposed requirement includes content from 3.2.2.2 (a), (b), and (d) in the 2018 Mining Standard, but has been reorganized and supplemented.

Sub-requirement 3.2.2.1.a.i now refers to six common categories of hazards experienced at industrial operations like mines and mineral processing facilities. We have created <u>Annex 3.2-A</u> to provide a summary of known hazards and classes of hazards associated with mining and mineral processing operations, with the idea that during audits the auditors would expect to see that that consideration has been given to whether or not these hazards are applicable for a particular project/operation.

CONSULTATION QUESTION 3.2-1: Are there major potential hazards that have been missed in <u>Annex 3.2-A</u> or that you believe are not applicable to mining and/or mineral processing operations?

Sub-requirement 3.2.2.1.a.iii is NEW. External factors can exacerbate hazards. In particular, climate-related events such as high heat waves, or unusually large precipitation events can lead to an increase in heat-related illnesses, flooding-related safety issues, or increase in vector-borne disease, etc.³¹⁹

Sub-requirement 3.2.2.1.b replaces 3.2.2.3 from the 2018 Mining Standard which said "The operating company shall pay particular attention to identifying and assessing hazards to workers who may be especially susceptible or vulnerable to particular hazards." Instead of using the phrase 'pay particular attention' we are clear that susceptible workers, if any, need to be identified in relation to each hazard.

3.2.2.2. A risk assessment process is implemented that follows a credible methodology for industrial operations.

NOTE FOR 3.2.2.2. REVISED. Requirement 3.2.2.1 from the 2018 Mining Standard required that entities follow a recognized risk assessment methodology. We have changed that to credible methodology, as this is consistent with changes throughout the IRMA Standard.

We are proposing to define credible methodology as:

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

3.2.2.3. The entity consults with workers' health and safety representatives and relevant workers and contractors³²⁰ to:

- a. Identify hazards (as per 3.2.2.1);
- b. Determine the potential severity of consequences and probability of occurrence of identified hazards;
- c. Identify any existing controls for the hazards;
- d. Identify high-risk (or equivalent) hazards for which additional controls should be prioritized, including but not limited to those that have caused or have a reasonable potential to cause a life-altering or fatal injury or disease; and
- e. Identify key potential emergency scenarios including, but not limited to, all potential accidents that have a moderate or high severity or probability of occurrence.³²¹

NOTE FOR 3.2.2.3. REVISED. This requirement combines 3.2.2.1 and 3.2.3.4.a from the 2018 Mining Standard.

Sub-requirement 3.2.3.4.a in the 2018 Mining Standard required that workers representatives be engaged in hazard identification and risk assessment. We are proposing to add that workers and contractors should also be consulted, as there will be cases where workers and contractors who perform tasks that are linked to

³¹⁹ For example, see: Centers for Disease Control and Prevention. 2014. "Climate Change and Occupational Health and Safety." <u>https://blogs.cdc.gov/niosh-science-blog/2014/09/22/climate-change/</u>

³²⁰ Workers and contractors who are most likely to be exposed or susceptible to particular hazards should be consulted during the risk assessment of those hazards, and in the development of controls.

³²¹ These scenarios will feed into the emergency preparedness and response plans in 3.2.3.6.

particular hazards will be best placed to provide input on the natural of the hazards, the existing controls, the likelihood that hazards will lead to events, etc.³²² When there are sub-groups of workers who or contractors susceptible to harm from particular hazards, they could also be consulted during this process.

Requirement 3.2.2.1 in the 2018 Mining Standard mentioned the assessment of significant/consequence of hazards. Our proposed language here acknowledges that some prioritization will likely need to occur related to the development of controls (e.g., prevention, mitigation), given that there are many hundreds of hazards associated with large-scale mining and mineral processing operations. We refer to the prioritized situations as "high" risk hazards, although other systems use other terms (e.g., serious, key, critical, priority risks, principal or high consequence hazards, material unwanted events). We have included that high-risk hazards include those that have caused or have a reasonable potential to cause a life-altering or fatal injury or disease. This is consistent with many other standards and regulations.³²³

3.2.2.4. Risk assessments are documented, including:

- a. Any assumptions made in relation to the number of people at risk, the probability, and severity of consequences for each hazard that inform the level of risk assigned to each hazard; and
- b. Any criteria used to determine the high-risk activities or conditions for which additional <u>controls</u> should be prioritized, and criteria to determine the key potential <u>emergency scenarios</u>.

NOTE FOR 3.2.2.4. NEW. This requirement specifies and expands some documentation requirements related to 3.2.2.1 from the 2018 Mining Standard.3.2.2.5. <u>Hazard</u> identification and risk assessments are reviewed and, if necessary, updated at least annually, and more frequently if changes in the workplace, in activities, processes or services, resources, operational context, or external factors have the potential to introduce new hazards or change the risk rating of any existing hazards.³²⁴

3.2.2.5. Hazard identification and risk assessments are reviewed and, if necessary, updated at least annually, and more frequently if changes in the workplace, in activities, processes or services, resources, operational context, or external factors have the potential to introduce new hazards or change the risk rating of any existing hazards.

NOTE FOR 3.2.2.5. REVISED. Requirement 3.2.2.3 in the 2018 Mining Standard stipulated that the risk assessment process be "ongoing" process. This requirement seeks to provide clarification for what is meant by ongoing. We are proposing an annual review, as this corresponds to guidance provided by some mining jurisdictions.³²⁵

Updates to risk assessments were also mentioned in a second requirement, 3.2.5.3, which has been deleted as it overlapped with this requirement.

3.2.3. Health and Safety Management Plans and Procedures

³²² The U.S. Occupational Health and Safety Administration recommends that employers, "Collect, organize, and review information <u>with workers</u> to determine what types of hazards may be present and which workers may be exposed or potentially exposed." (Source: OSHA. "Hazard Identification and Assessment." <u>https://www.osha.gov/safety-management/hazard-Identification#ai1</u>)

³²³ For example: The reference to life-altering injury or occupational disease is from Mining Association of Canada. 2021. Safety and Health Protocol. p. 15. <u>https://mining.ca/wp-content/uploads/dlm_uploads/2021/08/Safety-and-Health-2020-EN.pdf</u>; WorkSafe BC says "key risks are those that have resulted or might result in serious injury, fatality or disease. (<u>https://www.worksafebc.com/resources/health-safety/books-guides/creating-key-risk-inventory?lang=en</u>)

³²⁴ External factors could include political, economic, social, technological, environmental or legal (PESTEL) influences.

Changes in workplace or operational context may include, for example, changes in personnel, organization or work, processes, facilities, equipment, materials, services, procedures, laws, regulations, environmental conditions, etc.)

³²⁵ For example, in Ontario, Canada, the risk assessment must be reviewed as often as necessary and at least annually, as per subsection 5.3(1) of the Mines and Mining Plant regulation (available at: https://www.ontario.ca/laws/regulation/900854#BK0).

The annual or more frequent review "is to ensure that new hazards, or existing hazards that may have changed during the intervening period, are addressed, and that the controls that have been adopted to mitigate workplace risks continue to remain effective."

3.2.3.1. They entity consults with workers' health and safety representatives and relevant workers and contractors to develop controls for high-risk hazards in a manner that aligns with the widely accepted hierarchy of controls. The process of selecting controls is documented, including:

- a. Documentation that the <u>hierarchy of controls</u> have been considered in proper sequence, beginning with serious consideration of the most effective strategies, even if they are the most expensive;³²⁶ and
- b. Rationale for rejecting higher hierarchy controls.³²⁷

NOTE FOR 3.2.3.1. REVISED. Requirement 3.2.2.4 in the 2018 Mining Standard mentioned hierarchy of controls (in a footnote), and specifically mentioned that elimination of hazards be a priority, but did not provide a way for that to be consistently audited. By requiring documentation of controls considered and rationale for the final selection of controls, it provides a way for entities to demonstrate that they are following the hierarchy of controls, or have a good reason (not solely based on cost) for not accepting the most effective strategies in all cases.

We propose the following definition of hierarchy of controls:

A step-by-step approach to eliminating or reducing workplace hazards that ranks controls from the most effective level of protection to the least effective level of protection as follows: Elimination (physically remove the hazard), Substitution (replace the hazard with something safer), Engineering Controls (use equipment or other means to isolate people from the hazard), Administrative Controls (change the way people work via procedures), Personal Protective Equipment (protect the worker using personal protective equipment).³²⁸

3.2.3.2. A health and safety risk management plan (or equivalent) is developed and implemented for managing high-risk hazards that:

- a. Outlines specific controls to address the high-risk hazards identified through the assessment process;
- b. Includes performance criteria or indicators of effectiveness for each control;³²⁹
- c. Includes specific actions to be taken if the controls are not working within established criteria;
- d. Assigns implementation of controls or actions, or oversight of implementation, to responsible staff;³³⁰
- e. Includes an implementation schedule;³³¹ and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 3.2.3.2. REVISED to be more consistent with management plans in other chapters.

3.2.3.3. If not covered in the plan for managing high-risk <u>hazards</u>, the <u>entity</u> demonstrates that documented procedures or measures are in place and implemented to address occupational health and safety hazards associated with the following, if relevant to the operation:

a. Any unique occupational health and safety risks to specific groups of workers (e.g., pregnant women, children, HIV-positive, etc.) identified in the risk assessment;

³²⁶ United Steelworkers. 2022. Bargaining for Stop Work Authority To Prevent Injuries and Save Lives. <u>https://m.usw.org/act/activism/health-safety-and-environment/resources/bargaining-for-stop-work-authority-to-prevent-injuries-and-save-lives</u>

³²⁷ New Zealand Ministry of Business, Innovation and Employment. 2013. Guidance for a Hazardous Management System. https://www.worksafe.govt.nz/assets/dmsassets/zero/188WKS-2-excavations-hazard-management-system-for-mines.pdf

³²⁸ Province of British Columbia. WorkSafe BC web site: "Controlling Risks." <u>https://www.worksafebc.com/en/health-safety/create-manage/managing-risk/controlling-risks</u>

³²⁹ Appropriate performance criteria or indicators must include those required by host country law (e.g., maximum concentrations of certain chemicals in air), and, as relevant, those associated with external standards (e.g., IRMA references the ACGIH for occupational exposures), and any indicators agreed with workers.

³³⁰ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

³³¹ Timelines may reflect a prioritization – i.e., those presenting the greatest risk are addressed first. Note, however, that entities have an ongoing obligation to control all serious recognized hazards and to protect workers. (<u>https://www.osha.gov/safety-management/hazard-Identification</u>)

- b. Ground control and physical stability;³³²
- c. Electricity;
- d. Chemicals and hazardous materials;³³³
- e. Gases and dust;³³⁴
- f. Explosives;335
- g. Mobile (powered) equipment/vehicles;
- h. Equipment, including hand tools, and machinery;
- i. Pressurized systems or vessels;
- j. Confined spaces;
- k. Inundation and inrush of water or other substances;
- I. Working at heights; and
- m. Materials handling.336

NOTE FOR 3.2.3.3. REVISED. This requirement combines 3.2.4.2 and 3.2.2.5 from the 2018 Mining Standard. Requirement 3.2.2.5 drew directly from language in the ILO Safety and Health in Mines Convention (176), Article 7,³³⁷ which specifies that employers must take all necessary measures to eliminate or minimize risks associated with a number of known risk areas or issues in the mining industry. Thus, there was an expectation that over and above any plan to manage the "high-risk hazards" identified through risk assessment, that procedures also be in place to manage a set of known risks.

This approach is not unique. For example, the New Zealand government requires mining entities to develop Hazard Management Plans for all "principal" mining hazards regardless of the level of risk determined by a risk assessment. They include as principal hazards: ground or strata instability; inundation and inrush of any substance; mine shafts and winding systems; roads and other vehicle operating areas; tips, ponds and voids; air quality; fire or explosion; explosives; gas outbursts; spontaneous combustion (for underground coal mines).³³⁸

Based on a review of various sources that identify major hazards in the mining and mineral processing industries (see list of sources for <u>Annex 3.2-A</u>), and also a consultation question in the draft IRMA Mineral Processing Standard, we have identified common areas of known hazards. These are now listed in 3.2.3.3. Not all will be relevant at every operation.

CONSULTATION QUESTION 3.2-2: Do you agree with this approach? If so, do you agree with the categories of hazards listed, or would you suggest other types of hazards that should always have procedures or controls (if relevant at the operation)?

- 3.2.3.4. The entity collaborates with worker health and safety representatives to:
 - a. Review <u>psychosocial hazards</u> and identify those that are priority concerns for <u>workers</u>. The identification process includes <u>consultations</u> with <u>workers</u> and <u>contractors</u>;

³³² Management of physical stability is addressed in proposed Chapter 4.X. There may be some overlap, as some of the controls/mitigation measures applied there may help to protect worker health and safety. However, 3.2.3.3 would have much more work/task-specific measures to control hazards.

³³³ These are required to be identified and characterized in Chapter 4.1.

³³⁴ These are requirement to be identified in Chapter 4.3.

³³⁵ These are required to be identified in Chapter 4.1.

³³⁶ Procedures may have been developed for some materials handling in Chapter 4.1.

³³⁷ International Labour Organization. 1995. Safety and Health in Mines Convention, 1995 (No. 176). www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C176_

³³⁸ New Zealand Ministry of Business, Innovation & Employment. 2013. Guidance for a Hazard Management System for Mines. <u>https://worksafe.govt.nz/dmsdocument/188-guidance-for-a-hazard-management-system-for-mines</u>

- b. Develop and implement programs to support the mental health of workers and contractors;
- c. Develop and implement programs to encourage and promote overall health and wellness in the workplace; and
- d. Review the effectiveness of the programs developed under (b) and (c) above and update them as necessary.

NOTE FOR 3.2.3.4: REVISED. The idea of developing promotional programs to support wellness and mental health was addressed in two requirements in the 2018 Mining Standard (3.2.3.4.d and 3.2.4.2).³³⁹ However, neither requirement clearly articulated a need for such programs to always be developed, which made it difficult for auditors to interpret if and when such programs would be required.

The identification of psychosocial hazards (i.e., those that may affect workers' metal or emotional health or wellbeing) occurs in a previous requirement (3.2.2.1.a.i). But there is no guarantee that a risk assessment will prioritize such hazards as being high-risk. In 3.2.3.4, we are proposing that programs to promote and support worker mental health and promote wellbeing more generally be required regardless of the outcome of the risk assessment, though we are not prescriptive about the content of such programs, as different types of programs will be more or less useful in different contexts.

This approach is taken in the Mining Association of Canada's Safety and Health Protocol (2021). For example, they require at the AA level that sites demonstrate that "The facility's programs promote and encourage health and wellness, including mental health, and a healthy lifestyle."³⁴⁰

In order to determine priority programs, we are proposing that collaboration occur with worker health and representatives and workers and contractors.

We are proposing a definition of **psychosocial hazards**:

Hazards that can have an impact on the psychological health or mental or emotional wellbeing of a person.

If this requirement is approved, we can add guidance related to psychosocial hazards. For example, the Western Australia Department of Mines, Industry Regulation and Safety has a website that outlines examples of psychosocial hazards that include: work demands, low levels of control, inadequate support from supervisors or coworkers, lack of role clarity, poor organizational change management, low recognition and reward, poor organizational justice, extreme environmental conditions, remote work, isolated work, inappropriate behaviors, traumatic events, fatigue, alcohol and other drug use and poor physical health.³⁴¹

3.2.3.5. If the risk assessment demonstrates a significant risk of <u>worker</u> exposure to HIV/AIDS, tuberculosis, malaria, or SARS-CoV-2 (COVID-19) or another infectious disease, the health and safety risk management plan (or equivalent) integrates the following:

- a. In relation to HIV/AIDS (if relevant), the entity:
 - i. Provides free, voluntary and confidential HIV testing and counseling for all workers and employees;
 - ii. Provides HIV/AIDS treatment for workers and employees where not covered by public or private insurance schemes at an affordable rate; and

³³⁹ 3.2.3.4.d required that there be a formal health and safety committee to ensure consultation and participation in matters relating to OHS, including "Development of appropriate assistance and programs to support worker health and safety, including worker mental health." And 3.2.4.2 required that, "If the risk assessment process reveals unique occupational health and safety risks for certain groups of workers (e.g., pregnant women, children, HIV-positive, etc.) the entity shall ensure that additional protective measures are taken, and trainings and health promotion programs are available to support the health and safety of those workers."

³⁴⁰ Mining Association of Canada. 2021. Safety and Health Protocol. p. 9. <u>https://mining.ca/wp-content/uploads/dlm_uploads/2021/08/Safety-and-Health-2020-EN.pdf</u>

³⁴¹ Government of Western Australia. Department of Mines, Industry Regulation and Safety web site: "Psychosocial hazards overview." <u>https://www.dmp.wa.gov.au/Safety/Psychosocial-hazards-overview-25390.aspx</u>

- iii. Provides <u>contractors</u> with access to education and other preventative programs, and works with contracting companies to identify ways for contractors to access affordable treatment.
- In relation to tuberculosis (if relevant), the entity provides free and voluntary testing for workers/employees where it is not reasonably likely to be provided by public or private health programs at an affordable rate.
- c. In relation to malaria (if relevant), the entity:
 - i. Has a vector control plan;
 - ii. Takes action to prevent facilities from becoming breeding environments for malaria-carrying mosquitoes; and
 - iii. Provides protection from infection by malaria-carrying mosquitoes in company facilities and any company-provided housing.
- d. In relation to SARS-CoV-2 (Covid-19) or any emerging infectious diseases (if relevant), the entity:
 - i. Provides no-cost training for workers and contractors on preventative measures to reduce the risk of infection and spread of the disease;
 - ii. Provides health screening of workers, contractors and visitors;
 - iii. Provides testing, and, if available, a voluntary vaccination program at no cost to workers;
 - iv. Cleans and disinfects the working environment based on best international guidance;
 - v. Provides suitable personal protective equipment to workers, contractors and visitors at no cost;
 - vi. Modifies shift patterns and changeover times to minimize close contact between workers and/or contractors;
 - vii. Provides for isolation and/or medical treatment of workers where infection is suspected or confirmed; and
 - viii. Suspends non-essential activities, or all activities, if necessary.

NOTE FOR 3.2.3.5: REVISED. 3.2.3.5 (a), (b) and (c) were previously in the Community Health and Safety chapter. The worker-related requirements have been separated out and added into this chapter, as they are more relevant here.

Sub-requirement 3.2.3.5.d is a NEW requirement borne out of experiences with Covid-19. However, these plans would also be appropriate if there is the potential for other infectious diseases. Our proposal is that all sites should have a plan in place that covers general elements of how to respond to outbreaks of known potential diseases. For new diseases, having a general plan in place will enable operations to more quickly adapt and develop disease-specific responses.

The action plan is geared toward management of infectious diseases in the workplace, but also seeks to minimize risks to nearby communities by reducing the potential for significant outbreaks at the mineral processing site. If sites respond quickly when cases are found, and implement controls to limit the spread, then there will be less potential for movement of viruses/diseases between facilities and communities). See also Chapter 3.3 – 'Community Health and Safety,' where a similar action plan is required to be implemented if infectious diseases are found.

3.2.3.6. They entity consults with workers' health and safety representatives and relevant workers and contractors to develop emergency preparedness and response systems and procedures, including:³⁴²

- a. An emergency response plan that:
 - Outlines the appropriate actions, including evacuation plans if relevant, to be taken for all reasonably foreseeable health and safety emergencies identified in the risk assessment process (see 3.2.2.3); and

³⁴² See Chapter 4.1, criterion 4.1.7, which outlines spill preparedness and response procedures. These may be integrated into this OHS Emergency Preparedness and Response plan.

- ii. Is accessible to all workers and contractors in languages that are comprehensible to them.
- b. Exercises to test emergency response plans and documentation of lessons learned, including:
 - i. Table top emergency response simulations on an annual basis or more frequently; and
 - ii. A full emergency simulation drill conducted every three years or more frequently;
- c. Equipping the workplace with emergency response equipment in sufficient quantities and in working condition to respond appropriately to foreseeable emergencies, and inspecting equipment on an annual basis;
- d. Ensuring that relevant first responders receive training in first aid, fire-fighting, and handling of hazardous chemicals and materials, as relevant;³⁴³
- e. Implementing a system to identify and track at any time the probable locations of all individuals who are underground, if relevant; ³⁴⁴
- f. Implementing mechanisms to alert workers and contractors about <u>emergency situations</u>, and testing the mechanisms annually; and
- g. Reviewing the plan every two years, or sooner, if there are changes that may affect the scope, nature or scale of potential emergency scenarios or the ability to respond to potential emergencies (e.g., changes in the organization, hazards, resources, external factors, etc.).³⁴⁵

NOTE FOR 3.2.3.6: REVISED. 3.2.3.6.a and 3.2.3.6.b incorporate workplace-focused emergency preparedness and response requirements from Chapter 2.5 (that chapter now focuses on emergency preparedness and response planning that occurs with affected communities). 3.2.3.6.e, the requirement to be able to identify and track locations of individuals underground, was 3.2.4.1.f in the 2018 Mining Standard.

We have expanded on the expectations beyond what was in the 2018 Mining Standard.

- 3.2.3.6.c, providing sufficient emergency response equipment and inspecting that equipment, was added based on similar requirements in the RBA/RMI ESG standard for Mineral Supply Chains.³⁴⁶
- 3.2.3.6.f, having mechanisms to alert workers in emergency situations is based on similar requirements in Mining Association of Canada (MAC) Crisis Management Protocol.³⁴⁷
- 3.2.3.6.g, the frequency of review (and the frequency of tabletop and drills) aligns with MAC protocol.³⁴⁸

3.2.3.7. A stop work authority procedure (or equivalent) is developed and implemented that provides workers and <u>contractors</u> with the right, the responsibility, and the authority to either refuse to undertake or to stop work if they believe that conditions or behaviors pose an imminent and serious danger to the health or safety of themselves or others, or serious risk of harm to the environment. The procedure:

- a. Is clear that the authority to stop work with reasonable justification may be exercised by workers or contractors without fear of reprisal by the entity, and that retaliation by other workers will not be tolerated;³⁴⁹
- b. Outlines:
 - i. The conditions whereby workers or contractors may initiate a stop work action;

³⁴³ See also requirement 4.1.7.1 (spill preparedness and response) in Chapter 4.1.

³⁴⁴ This is only relevant at underground mines.

³⁴⁵ External factors could include political, economic, social, technological, environmental or legal (PESTEL) influences.

³⁴⁶ Responsible Business Alliance. 2021. Environmental, Social and Governance Standard for Mineral Supply Chains. Requirement VI-20. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

³⁴⁷ Ibid. Also, Mining Association of Canada. 2021. Crisis Management and Communications Planning Protocol. See p. 4. (Toward Sustainable Mining). <u>https://mining.ca/wp-content/uploads/dlm_uploads/2023/04/Crisis-Protocol.pdf</u>

³⁴⁸ Ibid. p. 6.

³⁴⁹ Retaliation could include penalizing, dismissing, disciplining, suspending or threatening to do any of these things to a worker.

- ii. Who needs to be notified of the stop work action;
- iii. The investigation process to determine validity of the stop work action (see 3.2.3.8.c);
- iv. A process for coming to agreement on any containment actions and verifying that those actions have been implemented;
- v. Who has authority to restart work, and any monitoring that need to occur after work has resumed to ensure that corrective actions remain effective; and
- vi. Follow-up steps for communicating the event to relevant workers, contractors and management, and integrating learning from the stop work event (e.g., into risk assessment updates, management plans or procedures, or training materials).

NOTE FOR 3.2.3.7: NEW. The 2018 Mining Standard (3.2.3.1.e) included the workers' right to remove themselves from unsafe situation, as this right is embedded in ILO conventions such as 176-Safety in Mines and 155-Occupational Safety and Health,³⁵⁰ in many national laws,³⁵¹ and in company codes or policies.³⁵²

The 2018 Mining Standard, however, did not outline any obligations of the entity beyond informing workers of this right. There can be numerous reasons that workers may be reluctant to exercise their stop work authority, and if they do not understand the bounds within which they can exercise this right, or do not believe there is support from company leadership, then dangerous conditions may persist.

The importance of communicating this authority to workers so that they understand their rights and responsibilities has been written into voluntary standards such as the American Society of Safety Professionals Standard Z10-2019 Occupational Health and Safety Management Systems, which was developed with the cooperation of United Steelworkers along with corporations and trade associations, including Alcoa, Chevron, Nucor, Siemens, United Technologies, the American Chemistry Council, and the American Foundry Society.³⁵³

We are proposing that there be both a procedure (3.2.3.7), and, later in the chapter, training on the procedure (3.2.7.4.d) to address this gap in the IRMA Standard.

3.2.3.8. A reporting and investigation procedure (or equivalent) is developed and implemented that outlines the steps to be taken by <u>workers</u>, <u>contractors</u>, internal inspectors, or others to inform the entity of <u>unwanted events</u> or unsafe working conditions. The procedure outlines, at minimum:

- a. The rights and responsibilities of workers, contractors, and internal inspectors to report unwanted events (e.g., accidents, near-miss incidents, injuries, illness or fatality), ineffective controls or unsafe working conditions (e.g., uncontrolled hazards) without fear of reprisal by the entity, and that retaliation by other workers for reporting unwanted events will not be tolerated;³⁵⁴
- b. The process to be followed when reporting unwanted events or unsafe working conditions, including who to contact, how to contact them, what types of information to include, and any forms that need to be submitted as part of the process; and

³⁵⁰ ILO. 1995. C176-Safety and Health in Mines Convention.; and C155-Occupational Health and Safety Convention. Available at: <u>https://www.ilo.org/dyn/normlex/en/f?p=1000:12000:::NO:::</u>

³⁵¹ "Under federal law in the United States and similar laws written in other countries, employers must provide employees with a safe and healthy workplace free of recognized hazards. Workers have the right to refuse to perform dangerous work and, if they do so, are protected against employer retaliation." (Source: <u>https://ohsonline.com/Articles/2019/12/02/Stop-Work-Authority-A-Principled-Based-Approach.aspx</u>)

³⁵² Anglo American. 2022. p. 7. Our Code of Conduct. <u>https://www.angloamerican.com/~/media/Files/A/Anglo-American-Group-v5/PLC/sustainability/code-of-conduct-2022-english-1.pdf</u>

ArcelorMittal. 2023. Health and Safety Policy. https://corporate.arcelormittal.com/media/y5zkt40r/health-and-safety-policy-2023.pdf

Teck. 2020. Our Approach to Health and Safety. https://www.teck.com/media/teck_approach_to_Health_and_Safety_2020.pdf

Barrick. Health & Safety. https://www.barrick.com/English/sustainability/health-and-safety/default.aspx

³⁵³ United Steelworkers. 2022. p. 7. Bargaining for Stop Work Authority to Prevent Injuries and Save Lives. <u>https://www.usw.org/get-involved/hsande/resources/publications/StopWorkAuthority_July2022.pdf</u>

³⁵⁴ Retaliation could include penalizing, dismissing, disciplining, suspending or threatening to do any of these things to a worker.

- c. The investigation process to be followed for different situations (e.g., validating stop work actions by workers or inspectors, investigating accidents, near miss incidents or observations of hazards in the workplace, etc.) including:
 - i. A provision that any use of stop work authority by workers or internal inspectors is investigated promptly;
 - ii. Expected timelines for commencing investigations of other reported unwanted events or unsafe working conditions;
 - iii. Who participates in different types of investigations; and
 - iv. How the outcomes of investigations are communicated to workers, contractors, and others.

NOTE FOR 3.2.3.8. NEW. We are proposing this requirement because it seems reasonable to expect that there be clear procedures for how safety-related issues are reported and investigated. Having written procedures will help to promote consistency and predictability in the process, and provide reassurance to workers and others that when potential health and safety hazards or actual impacts are reported, there is a process for following up. Also, if protection of worker health and safety is a priority, then actions should be taken in a prompt manner (and having a procedure in place with clear timelines and responsibilities will help to facilitate those actions).

We are proposing the following definition of **unwanted event**:

A situation or condition where there may be or is a loss of control of a hazard that leads to harm.³⁵⁵

CONSULTATION QUESTION 3.2-3: Is it common to have a procedure related to the reporting and investigation of health and safety issues in the workplace? If not, do you believe this is something that would be useful or not? Are there any elements you would add or remove from such a procedure?

3.2.4. Specific Measures to Protect Workers

3.2.4.1. The entity communicates with workers on health and safety matters as follows:

- a. Systems or processes are in place to communicate information to workers and <u>contractors</u> and receive input and respond to them on matters relating to occupational health and safety;³⁵⁶ and
- b. Health and <u>safety data sheets</u>, labels, and signage (e.g., warning signs, exits, evacuation routes) in the workplace are: ³⁵⁷
 - i. In formats and languages that are understandable to the workers and contractors;
 - ii. Maintained in legible condition; and
 - iii. Kept up to date.

NOTE FOR 3.2.4.1. REVISED. This was 3.2.3.3 in the 2018 Mining Standard. It has been revised to make it clear that there are two elements in the requirement. One is communication from the entity to the workers (and this includes all workers, not just workers' health and safety representatives), and the other is from workers to the entity.

There is overlap between 3.2.4.1 and 4.1.4.1 in Chapter 4.1 - 'Waste and Materials Management.' Chapter 4.1 covers procedures related to hazardous chemicals and wastes. That chapter requires procedures related to hazardous chemicals that include informing workers about how to access the information on chemicals. This requirement, 3.2.4.1, however, makes it clear that that information must be in a format that is clear and understandable to workers.

³⁵⁵ Source: Adapted from the Government of Western Australia, Department of Mines, Industry Regulation and Safety. <u>https://www.dmp.wa.gov.au/Safety/What-is-a-hazard-and-what-is-4721.aspx</u>

³⁵⁶ See also Chapter 1.2, requirement 1.2.4.1, relating to communications with stakeholders, which should also apply to workers (e.g., that communications be timely, and culturally appropriate).

³⁵⁷ See also requirement 3.2.4.4 and requirements in Chapter 4.1 (4.1.4.1.e and 4.1.5.1.e).
3.2.4.2. Every shift has supervision at a level commensurate with the risks and the competence of workers.³⁵⁸ Supervision includes:

- a. Oversight and enforcement of adherence to relevant procedures and <u>controls</u> related to the tasks being carried out; and
- b. Consistent and correct usage of personal protective equipment and clothing appropriate to the working environment.

NOTE FOR 3.2.4.2: REVISED. This was 3.2.4.1.e in the 2018 Mining Standard. Previously the requirement stipulated that there needed to be "adequate supervision and control" on each shift. We have added more clarity here as to what supervision entails.

3.2.4.3. (Critical Requirement)

Personal protective equipment and clothing:

- a. Provided, at no cost, to <u>workers</u> and <u>contractors</u> when exposure to adverse conditions or adequate protection against risk of accident or injury to health cannot be ensured by other means;³⁵⁹
- b. Is fit for purpose, and the size and fit are gender-appropriate and provide adequate protection; and
- c. Is maintained by the entity in clean and good working condition, and replaced as necessary.

NOTE FOR 3.2.4.3: REVISED. Sub-requirement 3.2.4.3.a was 3.2.4.1.b in the 2018 Mining Standard. This was a critical requirement in the 2018 Mining Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

- Sub-requirement 3.2.4.3.b was added based on recommendations from IRMA's Expert Working Group on Gender.
- Sub-requirement 3.2.4.3.c was added based on a review of PPE-related requirements in other standards.
- 3.2.4.4. First aid is available on site as follows:
 - a. All workers and contractors receive basic first aid training;
 - b. Workers and contractors have unrestricted access to first aid and rapid response equipment appropriate to the work area;³⁶⁰
 - c. In areas where chemicals are stored, handled and used, <u>safety data sheets</u>, and instructions on first aid for all potential exposure routes (e.g., inhalation, ingestion, eye or skin contact) are available (see also 3.2.4.1.b).³⁶¹

NOTE FOR 3.2.4.4: NEW. In the 2018 Mining Standard, the site was responsible for providing first aid to workers who suffered injury or illness, however, there was no mention of having first aid provisions/equipment easily accessible to workers. A similar expectation is included in other mining-related standards.

For example, Responsible Business Alliance's ESG Standard requires that all employees receive basic first aid training, and Responsible Jewellery Council requires that there be trained first-aid personnel on site.³⁶²

³⁵⁸ The competence of workers is determined as part of the training program (see 3.2.7.3).

³⁵⁹ Example of guidance: inventories should be such that PPE is always immediately available to workers, contractors and visitors when required this could be checked by assessing the inventory and interviews with workers and contractors. Adverse conditions include extremes of temperature, exposure to chemicals, etc.

³⁶⁰ Example of guidance rapid response equipment may include eye wash stations and showers in areas where chemical handling could lead to contact with the eyes and skin). Document regular inspections, tests and refills of first aid equipment and supplies.

³⁶¹ Requirement 3.2.4.1.b is also relevant in these situations, i.e., safety data sheets must be accessible in areas where chemicals are stored, handled and used, and be understandable, etc.

³⁶² For example: Responsible Jewellery Council. 2019. Code of Practices. Requirement 23.7. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>; and Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VI-23.

Also, we have added that first aid instructions be available where chemicals are stored or used, so that workers have information to understand the appropriate actions to take if exposures occur.

CONSULTATION QUESTION 3.2-4: In 3.2.4.4.a, we are suggesting that all workers have at least basic training in first aid. Should there also always be others on site who have a higher level or depth of first aid training or certification (e.g., supervisors)? Also, mine sites and mineral processing operations can be extremely large complexes. Do you have a suggestion for what might be an adequate number of on-site employees/workers with certified first aid on site at all times?

3.2.4.5. Workplaces include:

- a. Safe, potable water that is readily accessible to workers and contractors;
- b. Clean toilet, washing and locker facilities commensurate with the number and gender of employees and contractors;
- c. Sanitary facilities for eating and storing food;
- d. Primary and emergency power supply and lighting;
- e. Adequate ventilation, in particular for confined spaces and underground workings;
- f. Fire safety equipment and alarms; and
- g. Clearly marked, unlocked and unblocked evacuation routes and emergency exits, including, for any underground workplace, two exits that are each connected to separate means of egress to the surface where practicable.

NOTE FOR 3.2.4.5: REVISED. The requirement has been refocused on general elements of the workplace that should be in place to provide a healthy and safe environment for workers. Previously, many of the requirements were in a single paragraph. They have been separated out here to make the expectations clearer. In the 2018 Mining Standard, most of these expectations were included in requirement 3.2.4.3, except for the provisions of two exits for underground workplaces, and adequate ventilation in sub-requirements (g) and (f), which were 3.2.2.5.d and 3.2.2.5.e, respectively, in the 2018 Mining Standard.

Also, we are proposing to add three NEW sub-requirements - 3.2.4.5 (d), (f) and (g). These are all expectations in the Responsible Jewellery Council's Code of Practices (2019).³⁶³

And we removed references to accommodations, as these are now included in 3.2.4.6, below.

3.2.4.6. Any accommodations for workers or contractors provided by the entity adhere to best international practices including: ³⁶⁴

- a. During time spent in workers' accommodations, workers are able to enjoy their fundamental human rights, including the freedom of association and freedom of movement;
- b. Any fees for rent or services are discussed during recruitment, specified in employment contracts, and never lead to a worker becoming indebted to the employer;
- c. All accommodations provide:
 - i. Safe and potable water in the dwelling in quantities sufficient to provide for all personal and household uses;
 - ii. Adequate sewage and garbage disposal systems;
 - iii. Appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals and insects;

https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_ June32021_FINAL.pdf

³⁶³ Responsible Jewellery Council. 2019. Code of Practices. Requirement 23.2. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>

³⁶⁴ See Chapter 3.1 for more requirements related to rental fees for accommodations (requirement 3.1.9.9)

- iv. Adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting; and
- v. A reasonable degree of privacy both between individuals within the household, and for the members of the household against undue disturbance by external factors;
- d. Where accommodations are provided for single workers or workers separated from their families:
 - i. A separate bed for each worker;
 - ii. Safe accommodations and toilet/bathroom facilities separated by gender; and
 - iii. Common dining rooms, canteens, recreation rooms and health facilities, where not otherwise available in the community.

NOTE FOR 3.2.4.6. REVISED. Requirement 3.2.4.3 in the 2018 Mining Standard included a single subrequirement that, "Any accommodations provided by the operating company shall be clean, safe, and meet the basic needs of the workers." It was not clear what was meant by safe, or "meet the basic needs of workers," and so a review was undertaken of international practices related to workers' accommodations.

Several international instruments recognize a right to an adequate standard of housing as part of respecting human rights,³⁶⁵ and the ILO and IFC/EBRD have produced separate guidance on adequate housing standards and practices when accommodations are provided by employers.³⁶⁶ This more detailed requirement includes provisions that have been drawn from those sources.

CONSULTATION QUESTION 3.2-5: There are many more specific requirements that could be added based on the ILO and IFC/EBRD guidance. Do you have suggestions for additional or different requirements that should be viewed as the most material when it comes to worker accommodations?

3.2.5. Inspections, Workplace Monitoring and Health Surveillance

3.2.5.1. The <u>entity</u> and <u>workers' health and safety representatives</u> if they so choose³⁶⁷ perform joint inspections of the working environment to identify any <u>hazards</u> to which <u>workers</u> or <u>contractors</u> may be exposed and evaluate the effectiveness of occupational health and safety controls and protective measures. The joint inspection program:

- a. Includes a plan that outlines the frequency of inspections for different work areas/tasks/equipment, ensuring coverage of the entire site and all high-risk hazards each year;
- b. Empowers those carrying out inspections to use stop work authority if a hazard is uncovered that poses an imminent threat to the health or safety of any person(s); and
- c. Documents, in an inspection report, any observed unsafe conditions and actions, recommended containment and/or corrective actions, and a priority level for actions (e.g., immediate action, short-term action or long-term action).³⁶⁸

³⁶⁵ According to the UN Special Rapporteur on Housing website, "The United Nations Committee on Economic, Social and Cultural Rights has underlined that the right to adequate housing should not be interpreted narrowly. Rather, it should be seen as the right to live somewhere in security, peace and dignity. The characteristics of the right to adequate housing are clarified mainly in the Committee's general comments No. 4 (1991) on the right to adequate housing and No. 7 (1997) on forced evictions." (Source: "The human right to adequate housing." https://www.ohchr.org/en/special-procedures/sr-housing/human-right-adequate-housing)

³⁶⁶ See: ILO Helpdesk Factsheet on Workers' Housing. <u>https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---</u> <u>multi/documents/publication/wcms_116344.pdf;</u> and ILO. 1961. Workers Housing Recommendation 115. <u>https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100::NO::P12100_ILO_CODE:R115;</u> and IFC and EBRD. 2009. Workers' accommodations: processes and standards. A guidance note by IFC and the EBRD. <u>https://www.ebrd.com/downloads/about/sustainability/Workers_accomodation.pdf</u>

³⁶⁷ As per requirement 3.2.1.5.e, workers' health and safety representatives must be given the opportunity to participate in these inspections.

³⁶⁸ Note that these inspections reports are reviewed by the entity and inform continual improvement of the health management system. See requirements 3.2.8.1 and 3.2.8.2.

NOTE FOR 3.2.5.1: REVISED. Workplace inspections are a critical component of occupational health and safety management. The 2018 version of the Mining Standard did not provide much detail on either the expectations or outcomes of these inspections.

We are proposing a short-list of elements based on a review of guidance,³⁶⁹ including in 3.2.5.1.b. that inspectors to have the authority to stop work when there is an imminent threat to worker safety.

3.2.5.2. A workplace monitoring and <u>health surveillance</u> program is in place to measure exposures to <u>hazards</u>, and to evaluate the effectiveness of the <u>controls</u> being implemented to protect health and safety as follows:

- a. Workplace monitoring and <u>worker</u> health surveillance are designed and conducted by certified industrial hygienists or other <u>competent professionals</u>;
- Workers' health and safety representatives have the opportunity to suggest improvements to the design, and to participate in the implementation of workplace monitoring and worker health surveillance programs;
- c. Health surveillance is carried out in a manner that protects the right to confidentiality of medical information, and is not used in a manner prejudicial to workers' interests;
- d. Samples collected for workplace monitoring and health surveillance purposes are analyzed in an ISO/IEC-17025-certified or nationally accredited laboratory, if available in the host country;
- e. Sample results are compared against national occupational exposure limits (OELs) and/or biological exposure indices (BEIs), if they exist,³⁷⁰ or OELs/BEIs developed by the American Conference of Governmental Industrial Hygienists (ACGIH);³⁷¹ and
- f. If an OEL/BEI is exceeded:
 - i. Affected people (i.e., <u>workers</u>, <u>contractors</u>, supervisors, etc.) are <u>informed</u> immediately, and provided with instructions on the appropriate actions to take (e.g., evacuation, machinery stoppages, etc.);
 - ii. Any supervisors and management not present at the affected location are informed as soon as possible; and
 - iii. Controls are reviewed and revised in a timely manner to ensure that future exposure levels remain within safe limits.

NOTE FOR 3.2.5.2: REVISED. Sub-requirement 3.2.5.2.b used to be 3.2.3.4.b. It was moved here. Minor revisions were made to:

- 3.2.5.2.d (Added that certified labs must be used if available in the host country, recognizing that not all countries will have certification/accreditation systems).
- 3.2.5.2.f (Added that in addition to being informed immediately, affected are provided with instructions on appropriate actions to take; and added that supervisors and management is informed as soon as possible so that they are made aware of the situation.

CONSULTATION QUESTION 3.2-6: Is the selection of factors to be monitored and surveilled solely based on the outcomes of the risk assessment? Or should IRMA be requiring separate assessments (e.g., an exposure assessment or baseline monitoring) to help inform the monitoring program? For example, the ESG Standard developed by the RBA/RMI requires documentation of temperature exposure hazards, which presumably

³⁶⁹ For example, see: Canadian Center for Occupational Health and Safety. Effective Workplace Inspections.

https://www.ccohs.ca/oshanswers/prevention/effectiv.html; OSHA. Guide To Evaluating Safety And Health Management System Attributes. ³⁷⁰ Some countries have developed occupational hygiene standards for workplaces. The International Labour Organization website provides links to agencies responsible for establishing exposure limits in various countries. <u>www.ilo.org/safework/info/publications/WCMS_151534/lang--</u> <u>en/index.htm</u>

³⁷¹ The American Conference of Governmental Industrial Hygienists is a member-based organization composed of independent knowledgeable experts that advances occupational and environmental health. ACGIH develops Threshold Limit Values (TLVs) (akin to OELs) and BEIs through a committee process that involves review of peer-reviewed literature and public input. <u>www.acgih.org/</u>

requires some monitoring of the workplace, and an "ergonomic assessment of workplace jobs, tasks and activities."³⁷²

CONSULTATION QUESTION 3.2-7: Should we be separating out workplace environmental monitoring from health surveillance activities, and adding more specific expectations for both? For example:

1) Environmental monitoring in the workplace (e.g., sampling for chemicals/toxins in air, measuring noise levels, monitoring temperatures in the workplace, evaluating ergonomics); and

2) Worker health testing and surveillance (e.g., routine physical examinations, chest x-rays, pulmonary function tests (PFT), testing blood, hair for chemicals, etc.)?

CONSULTATION QUESTION 3.2-8: If certain known hazards are identified during the entity's hazard identification process (e.g., known carcinogens or hazardous substances, or potential that certain noise decibel levels will be exceeded) should the IRMA Standard outline specific monitoring and/or health surveillance actions to be taken? For example, OSHA in the United States has developed guidance related to a number of known hazards.³⁷³ Or, if normative requirements are not added, should IRMA add some guidance on what might be appropriate monitoring and health surveillance actions?

3.2.6. Response to Unsafe Working Conditions and Unwanted Health and Safety Events

NOTE FOR 3.2.6: NEW criterion heading.

3.2.6.1. If unsafe working conditions are observed and reported by <u>workers</u>, <u>contractors</u>, supervisors, inspectors or others, they are investigated in a timely manner,³⁷⁴ and if an investigation verifies that there is an imminent and serious threat to human health:

- a. In cases where an area is affected:
 - i. All workers and contractors are evacuated immediately;
 - ii. Workers or contractors re-entering the affected area to reinstate safe working conditions are protected from harm; and
 - iii. Working conditions in the affected area are verified as safe before general workers and contractors are allowed to enter.

b. In cases where machinery or equipment is the cause of unsafe working conditions:

- i. Use of the machinery or equipment ceases immediately;
- ii. The equipment or machinery is fixed or replaced by an appropriate trained specialist; and
- iii. The equipment or machinery is verified as safe before being put into service.

NOTE FOR 3.2.6.1: NEW. The requirement that work be stopped if dangerous conditions exist was not explicitly stated in the 2018 Mining Standard, and was an oversight that we are seeking to correct in this version of the Standard.

We have proposed a stop work authority procedure (see 3.2.3 7), and this requirement follows on that – i.e., it evaluates whether or not that procedure is actually being followed – i.e., that when unsafe conditions are observed by workers, internal or external inspectors, or others (e.g., it could be an IRMA auditor), that work is stopped and appropriate follow-up actions taken.

3.2.6.2. Whenever a near miss incident, accident, injury, illness or fatality occurs in the workplace:

³⁷² Responsible Business Alliance. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. <u>https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf</u>

³⁷³ U.S. Occupational Health and Safety Administration. 2014. Medical Screening and Surveillance Requirements in OSHA Standards: A Guide. https://www.osha.gov/sites/default/files/publications/osha3162.pdf

³⁷⁴ As per the reporting and investigations procedure in 3.2.3.8.

- a. Workers or contractors who have suffered an injury or illness are provided with first aid, and, if necessary, prompt transportation from the workplace to appropriate medical facilities;
- b. Affected workers or contractors, including those present at the time of an accident, are offered counselling or other forms of psychological support;
- c. The events are reported to the joint health and safety committee and accountable member of senior management, and, if required, to the <u>competent authority</u>;
- d. The events are investigated by the entity, including a root cause analysis;
- e. Corrective action plans are developed and implemented; and
- f. The circumstances surrounding the event, the investigation, the corrective action plans and the outcomes are documented.

NOTE FOR 3.2.6.2: REVISED. This was requirement 3.2.5.4. Previously, all steps were included in a single paragraph. We have separated out the steps to make it clear that response to events such as injuries, illness, accidents, fatalities, etc. require a series of actions and documentation. Audits should ensure that all of these steps are taken for each health and safety event.

Proposed definitions:

Accident

An event that results in injury, ill health, fatality or damage to property or the environment

Near Miss Incident

An unexpected event that disrupts regular work activity and there was the potential for injury, ill health, fatality or damage to property or the environment, but no actual harm occurred. Also known as a 'close calls', 'injury-free event', 'near accident'.

Sub-requirement 3.2.6.2.b is NEW. We are proposing this to address the potential psychological stress or trauma that may occur when experiencing or witnessing an accident, injury or fatality. Although few studies have been conducted on post-traumatic stress disorder (PTSD) in the mining industry, a 2013 study found that PTDS "is a reality in the South African mining industry."³⁷⁵ That study found that between 2006 and 2010 there were 671 claims for PTSD filed with the Rand Mutual Assurance Company for compensation benefits. Of those, 451 (66.9%) were from the mining sector. The mining industry claims filed by mine workers included those who directly experienced traumatic mine accidents and sustained physical injuries (87.8%) and those who witnessed the events 55 (12.2%).

Some mining and mineral processing companies offer counseling support to employees and even their families following accidents that have led to fatalities.³⁷⁶ Note that a requirement to offer to pay for counselling for families of workers killed on the job is being proposed in Chapter 3.1, requirement 3.1.9.4.b.iii.

CONSULTATION QUESTION 3.2-9: Do you support the addition of sub-requirement 3.2.6.2.b? Do you agree that some form of counseling or psychological support be provided even if accidents don't result in fatalities? Should all employees (not just those who experienced or witnessed the accident be eligible for counseling or support?

³⁷⁶ For example, see: ABC Pilbara. 2022. "Worker dies at Rio Tinto port facility at Cape Lamber in WA's Pilbara region," <u>https://www.abc.net.au/news/2022-04-21/rio-tinto-worker-dies-port-pilbara/101005660;</u> Salt Lake Tribune. 2017. "Kennecott worker dies from explosure to sulfur dioxide at smelter,"<u>https://www.sltrib.com/news/business/2017/10/11/kennecott-worker-dies-from-exposure-to-sulfur-dioxide-at-smelter/;</u> Newmont News. 2018. "Newmont Ghana provides update on Ahafo mill expansion accident,"

https://www.newmont.com/investors/news-release/news-details/2018/Newmont-Ghana-Provides-Update-on-Ahafo-Mill-Expansion-Accident/default.aspx; APNews. 2017. Steelworker dies at Arcelor Mittal's Indiana Harbor complex.

https://apnews.com/article/d1d88fe48d7f47e38a0fa7495bd490a1

³⁷⁵ Zungu, L. 2013. "Prevalence of post-traumatic stress disorder in the South African mining industry and outcomes of liability claims submitted to Rand Mutual Assurance Company," Occupational Health Southern Africa. Vol.19, No. 2.

https://uir.unisa.ac.za/bitstream/handle/10500/8996/Prevalence%20of%20PTSD%20in%20the%20South%20African%20mining%20industry.pdf?sequence=1&isAllowed=y

CONSULTATION QUESTION 3.2-10:

Background: There are different ways to classify incidents, for example there are those that did cause an injury or fatal and those that may have (but didn't) caused an injury or fatality. This chapter currently uses the term "near miss incident", which IRMA defines as: "An unexpected event that disrupts regular work activity and there was the potential for injury, ill health, fatality or damage to property or the environment, but no actual harm occurred. Also known as 'close calls', 'injury-free event', 'near accident'."

However, it has been suggested that this chapter should focus on High Potential Incidents (HPI) rather than Near Miss Incidents. The Global Reporting Initiative 2018 Standard uses both terms. GRI recommends that entities report on the number of "high-potential worker-related incidents," which are defined as "workrelated incident with a high probability of causing a high-consequence injury." (A high-consequence injury is a work-related injury that results in a fatality or in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within 6 months). GRI also recommends that entities report on the number of "close calls", which corresponds to IRMA's current definition of "near miss incident".

Question: Should IRMA include requirements for entities to investigate and report on high-potential incidents instead of near miss incidents? Or in addition to near miss incidents? Or not at all? Please provide a rationale for your opinion.]

3.2.7. Education and Training

NOTE FOR 3.2.7. NEW criterion heading.

The 2018 Mining Standard included training and retraining in a single requirement (3.2.4.1.d). By including it at a sub-requirement of a larger requirement it failed to capture the importance of ensuring that all workers understand potential hazards and how to protect themselves in the workplace. Training is now being covered in three separate requirements 3.2.7.3, 3.2.7.4 and 3.2.7.5) to elevate the importance of training in the creation and maintenance of safe and healthy workplaces.

This is aligned with other mining standards, such as Mining Association of Canada's Health and Safety Protocol, updated in 2020, which includes a larger focus on worker health and safety training than what was included in IRMA's 2018 Mining Standard.

- 3.2.7.1. Workers and contractors are informed of their rights to:³⁷⁷
 - a. Know and be informed of workplace hazards that may affect their safety or health;
 - b. Collectively select safety and health representatives;
 - c. Report accidents, dangerous occurrences and hazards to the entity and to the competent authority;
 - d. Request and obtain inspections and investigations by the entity and the competent authority where there is cause for concern on safety and health grounds; and
 - e. Obtain personal data and information held by the entity or the competent authority that is relevant to their safety or health.³⁷⁸

NOTE FOR 3.2.7.1: REVISED. This was 3.2.3.1 in the 2018 Mining Standard. We removed one subrequirements (i.e., the right to remove themselves from locations when there is a danger to safety or health), as this is specifically part of the training program, and so the auditors will determine there if the workers have not only been informed but also trained (which goes further than informing) on that rights/authority (see requirements 3.2.7.4.e.ii).

We have revised 3.2.7.1.e to make it clear that this refers to personal data for each individual worker, and added a footnote that personal data or information may be related to accidents, near-miss incidents,

³⁷⁷ Rights may be outlined host country laws, and/or outlined in a collective bargaining agreement, and/or established by the joint health and safety committee.

³⁷⁸ This includes personal information and data related to accidents, incidents, inspections, investigations and remedial actions, workplace monitoring, health surveillance and medical examinations.

inspections, investigations and remedial actions, workplace monitoring, health surveillance and medical examinations. This content was previously included in requirement 3.2.6.3 of the 2018 Mining Standard.

3.2.7.2. In all cases a <u>worker</u> attempting to exercise in good faith any of the rights referred to in 3.2.3.1 are protected from reprisals of any sort.

NOTE FOR 3.2.7.2: This was 3.2.3.2 in the 2018 Mining Standard.

3.2.7.3. A training program is in place on workplace health and safety as follows:

- a. All workers and contractors receive an initial general training before they are allowed to commence their work;³⁷⁹
- b. All workers and contractors receive specific task training under supervision for a required period before they are deemed qualified to undertake the work without immediate supervision;
- c. Periodically, retraining takes place;
- d. Worker competency for conducting work safety is verified using a variety of techniques such as training comprehension evaluation, observation of workers performing tasks correctly and safely, and incorporating results of workplace evaluations and incident tracking to assess effectiveness of training;
- e. Records of worker and contractor attendance and competency evaluations are maintained;
- f. Trainings are conducted by competent professionals;
- g. Trainings are in formats and languages that are comprehensible to all workers and contractors;³⁸⁰ and
- h. Trainings are free for workers and contractors.

NOTE FOR 3.2.7.3: REVISED. See note for 3.2.7, above. Requirement 3.2.7.3 contains elements from requirements in 2018 the Mining Standard (e.g., the requirement that instruction be provided in a comprehensible manner, now 3.2.7.3.g was previously covered in 3.2.4.1.a). But most of the content is new.

CONSULTATION QUESTION 3.2-11: What is an appropriate periodicity for retraining workers, and would the retraining programs cover the same information as the initial training?

3.2.7.4. (Critical Requirement)

The content of the training program includes:

- a. The range of specific health and safety <u>hazards</u> associated with specific job/tasks, as identified through the hazard identification and risk assessment process;
- b. How to perform routine and non-routine tasks in a manner that avoids placing themselves or others at risk;
- c. <u>Control</u> measures that have been developed to prevent and respond to high-risk hazards relevant to specific jobs/tasks;
- d. Procedures that have been developed that are specific to their work area/job/tasks;³⁸¹
- e. The proper use and fitting of personal protective equipment; and
- f. Instruction on:

³⁷⁹ Although 3.2.7.3.a is a time dependent requirement (i.e., training needs to occur before the workers begin working), our proposal is that the entity be scored on its performance in the previous three years only. So, for example, if there are workers who have been with an operation for six years who were not trained prior to commencing work, but a program has since been implemented to train all new workers before they begin work, then a site could fully meet this expectation (if the workers who were not trained at the appropriate time did eventually receive training upon commencement of the program).

³⁸⁰ Guidance will make it clear that by comprehensible we mean that all procedures, signs and instructions for using equipment and machinery, material safety data sheets, emergency response evacuation routes and instructions, first aid equipment, and control measures to address unsafe conditions must be in local language(s). Example of guidance training and retraining in appropriate language(s) for the workforce should include at least basic first aid and refer to proper use and fitting of PPE, safe use of equipment and vehicles, working in confined spaces, working at height (preventing falls, preventing falling objects), instructions on proper handling of hazardous materials, and emergency response instructions. All new employees should receive induction training covering any activities that require training before commencing work.

³⁸¹ E.g., some may need training on chemical safety, or fire safety, or working at heights, etc.

- i. How to identify workplace hazards;
- ii. Emergency response plans, including evacuation plans if relevant; (see 3.2.3.7)
- iii. The stop work authority procedure (see 3.2.3.8);
- iv. The reporting and investigations procedure (see 3.2.3.9); and
- v. How to access first aid and medical assistance.

NOTE FOR 3.2.7.4: NEW. See note for 3.2.7, above. In the 2018 Mining Standard, there was a critical requirement that entities inform workers, in a comprehensible manner, of the hazards associated with their work, the health risks involved and relevant preventive and protective measures. We are proposing that this training requirement replace that critical requirement, as it is the requirement that most closely matches the intention of the 2018 Mining Standard requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

3.2.7.5. The training program is reviewed and updated when there are changes to procedures, risk assessments or management plans, or if evaluations of the <u>operation's</u> occupation health and safety performance suggest areas that need attention.

NOTE FOR 3.2.7.5: NEW. See note for 3.2.7, above.

3.2.7.6. All visitors and other third parties accessing the operation's premises (e.g., suppliers, service providers):

- a. Receive an occupational health and safety briefing;
- b. Are provided with clean personal protective equipment, at no cost, that is relevant to the areas of the site that they will be entering; and
- c. Receive instruction on proper use and fitting of personal protective equipment and the <u>entity's</u> expectations for when and where the equipment must be used.

NOTE FOR 3.2.7.6: This was 3.2.3.6 in the 2018 Mining Standard. Previously, all requirements were in a single paragraph. They have been separated out here to more clearly delineate the expectations.

3.2.8. Health and Safety Performance Evaluation and Reporting

3.2.8.1. On an ongoing basis:

- a. The entity reviews inspections reports, industrial hygiene monitoring information, occurrences of stop work actions, hazards, accidents, near-miss incidents, injuries and fatalities; and
- b. If performance criteria or indicators related to control measures are not being met, the entity:
 - i. <u>Collaborates</u> with workers to carry out a root cause analysis, develop corrective actions and modify controls;
 - ii. Revises the management plan and/or relevant procedures and training materials, accordingly; and
 - iii. Includes the information in the annual occupational health and safety management review (see 3.2.8.2).

NOTE FOR 3.2.8.1: REVISED. Requirement 3.2.2.4 in the 2018 Mining Standard required that the company "systematically update a risk management plan." Requirement 3.2.8.1 replaces 3.2.2.4, and provides more context for what information should feed into a review process that would inform the revision of management plans <u>and</u> other aspects of the OHS management system (e.g., procedures listed above, training, procedures, etc.).

We replaced systematically with ongoing, because rather than a regular or systematic approach, the information coming in from various sources will occur at different times (e.g., incidents to not occur on a schedule) and management plans and procedures should be updated in a timely manner to reflect learning from those incidents.

Updates to management plans were also mentioned in 3.2.5.3 of the 2018 Mining Standard, which has been deleted due to overlap with this and other requirements.

3.2.8.2. Annually, the member of senior management accountable for the health and safety management system reviews the <u>operation's</u> health and safety record for the year (e.g., <u>unwanted events</u>, monitoring and inspection results, <u>worker</u> and <u>contractor grievances</u>, etc.) and if the entity's goals and performance targets are not being achieved, documents and implements changes to policies or procedures to improve performance.

NOTE FOR 3.2.8.2: NEW. This requirement fills a gap in the 2018 Mining Standard, where there was no requirement for annual review of OHS performance even though the very first requirement in the chapter outlined an expectation that they entity measure and improve its health and safety performance.

We are proposing, here, a concrete step for how entities can demonstrate that they are measuring health and safety performance and taking steps to improve it. A review process is included in the TSM Health and Safety Protocol, and includes comparing results against targets.³⁸²

3.2.8.3. On an annual basis, or more frequently, the <u>entity</u> publicly reports the following information, disaggregated by direct employees and <u>contractors</u>:

- a. Number of near-miss incidents;
- b. Number of accidents;
- c. Total number of injuries;
- d. Number of lost-time injuries; and
- e. Number of fatalities.

NOTE FOR 3.2.8.3: NEW. Based on input on the IRMA draft Mineral Processing Standard, companies routinely report incident statistics publicly, although which statistics are report varies by country to country. We are proposing that the entity report the same statistics that are being collected in relation to the performance targets in 3.2.1.1, and that the statistics be reported in relation to those targets.

CONSULTATION QUESTION 3.2-12: Are there any other health and safety statistics that may be relevant to publicly report?

3.2.9. Health and Safety Data Management

NOTE FOR 3.2.9: REVISED. This criterion was previously called 'Health and Safety Data Management and Access to Information'. We moved the access to information expectations for workers' health and safety representatives into 3.2.1.5, and moved those related to workers into 3.2.7.1.

3.2.9.1. The entity maintains the following records:

- a. Workplace monitoring (e.g., air quality, noise levels, temperatures, etc.) and <u>health surveillance</u> results (e.g., physical and biological assessments and testing);
- b. All data on <u>unwanted events</u> (i.e., injuries, diseases, fatalities, <u>accidents</u>, and <u>near-miss incidents</u>) collected by the company; and
- c. Reports on unwanted events submitted to competent authorities;

NOTE FOR 3.2.9.1: In the 2018 Mining Standard, all of these expectations were in a single paragraph in requirement 3.2.6.1. They have been separated out here to make the expectations clearer. Also, the original requirement also stated that workers' representatives have access to the data. This is now included in 3.2.1.5.e.v.

³⁸² Mining Association of Canada. Safety and Health Protocol. Criterion 5. p. 13. <u>https://mining.ca/wp-content/uploads/dlm_uploads/2021/08/Safety-and-Health-2020-EN.pdf</u>

3.2.9.2. A data management system is implemented that enables worker health data to be readily located and retrieved. The system:

- a. Is overseen by a responsible custodian;
- b. Securely stores data that are protected by medical confidentiality; and
- c. Retains data on workers for a minimum of 30 years.³⁸³

NOTE FOR 3.2.9.2: In the 2018 Mining Standard, all of these expectations were in a single paragraph in requirement 3.2.6.2. They have been separated out here to make the expectations clearer.

NOTES

Many of the requirements in this chapter are based on International Labour Organization Convention C176 - Safety and Health in Mines. A small number of requirements align with expectations in the Mining Association of Canada's Safety and Health Protocol (2021), and other minerals industry standards like the RBA ESG Due Diligence Standard for Mineral Supply Chains (2021) and Responsible Jewellery Council's Code of Practices (2019).

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Accident

An event that results in injury, ill health, fatality or damage to property or the environment.

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Emergency Scenario

A description of a possible unwanted event or emergency situation that could pose an immediate risk to health, safety, life, property, or environment.

Emergency Situation

Any situation arising from a sudden and unexpected event that poses an immediate risk to health, safety, life, property, or environment and requires immediate corrective action to restore normal operation.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

³⁸³ The intention is not that the data should be destroyed after 30 years. Rather, where possible it should be retained indefinitely as the data may be important for future medical research or legal purposes. If a company is sold, provisions should be made for successor custodianship, i.e., transfer of records to the successor company. If a company ceases to operate, it is good practice (and may be mandatory in some jurisdictions) to notify current employees of their right to access their records before the company goes out of business. (See: U.S. Dept. of Labor. 2020. "Access to Medical and Exposure Records," <u>https://www.osha.gov/Publications/osha3110.pdf</u>)

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Gender

Gender refers to the norms, responsibilities, and social structure enforcing pre-defined roles for women, men, girls, boys, and gender-diverse people. As a social construct, gender varies from society to society and can change over time. Regarding mineral development (i.e., exploration, mining, mineral processing), issues of gender equality often focus on women in particular because they face a heightened risk to adverse effects from mining-related activities, due in large part to patriarchal gender norms and differences in women's access to and control over resources relative to men.

Source: Adapted from World Health Organization, Health Topics: Gender, <u>https://www.who.int/health-topics/gender#tab=tab_1</u>

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health, or environmental hazard.

Hierarchy of Controls

A step-by-step approach to eliminating or reducing workplace hazards that ranks controls from the most effective level of protection to the least effective level of protection as follows: Elimination (physically remove the hazard), Substitution (replace the hazard with something safer), Engineering Controls (use equipment or other means to isolate people from the hazard), Administrative Controls (change the way people work via procedures), Personal Protective Equipment (protect the worker using personal protective equipment). Source: WorkSafe BC. https://www.worksafebc.com/en/health-safety/create-manage/managing-risk/controlling-risks

Leading Indicators

Measure precursors to harm (e.g., conditions, events or measures that precede an undesirable event, whether it is an accident, near-miss incident, or undesirable safety state), and are associated with proactive activities that identify hazards and assess, eliminate, minimize and control risk in order to achieve a desired outcome or avoid unwanted outcomes.

Source: Adapted from Grabowski. 2006. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=23b29d1d38d57b741e65a371b0854c43d1c40e29

Lagging Indicators

Measure outcomes and occurrences (e.g., the extent of harm that has occurred in the past). Reactive, tells you whether you have achieved a desired result (or when a desired safety result has failed) and provides historical information about health and safety performance.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Near-Miss Incident

An unexpected event that disrupts regular work activity and there was the potential for injury, ill health, fatality or damage to property or the environment, but no actual harm occurred. Also known as a 'close calls', 'injury-free event', 'near accident'.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Psychosocial Hazard

Hazards that can have an impact on the psychological health or mental or emotional wellbeing of a person.

Root Cause Analysis

Root cause analysis seeks to identify the primary cause of a problem that allowed a NC to occur. By identifying the root cause, a NC can be effectively addressed and recurrence can be avoided.

Source: Adapted from Aluminum Stewardship Initiative Glossary. <u>https://aluminium-stewardship.org/wp-content/uploads/2022/05/ASI-Glossary-V1-May2022.pdf</u>

Safety Data Sheets

A document giving information on the properties of hazardous chemicals and how they affect health and safety in the workplace.

Source: RJC. https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Unwanted Event

A situation or condition where there may be or is a loss of control of a hazard that leads to harm. Source: Adapted from the Government of Western Australia, Department of Mines, Industry Regulation and Safety. https://www.dmp.wa.gov.au/Safety/What-is-a-hazard-and-what-is-4721.aspx

Whistleblower

A person who raises concerns regarding the unlawful or unethical activity or behavior of a person or organization.

Workers' Health and Safety Representative

A worker chosen to facilitate communication with senior management on matters related to occupational health and safety, and to participate in and/or have access to information on health and safety risk assessments, monitoring, inspections and investigations. A representative is selected by other workers, or in unionized facilities may be selected by a recognized trade union.

EXISTING DEFINITIONS

Biological Exposure Indices (BEI)

The concentration of chemicals in the body that would correspond to inhalation exposure at a specific concentration in air.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Competent Authority

The government department or other authority having power to issue and enforce regulations, orders, or other instructions having the force of law in respect of the subject matter of the provision concerned.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Comprehensible

In forms and languages that are easily understood by workers and/or other stakeholders.

REVISED. This used to be 'Comprehensible Manner'. Changed to make applicable to more situations.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Control

An act, object (engineered), or system (combination of act and object) intended to prevent or mitigate an unwanted event.

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is selfdescribed (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Hazard (in relation to the workplace)

A potential source of harm or adverse health effect on something or someone under certain conditions at work.

Health Surveillance

Procedures and investigations to assess workers' (or others') health in order to detect and identify an abnormality. The results of surveillance should be used to protect and promote health of the individual, collective health at the workplace, or the health of exposed working population. Health assessment procedures may include, but are not limited to, medical examinations, biological monitoring, radiological examinations, questionnaires, or a review of health records.

Source: Adapted from ILO. 1997. Technical and Ethical Guidelines for Workers Health Surveillance. OSH No. 72.

REVISED. Added to Chapter 3.3, and revised to be applicable to the workplace and communities.

Inform

The provision of information to inform stakeholders of a proposal, activity, or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Mitigate

Action taken to reduce the likelihood of a certain adverse impact occurring.

Occupational Exposure Limit (OEL)

An upper limit on the acceptable concentration of a hazardous substance in workplace air for a particular material (e.g., gases, vapors and particles). It is typically set by competent national authorities and enforced by legislation to protect occupational safety and health.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Practicable

Practicable means giving equal weight to environmental, social, and economic benefits and costs. This is not a technical definition. It is the discussion between the affected parties on the balance between these interrelated costs and benefits that is important.

Suppliers

Providers of goods, services, or materials to a project/operation.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Workers' Representative

A worker chosen to facilitate communication with senior management on matters related to working conditions or other workers' concerns. A representative is selected by other workers, or in unionized facilities may be selected by a recognized trade union.

REVISED. Removed reference to occupational health and safety, as that is now covered by workers' health and safety representative, and revised second sentence.

ANNEXES AND TABLES

ANNEX 3.2-A – Potential Workplace Hazards

NOTE ON ANNEX 3.2-A: As mentioned in the <u>NOTE ON THIS CHAPTER</u>, the first audits suggested that more detail was needed to ensure that there would be consistent measurement of performance from site to site. While IRMA auditors are required to have competencies in the topics that they are auditing, the auditors are not and cannot be experts on all of the particular hazards that may be present at large scale mines or mineral processing operations.

This has prompted IRMA to create proposed <u>Annex 3.2-A</u>, which enumerates the various hazards that are common at mines and mineral processing operations, so that auditors are aware and can determine if sites have adequately considered and controlled the range of hazards that may be present. Without this additional guidance, there is the potential that some entities and auditors may overlook major hazards, which could lead to consequences for workers, and also risks to IRMA if mines that score well on this chapter were to have major occupational health and safety events. This is not meant to place the burden on auditors. The entity being audited bears the sole responsibility for reducing and managing health and safety hazards in the workplace.

As mentioned in the <u>NOTE FOR 3.2.2.1</u>, requirement 3.2.2.1.a.i now refers to 6 common categories of hazards experienced at industrial operations such as mines and mineral processing facilities (i.e., safety, chemical, physical, ergonomic, psychosocial, biological). We have created <u>Annex 3.2-A</u> to provide a summary of known hazards within the six categories, drawn from a number of mining and general occupational health and safety sources.

The idea is that during audits the auditors would expect to see that that consideration has been given to whether or not these hazards are applicable for a particular project/operation, and for those that are applicable, whether appropriate steps have been taken to control the hazards.

CONSULTATION QUESTION 3.2-1 (repeated from requirement 3.2.2.1): Are there major potential hazards that have been missed in <u>Annex 3.2-A</u> or any that you believe are not applicable to mining and/or mineral processing operations? Would you suggest a different way of organizing the information?

Hazard Type ³⁸⁴	Examples	Sources of information
Safety	Unsafe conditions in the workplace that can cause injury, illness and death.	[1], [2], [3], [4], [5], [6], [8], [9], [12]
	Safety hazards are associated with many types of work, including:	
	 Blasting (e.g., post-blast gases, falls of ground, damage to ground support, lack of barricades, lack of visibility) 	
	 Confined spaces (e.g., poor ventilation, exposure to toxic gases and dust, unguarded machinery, live wires, heat stress, excessive noise, potential for inrush or being crushed when working underground, or in or around tanks, vessels, pits, tunnels, pipelines, equipment house) 	
	 Driving (e.g., distractions, seasonal factors, ergonomic considerations, poor technique, blind spots) 	
	Electrical (e.g., frayed cords, missing ground pins, improper wiring)	
	• Explosives/explosions (e.g., improper storage, inadvertent ignition, lack of inventory management/quality degradation)	
	 Fatigue (e.g., from sleep deprivation, shift work, overtime, seasonal production pushes) 	
	• Fires (e.g., spontaneous combustion, improper storage of flammable, combustible or explosive materials)	
	 Machinery (e.g., lack of or improper lockout or guarding of machinery and moving machinery parts; guards removed or moving parts that a worker can accidentally touch; jammed materials); lack of worker training and experience) 	
	 Materials Handling (e.g., slings, cranes, hoists, forklifts – all come with their own safety hazards, but issues include poor maintenance of equipment, poor technique, improper signaling, blind spots, improper loads, improperly-secured loads, volume of traffic or obstacles) 	
	• Mobile equipment (e.g., lack of maintenance, lack of tire safety, brake failures, being struck or crushed due to lack of visibility or poor traffic management, falling off equipment, driving into an unguarded open hole)	
	 Non-routine tasks (e.g., stuck conveyance, crusher bearing changes, kinked hoist rope, rehabilitation after sizable ground fall, retrieving undetonated explosives) 	
	• Pressurized vessels (e.g., poisonings, suffocations, fires, and explosions from leaks or ruptures)	
	 Slips, trips and falls (e.g., from poor housekeeping such as spills on floors, tripping hazards such as blocked aisles or cords across the floor, uneven ground, poor footwear, inappropriate pace of walking; falling into operating machinery, water or other liquid, onto a hazardous substance or object, through an opening – see also working from heights, below) 	
	 Tools (e.g., poor maintenance, poor technique, lack of or inappropriate personal protective equipment while using, wrong tool for the task) 	
	• Working at heights (e.g., falling from ladders, platforms, scaffolds, raised work areas, cliff edges)	
Chemical	Unsafe conditions that may occur when a worker is exposed to a chemical preparation in the workplace in any form (solid, liquid or gas).	[7], [8]
	Chemical hazards include:	
	• Exposure to toxic processing chemicals, paints, adhesives, acid mists, organic vapors and solvents, toxic gases, soluble oil (e.g., due to lack of training in handling,	

³⁸⁴ U.S. Occupational Health and Safety Administration. <u>https://www.osha.gov/sites/default/files/2018-11/fy10_sh-20839-10_circle_chart.pdf</u>

Hazard Type ³⁸⁴	Examples	Sources of information
	transport, lack of or improper use/fitting of personal protective equipment, lack of proper labeling, signage, usage instructions)	
Physical	Factors within the environment that threaten physical safety and can harm the body.	[2], [3], [4], [7], [8], [9], [10], [11], [13]
	Physical hazards include:	
	• Air quality (e.g., in adequate ventilation, excessive dust, diesel exhaust, dust, welding fumes and other metallic particulates, asbestos, synthetic mineral fibers, toxic, metals)	
	 Ground instability (e.g., fall of rock/ground, rock outbursts, too steep excavations, unstable slopes, excessively high bench heights, adverse geology, elevated water table) 	
	• Ground subsidence (e.g., due to removal of solid or fluids from underground)	
	 Inrush/inundation (e.g., failures of levies or dam structures, inrush from mine workings, surface water bodies, seams, faults, boreholes) 	
	 Noise, vibration or blast concussion (e.g., constant loud noise, too many blasts, working in too close of proximity to blast areas) 	
	• Radiation: including ionizing, non-ionizing (EMF's, microwaves, radiowaves, etc.	
	Temperature extremes – hot and cold	
	Unsecured mine openings	
	 Water (e.g., excessive accumulation in open pits or floors, runoff of water or water- saturated materials, hazards around ponds, drowning, musculoskeletal disorder injuries from hidden hazards in accumulated water) 	
Ergonomic	Occur when the type of work, body positions and working conditions put strain on the body. Short- term exposure may result in "sore muscles" the next day or in the days following exposure, but long-term exposure can result in serious long-term illnesses and musculoskeletal disorders.	[2], [7], [13]
	Ergonomic hazards include:	
	Manual lifting (frequent lifting, lifting heavy objects)	
	Poor posture	
	Improperly configured workstations (e.g., presence of obstacles, unstable surfaces)	
	Repeating the same movements over and over	
	Awkward movements, especially if they are repetitive	
	Being in the same position for long periods of time	
	Having to use too much force, especially frequently	
Davah an 11		
Psychosocial	Aspects of the work environment and the way that work is organized that are associated with a negative impact on mental health and/or physical injury or illness	[1], [4], [12]
	Psychosocial hazards include:	
	 Working alone, working long hours, physically demanding work, work in remote areas, performing hazardous tasks 	
	• Poor physical environment (e.g., unpleasant conditions cause by noise, odors, temperatures, working with poorly maintained or uncomfortable personal protective equipment)	
	 Stress (e.g., caused by harassment, bullying, violence, inadequate training, lack of support to do work safely, or stress external to work, etc.) 	

Hazard Type ³⁸⁴	Examples	Sources of information
	Lifestyle (e.g., drug or alcohol use/abuse)	
	• Trauma (e.g., from witnessing fatalities or being involved in work-related accidents)	
Biological	Bacteria, viruses, fungi, other microorganisms, insects, plants and animals and their associated toxins. They have the ability to adversely affect human health in a variety of ways, ranging from relatively mild, allergic reactions to serious medical conditions—even death. Some organisms, including various types of mold and Legionella bacteria, are found readily in the natural and built environment.	[1], [2]
	Biological hazards include:	
	Infectious diseases	
	Insect-borne or rodent-borne diseases or bites	
	Microbiological agents (bacteria, mold)	
	Foodborne illnesses	

List of Sources

[1] Canadian Centre for Occupational Health and Safety. "Hazards" (includes chemical, ergonomic, health, physical, psychosocial, safety, with examples and fact sheets on each hazard type). <u>https://www.ccohs.ca/topics/hazards/</u>

[2] U.S. Occupational Health and Safety Administration. Safety and Health Topics. <u>https://www.osha.gov/topics/text-index</u>

Biological agents: https://www.osha.gov/biological-agents

Confined Spaces: <u>https://www.osha.gov/confined-spaces</u>

Ergonomics: https://www.osha.gov/ergonomics

Pressure vessels: <u>https://www.osha.gov/pressure-vessels</u>

Toxic metals: <u>https://www.osha.gov/toxic-metals</u>

[3] NIOSH Mine and Mine Works Charts. "Number and percentage of nonfatal lost-time injuries by accident class, 2021. https://wwwn.cdc.gov/niosh-mining/MMWC/Injuries/Count

[4] Workplace Safety North web site. "Mining surface – Top Risks."

Risk categories overview:

https://www.workplacesafetynorth.ca/industries/mininghttps://www.workplacesafetynorth.ca/sites/default/fi les/uploads/Mining-surface-risk-categories_FullListRanked_Overview-2016-MLTSD.pdf

Risk categories detailed: <u>https://www.workplacesafetynorth.ca/sites/default/files/uploads/Mining-surface-risk-categories_FullListRanked_Detailed-2016-MLTSD.pdf</u>

[5] International Council on Mining and Metals (ICMM). 2015. Health and Safety Critical Control Management. "Table 2. Typical Mining- and Metals-Related Material Unwanted Events Based on Historical Analysis." p. 11. <u>https://www.icmm.com/website/publications/pdfs/health-and-safety/2015/guidance_ccm-good-practice.pdf?cb=39952</u>

[6] ICMM. 2022. Safety Performance: Benchmarking Progress of ICMM Company Members in 2021. <u>https://www.icmm.com/en-gb/research/health-safety/benchmarking-2021-safety-data</u>

[7] U.S. National Mining Association. CORESafety Handbook. pp. 23, 61. <u>https://nma.org/wp-content/uploads/2016/09/CORESafety-Handbook.pdf</u>

[8] New Zealand Government. Worksafe. 2013. Guidance for a Hazard Management System for Mines. https://worksafe.govt.nz/dmsdocument/188-guidance-for-a-hazard-management-system-for-mines

[9] Government of Ontario web site: Hazards in the Mining Sector:

Ground control, water management, remote control equipment, explosives, mobile equipment, occupational illness and diseases: https://www.ontario.ca/page/hazards-mining-sector#section-2

Non-routine hazardous tasks in mines: https://www.ontario.ca/page/non-routine-hazardous-tasks-mines

Post-Blast examinations: https://www.ontario.ca/page/post-blast-examinations-mines

[10] Best Practices for Assessing Ground Control Hazards in the Workplace. <u>https://www.workplacesafetynorth.ca/sites/default/files/resources/WSN-Best-Practices-for-Assessing-Ground-Control-Hazards-in-the-Workplace.pdf</u>

[11] Testing undiluted exhaust in underground mines. <u>https://www.ontario.ca/page/testing-undiluted-exhaust-underground-mines</u>

[12] SafeWork Australia. Psychosocial hazards. <u>https://www.safeworkaustralia.gov.au/safety-topic/managing-health-and-safety/mental-health/psychosocial-hazards/traumatic-events-or-materials</u>

[13] Institution of Occupational Safety and Health (IOSH). Website.

Chemical hazards: <u>https://iosh.com/health-and-safety-professionals/improve-your-knowledge/occupational-health-toolkit/chemical-hazards/</u>

Musculoskeletal disorders: <u>https://iosh.com/health-and-safety-professionals/improve-your-knowledge/occupational-health-toolkit/musculoskeletal-disorders/</u>

Noise: https://iosh.com/health-and-safety-professionals/improve-your-knowledge/occupational-health-toolkit/noise/

Vibration: <u>https://iosh.com/health-and-safety-professionals/improve-your-knowledge/occupational-health-toolkit/vibration/</u>

Psychosocial hazards: <u>https://iosh.com/health-and-safety-professionals/improve-your-knowledge/occupational-health-toolkit/psychosocial-hazards-including-stress/</u>

Chapter 3.3 Community Health and Safety

NOTES ON THIS CHAPTER: There are a number of changes to this chapter to make its structure more consistent with other IRMA chapters.

Proposed additions and changes:

- Deleted a criterion (3.3.5) on 'Stakeholder Engagement,' and moved the requirements into other criteria.
- Added a criterion on 'Monitoring and Evaluation' (3.3.4).
- Adding baseline data requirement to enable assessment of risks and monitoring of effectiveness of mitigation measures (3.3.2.1)
- Adding that risk assessment are periodically updated (3.3.2.4)
- Added that health surveillance occurs if exposure to airborne emissions from an operation may pose a risk to people in the operation's area of influence (3.3.4.3)

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Responsibly operated mines and mineral processing facilities can play an important part in improving public health, but poor management of impacts can expose local populations to additional health and safety risks.

Both the identification of potential mining-related health and safety impacts, as well as the mitigation of those impacts will be most successfully achieved when undertaken in partnership with local stakeholders such as local community representatives, government officials, health service providers, public health officials, and community development workers, as well as mine workers who live in communities.³⁸⁵

OBJECTIVES/INTENT OF THIS CHAPTER

TERMS USED IN THIS CHAPTER

Accident NEW
Affected Community
Area of Influence
Associated Facilities
Baseline
Collaborate
Competent Professional
Consultation
Contractor
Credible Method NEW
Culturally Appropriate NEW
Ecosystem Services
Entity NEW
Exploration NEW
Gender NEW
Grievance
Hazardous Materials NEW
Hazardous Wastes NEW
Health Surveillance
Mineral
Processing NEW
Mining NEW
Mining-Related
Activities
Mitigation
Operation NEW
Project NEW
Post-Closure
Scoping NEW
Site NEW
Stakeholder
Unwanted Event NEW
Vulnerable Group
Worker
Workers' Organization

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

To protect and improve the health and safety of individuals, families, and communities affected throughout the mineral development life cycle.

NOTE ON OBJECTIVES: REVISED. Now refers to mineral development life cycle.

SCOPE OF APPLICATION

RELEVANCE: This chapter is assumed applicable to all <u>exploration</u>, <u>mining</u> and <u>mineral processing projects</u> and <u>operations</u>, and if an <u>entity</u> believes it is not relevant then it needs to provide evidence to that effect to IRMA auditors. This may be done, for example, through maps or other documentation demonstrating that there are no

³⁸⁵ ICMM. Good Practice Guidance on Health Impact Assessment. p. 32. <u>https://www.icmm.com/en-gb/guidance/health-safety/2010/guidance-hia</u>

communities that may be affected by a proposed project and/or no communities being affected by ongoing operations or proposed major modifications to operations.

The requirement related to HIV/AIDS, tuberculosis, malaria and infectious diseases (3.3.3.4) is only relevant at operations where the community health and safety risk and impact assessment has identified that a disease poses a significant risk to community health.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The risks to community health and safety posed by the project/operation are identified (3.3.1.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Community Health and Safety Requirements

3.3.1. Scoping of Risks to Community Health and Safety

3.3.1.1. (Critical Requirement)

The entity identifies all of the potential sources of risks to community health and safety from the entity's miningrelated activities. Potential sources or risks include but are not limited to:³⁸⁶

- a. Entity-operated equipment or vehicles on public roads;
- b. Stationary, mobile, or fugitive sources of airborne emissions from operations (e.g., dust, fumes, vapors);
- c. Stationary or mobile sources of noise or vibration;
- d. Transport of hazardous materials and hazardous wastes;
- e. Hazardous materials and hazardous wastes that may be released to water and/or land as a result of mining-related activities;³⁸⁷
- f. Water-borne, water-based, water-related, and vector-borne diseases, and communicable and sexually transmitted diseases (e.g., HIV/AIDs, tuberculosis, malaria, Ebola virus disease or others) that could occur as a result of the project/operation;
- g. Project/operation-induced in-migration of workers, changes in community demographics and changes in community dynamics;

³⁸⁶ Some or all of these risks and impacts may have been scoped as part of the ESIA (IRMA Chapter 2.1), or other IRMA chapters. If so, there is no need to re-scope the issues in a standalone Community Health and Safety Scoping exercise.

³⁸⁷ See IRMA Chapter 4.1 for more requirements related to hazardous materials.

- h. Project/operation-induced changes in availability or capacity of community services (e.g., medical and public-health, emergency response, police), and infrastructure (e.g., potable water and sewage, energy, communications, transportation).
- i. Project/operation-related changes in access to land, water or ecosystem services;³⁸⁸ and
- j. Use of security personnel at the site or associated facilities.

NOTE FOR 3.3.1.1: REVISED. Most of this content was included in requirement 3.3.1.1 in the 2018 Mining Standard). Requirement 3.3.1.1 was a critical requirement in the 2018 Mining Standard, and it remains critical in this proposed version of the Standard (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

3.3.1.2. <u>Competent professionals</u> carry out a documented scoping (or equivalent) similar process, including <u>consultations</u> with relevant <u>stakeholders</u>,³⁸⁹ to identify risks to/impacts on community health and safety from the sources identified in 3.3.1.1, including:

- a. Throughout the project/operation life cycle (from construction through post-closure);
- b. Under normal operating conditions; and
- c. From potential operational accidents and unwanted event.³⁹⁰

NOTE FOR 3.3.1.2: REVISED. This includes content from requirement 3.3.1.1 and 3.3.1.2 from the 2018 Mining Standard. Changes include adding that the scoping be done by competent professionals to align with similar expectations throughout the IRMA Standard.

Also, added stakeholder engagement here. Previously, all stakeholder engagement requirements were in a single requirement (3.3.5.1 in the 2018 Mining Standard). As with other chapters, we have moved them into each relevant section to make it clear when stakeholder engagement needs to occur.

3.3.2. Risk and Impact Assessment

3.3.2.1. If <u>baseline</u> data on social-economic conditions were not previously collected at an appropriate level of detail to allow the assessment of the risks to community health and safety, then additional data are collected to estimate, to the extent possible, the baseline conditions prior to development of the <u>operation</u>.

NOTE FOR 3.3.2.1: NEW. This has been added to be more consistent with other IRMA chapters. This information will also be needed to develop indicators to measure the effectiveness of mitigation measures (as per 3.3.3.2.c).

³⁸⁸ Potential impacts on ecosystem services should have been identified as part of the scoping exercise for IRMA Chapter 4.6. If any of the identified potential impacts create risks to community health or safety, they should be further assessed in 3.3.2.1 to determine the significance of those risks.

Mining-related impacts on ecosystems services that could pose a risk to communities include, for example, land use changes or the loss of natural buffer areas such as wetlands, mangroves, and upland forests. These systems often mitigate the effects of natural hazards such as flooding, landslides, and fire, and if lost or damaged may result in increased vulnerability and community safety-related risks and impacts. Also, the diminution or degradation of freshwater may result in health-related risks and impacts. (IFC. 2012. Performance Standard 2. Para. 8).

³⁸⁹ Relevant stakeholders would include representatives from affected communities or affected individuals within the project/operation's area of influence (including women, men, children or their representatives, representatives/advocates for vulnerable groups such as ethnic minorities, the elderly, health-compromised individuals), public health or medical providers from affected communities, government health agencies, and workers who live in affected communities. A review of government statistics on various diseases may help to reveal other relevant populations.

³⁹⁰ For example, failure of structural elements such as tailings dams, impoundments, waste rock dumps (see also proposed Chapter 4.X).

It is possible that as part of a mine's waste management approach a scoping assessment may have been undertaken to identify risks to community safety from tailings dams, impoundments, waste rock dumps and other waste facilities. If such a scoping exercise was done, and risks to community health or safety were identified, then these risks should have been (or should be) further assessed to determine the significance of the risks to community health and safety. This may have been (or may be) done as part of the Community Health and Safety Risk and Impact Assessment in section 3.3.2 or another assessment such as an ESIA (see IRMA Chapter 2.1).

3.3.2.2. A credible methodology is used to assess and document:³⁹¹

- a. The nature, magnitude, extent and duration of the risks identified during scoping; and
- Evaluate the significance of each risk (based on the probability and severity of consequences), differentiated by different genders, ages, ethnicities, and any potentially <u>vulnerable groups</u> or susceptible individuals in the project/operation's area of influence.³⁹²

NOTE FOR 3.3.2.2: REVISED. This combines requirements from 3.3.1.3 and 3.3.2.1 in the 2018 Mining Standard.

3.3.2.3. The assessment is carried out by <u>competent professionals</u> and includes <u>consultations</u> with relevant <u>stakeholders</u> in the project/operation's <u>area of influence</u> to understand:³⁹³

- a. The risks that are of greatest concern or significance to stakeholders; and
- b. Potential differences in impacts based on gender, age, ethnicity, or any other factor of factor of vulnerability or susceptibility in the project's/operation's area of influence.³⁹⁴

NOTE FOR 3.3.2.3: REVISED. Previously, all stakeholder engagement requirements were in a single requirement (3.3.5.1 in the 2018 Mining Standard). As with other chapters, we have moved them into each relevant section to make it clear when stakeholder engagement needs to occur.

We are proposing additional language to clarify that the assessment of what is a significant risk needs to take into consideration stakeholder input on the risks of most concern to them, as well as those that may cause differential impacts on certain members/groups.

Also added that the assessment be conducted by competent professionals.

3.3.2.4. Assessments are updated throughout the project's/operation's life cycle when there are proposed changes to mining-related activities or changes in the operational, environmental, or social context that may create new risks to community health and/or safety or change the nature or degree of an existing impact.

NOTE FOR 3.3.2.4: NEW. This has been added to reflect that assessments are not a one-time thing.

This requirement is aligned with other IRMA chapters, which require an updating of risk assessments when there are changes in the operation or operational, environmental or social context. For example, a new mineral processing technique may result in different or increased emissions of contaminants that could have impacts on health, or issues such as climate change may affect the types of ecosystem services affected by the operation, or increased in-migration over time may warrant a re-evaluation of measures to best mitigation the impacts to communities, etc.

³⁹¹ Some or all of these risks and impacts may have been assessed as part of the ESIA (IRMA Chapter 2.1), risks in 3.3.1.1.d may have been assessed as part of a mine waste risk assessment (IRMA Chapter 4.1), and risks to human health and safety related to impacts on priority ecosystem services in 3.3.1.1.e may have been assessed as part of a scoping exercise as per Chapter 4.6. If the full range of risks to community health and safety were assessed elsewhere, there is no need to duplicate efforts.

³⁹² Which stakeholders must be included and what may constitute a 'vulnerable group' requiring additional focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, relevant stakeholders would include representatives from affected communities or affected individuals within the project/operation's area of influence (including women, men, children or their representatives, representatives/advocates for vulnerable groups such as ethnic minorities, the elderly, health-compromised individuals), public health or medical providers from affected communities, government health agencies, and workers who live in affected communities. A review of government statistics on various diseases may help to reveal other relevant populations.

³⁹³ Relevant stakeholders would include representatives from affected communities or affected individuals within the project/operation's area of influence (including women, men, children or their representatives, representatives/advocates for vulnerable groups such as ethnic minorities, the elderly, health-compromised individuals), public health or medical providers from affected communities, government health agencies, and workers who live in affected communities. A review of government statistics on various diseases may help to reveal other relevant populations.

³⁹⁴ See footnote 417.

3.3.3. Management of Community Health and Safety Risks and Impacts

NOTE FOR 3.3.3: This was called 'Risk and Impact Management and Mitigation' in the 2018 Mining Standard.

3.3.3.1. The entity <u>collaborates</u> with relevant <u>stakeholders</u> to develop <u>culturally appropriate</u> strategies to <u>mitigate</u> risks that are relevant to them, prioritizing the avoidance of risks and impacts over minimization and compensation.³⁹⁵

NOTE FOR 3.3.3.1: This combines 3.3.3.2 and 3.3.5.1.c from the 2018 Mining Standard.

We can add guidance that in this case, collaboration with "relevant" stakeholders does not mean that all stakeholders need to be engaged when discussing mitigation of a particular risk, just those who are most likely to be affected and therefore have the greatest interest in helping to develop workable solutions. In some cases, this may require engagement with representatives or advocates for various impacted groups, rather than directly affected individuals (e.g., children).

3.3.3.2. A community health and safety risk management plan (or equivalent):

- a. Is developed by competent professionals;
- b. Outlines specific actions to avoid, minimize, restore, and as a last resort compensate for past and/or potential impacts on community health and safety;
- c. Includes appropriate performance criteria or indicators³⁹⁶ to enable evaluation of the effectiveness of mitigation measures over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;³⁹⁷
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 3.3.2: REVISED. We have updated the requirement 3.3.3.1 from the 2018 Mining Standard to be more consistent with management plan expectations in other IRMA chapters.

3.3.3.3. The <u>entity collaborates</u> with relevant <u>stakeholders</u> to develop appropriate performance criteria or indicators (as per 3.3.3.2.c).

NOTE FOR 3.3.3: REVISED. This was 3.1.5.1.e in the 2018 Mining Standard, but the wording has changed. That requirement said that the entity needed to collaborate with stakeholders on the design and implementation of community health and safety monitoring programs. Regarding 'design,' this proposed requirement clarifies that collaboration needs to occur on the design of performance criteria, as that is where stakeholder input seems most important (i.e., that communities have a say in what is being measured, and how to tell if mitigation measures are being effective or not).

3.3.3.4. If the assessment or other information indicates a significant risk of community exposure to an infectious disease such as SARS-CoV-2 (Covid-19), HIV/AIDS, tuberculosis, malaria, or other due to transmission between the operation's workers or contractors and the community, the entity develops and implements

³⁹⁵ Relevant stakeholders would include representatives from affected communities or affected individuals within the project/operation's area of influence (including women, men, children or their representatives, representatives/advocates for vulnerable groups such as ethnic minorities, the elderly, health-compromised individuals), public health or medical providers from affected communities, government health agencies, and workers who live in affected communities. A review of government statistics on various diseases may help to reveal other relevant populations.

³⁹⁶ Appropriate performance criteria and indicators must include those required by host country law (e.g., regulator maximum concentrations of certain chemicals in air or water), and, as relevant, those associated with external standard (e.g., IRMA water quality criteria), those agreed with stakeholders, or indicators that are tied to an identified baseline (e.g., levels of lead in hair samples before a mineral processing facility begins operating).

³⁹⁷ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

business practices and targeted initiatives and incorporates them into the community health and safety management plan. These business practices and targeted initiatives include, but are not limited to:

- The creation and funding of initiatives, in partnership with public health agencies, <u>workers' organizations</u> and other relevant <u>stakeholders</u>, to educate <u>affected communities</u> and <u>vulnerable groups³⁹⁸</u> on the infectious disease and modes of prevention, and to support efforts to achieve universal access to testing, vaccinations and treatment for affected community members;
- b. Sharing best practices on the prevention and treatment of these diseases with civil society organizations and policymakers in affected communities; and
- c. Making information publicly available on the entity's infectious disease efforts.

NOTE FOR 3.3.4: REVISED. This requirement was previously in criterion 3.3.4 called 'Specific Provisions Related to HIV/AIDS, Tuberculosis, Malaria and Emerging Infectious Diseases' in the 2018 Mining Standard. We have deleted that requirement and added it into this management section.

The requirement, itself, has changed significantly. In particular, references to actions related to workers have been moved to Chapter 3.2 – 'Occupational Health and Safety,' and this chapter focuses more on the public health aspects of infectious disease management (see Chapter 3.2, requirement 3.2.3.5).

3.3.4. Monitoring and Evaluation

NOTE FOR 3.3.4: NEW criterion. In the 2018 Mining Standard, monitoring was integrated into a managementrelated requirement. Monitoring has been separated to be more consistent with other IRMA chapters, and to make it clear that there is a distinction between management plans and the monitoring of impacts. Also, a requirement to evaluate the effectiveness of management actions has been added.

3.3.4.1. A community health and safety monitoring program:

- a. Is developed and implemented to determine:
 - i. The change in magnitude of impacts over time; and
 - ii. The effectiveness of mitigation measures based on performance against criteria or indicators;
- b. Is designed and carried out by competent professionals; and
- c. Uses credible methods.

NOTE FOR 3.3.4.1: REVISED. This replaces the requirement 3.3.3.1. from the 2018 Mining Standard. We updated this requirement to be more consistent with language in other chapters. and to make it clear that monitoring involves gathering data on impacts, and also comparing the data collected to performance criteria, to determine if impacts are being adequately managed/mitigated.

3.3.4.2. The entity offers to facilitate community participation in the monitoring of community health and safety criteria or indicators.³⁹⁹

NOTE FOR 3.3.4.2: REVISED. The 2018 Mining Standard requires that the entity collaborate with stakeholders on the design and implementation of community health and safety monitoring programs (3.3.5.1.e). We proposed that 3.3.3.3 address the design element, and are proposing that 3.3.4.2 address the implementation element. The requirement did not previously specify that stakeholders be allowed to

³⁹⁸ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement in particular, special attention should be paid to demographics with existing vulnerabilities to health-related risks, considering those with pre-existing illnesses, those with lack of access to health care, those located closer to disease vectors, etc.

³⁹⁹ Examples of facilitation of participation in monitoring include: provision of capacity building or training on monitoring methods, community access to the mine site to participate in company monitoring activities or community-based independent monitoring activities; funding to enable community participation, etc. Or, if requested by relevant stakeholders (e.g., in particular those who may be directly affected), companies may also facilitate independent monitoring by providing funding to stakeholders to hire experts, allowing independent experts to have access to sites for monitoring social or environmental indicators, and by allowing access to relevant company records, reports or documentation.

participate in the monitoring, but that is what was meant by, "collaborate ... [on the] implementation of the monitoring program."

We are not requiring that there be community participation because there may not be any interest on the part of community members, but we are expecting that the entity let community stakeholders know that this is an opportunity available to them.

3.3.4.3. If significant risks or impacts to health from exposure to airborne emissions in the project's/operation's area of influence are identified, the entity collaborates with affected communities to develop and implement a program to monitor exposure levels and perform health surveillance of affected people as follows:

- a. Exposure monitoring and health surveillance are designed and conducted by a community health specialist or other competent professional selected in collaboration with community representatives;
- b. Health surveillance is carried out in a manner that protects the right to confidentiality of medical information, and is not used in a manner prejudicial to interests of the community member(s);
- c. Samples collected for monitoring and health surveillance purposes are analyzed in an ISO/IEC 17025 certified or nationally accredited laboratory, if available in the host country;
- d. Sample results are compared against national or international standards; and
- e. If a standard is exceeded, the affected community member(s) are informed immediately, and <u>mitigation</u> measures are reviewed and revised in a timely manner to ensure that future exposure levels remain within safe limits.

NOTE FOR 3.3.4.3: NEW. This is being proposed because, as with occupational (workplace) exposures to chemicals or emissions (see Chapter 3.2, requirement 3.2.5.2), there is the potential that community members may be exposed to elevated levels of contaminants from industrial activities such as mining (e.g., contaminant-bearing dusts from roads, waste facilities) and mineral processing (e.g., smelters, refineries).

We are proposing that if the assessment demonstrates the potential that airborne emissions may pose a risk to the health of community members (even if just a segment of the population such as those who are vulnerable due to age or pre-existing health conditions, or proximity to facilities), that communities are an active partner in developing a program of health surveillance and exposure monitoring. Data from health surveillance and monitoring would then be used to inform changes to management measures..

3.3.4.4. Annually or more frequently, the entity:

- a. Reviews monitoring results and any grievances related to community health and safety, and evaluates the effectiveness of its prevention, mitigation, and remediation strategies;
- b. Determines if there have been changes to the <u>operation</u> (e.g., expansions, changes in practices, etc.) or operating environment that have created new risks that need to be mitigated, or exacerbated existing ones; and
- c. Updates the management plan, if necessary, to improve management of community health and safety. 400

NOTE FOR 3.3.4.4: REVISED. This was 3.3.3.3 in the 2018 Mining Standard. We have updated this requirement to be more consistent with language in other chapters. Previously we said updates occur as the result of risk and impact monitoring. But there may be other factors that feed into updates of plans, such as changes to the operation that create new risks that need to be mitigated.

3.3.5. Reporting

3.3.5.1. The entity makes information on community health and safety risks and impacts and monitoring results publicly available.

⁴⁰⁰ Updated "if necessary" should be interpreted as meaning that plans are updated whenever monitoring or other information indicates that impacts on community health and safety have occurred, or that changes to the operation (e.g., expansions, changes in operations and practices, etc.) have created new risks that require mitigation measures. In either case, the expectation is that new mitigation measures would be added to the management plan.

NOTE FOR 3.3.5.1: This was 3.3.6.1 in the 2018 Mining Standard.

NOTES

Infectious diseases such as HIV/AIDS, tuberculosis, malaria or other emerging infectious diseases (e.g., Ebola virus disease, sexually transmitted diseases, etc.) may present risks for some projects/operations and communities. If significant risks related to infectious or communicable diseases are identified during the community health and safety risk and impact assessment process, then companies are expected to take steps to mitigate and monitor their impacts. This chapter highlights HIV/AIDS, TB and malaria in particular, because the mining industry has significant exposure to those diseases in some parts of the world, and best practices have been established by mining companies to minimize their impact in relation to those diseases.⁴⁰¹ Recent experience with Ebola virus in Liberia has demonstrated that mining operations can also play a key role in combatting other infectious diseases that threaten their workers and communities.⁴⁰²

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Accident

An event that results in injury, ill health, fatality or damage to property or the environment.

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Gender

Gender refers to the norms, responsibilities, and social structure enforcing pre-defined roles for women, men, girls, boys, and gender-diverse people. As a social construct, gender varies from society to society and can

⁴⁰¹ International Council on Mining and Metals. 2008. Good Practice Guidance on HIV/AIDS, Tuberculosis and Malaria. <u>https://www.icmm.com/en-gb/guidance/health-safety/2008/guidance-hiv-aids-tb-and-malaria</u>

⁴⁰² US Geological Survey. 2015. Fact Sheet: The Ebola Virus Disease Outbreak and the Mineral Sectors of Guinea, Liberia, and Sierra Leone. https://pubs.usgs.gov/fs/2015/3033/pdf/fs2015-3033.pdf

change over time. Regarding mineral development (i.e., exploration, mining, mineral processing), issues of gender equality often focus on women in particular because they face a heightened risk to adverse effects from mining-related activities, due in large part to patriarchal gender norms and differences in women's access to and control over resources relative to men.

Source: Adapted from World Health Organization, Health Topics: Gender, https://www.who.int/health-topics/gender#tab=tab_1

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health, or environmental hazard.

Hazardous Wastes

Wastes with properties or characteristics that make them a physical, health, or environmental hazard.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Unwanted Event

A situation or condition where there may be or is a loss of control of a hazard that leads to harm.

Source: Adapted from the Government of Western Australia, Department of Mines, Industry Regulation and Safety. https://www.dmp.wa.gov.au/Safety/What-is-a-hazard-and-what-is-4721.aspx

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.

REVISED. Streamlined - removed examples.

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities, construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Ecosystem Services

The benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that

provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Health Surveillance

Procedures and investigations to assess workers' (or others') health in order to detect and identify an abnormality. The results of surveillance should be used to protect and promote health of the individual, collective health at the workplace, or the health of exposed working population. Health assessment procedures may include, but are not limited to, medical examinations, biological monitoring, radiological examinations, questionnaires, or a review of health records.

Source: Adapted from ILO. 1997. Technical and Ethical Guidelines for Workers Health Surveillance. OSH No. 72.

REVISED. Added to Chapter 3.3, and revised to be applicable to the workplace and communities.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes ties (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-ties (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Workers' Organizations

Typically called trade unions or labor unions, these organizations are voluntary associations of workers organized on a continuing basis for the purpose of maintaining and improving their terms of employment and workplace conditions.

Chapter 3.4 Conflict-Affected and High-Risk Area Due Diligence

NOTES ON THIS CHAPTER: We have changed the chapter title to Conflict-Affected and High-Risk Area Due Diligence.

IRMA has been encouraged by stakeholders from different sectors to fully align with the <u>OECD Due Diligence</u> <u>Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas</u>⁴⁰³ (hereafter referred to as "OECD Due Diligence Guidance)". IRMA did base Chapter 3.4 in the 2018 Mining Standard on the OECD Due Diligence Guidance, but did not fully integrate every step of the guidance's 5-Step framework.

In 2022, IRMA held an Expert Working Group to discuss whether IRMA should try to fully algin with OECD. In general, most working group participants said IRMA should align with OECD, not because it is necessarily the best approach to manage a company's activities related to CAHRA (especially for mine operators, at the very upstream of the supply chain), but because OECD Due Diligence Guidance is now widely adopted and is even being written into regulations. Some suggested that OECD DD is especially useful in cases where LSM source from ASM.

The working group discussions included a number of challenging aspects related to conflict-affected and high-risk area (CAHRA) and OECD Due Diligence Guidance.

First, there is no definitive or consistently updated list of CAHRA. As a result, when a site that is under assessment and IRMA auditors have a difference of opinion on whether the site is in a CAHRA (or there are "red flags" using OECD DD terminology – see requirement 3.4.3.1) based on the evidence presented, there is no obvious arbiter to make a final determination. The outcome of that disagreement, however, can mean passing or failing this chapter, which could result in site reaching or not reaching and achievement level in IRMA, and therefore these needs to be a way to address disagreements. At this time, IRMA assumes that when such disagreements arise IRMA will have to convene an ad hoc expert committee to review the information and make a final determination.

Second, OECD Due Diligence Guidance has some very clear recommendations on what <u>should</u> occur if an entity is found to be sourcing from or linked to another entity that has committed serious human rights abuses or supported armed groups. For example, if an upstream entity in the supply chain has been extorted by an armed group (e.g., forced to pay a bribe or "fee") downstream entities are supposed to suspend or discontinue sourcing from the upstream entity. However, the working group discussed scenarios where this might not be the best course of action, especially for the mine workers and communities who might be receiving economic benefits from the mine. Clearly, CAHRA are very complex and challenging operating environments. Some IRMA expert working group participants suggested that perhaps OECD Due Diligence Guidance should be revised/updated, and that IRMA should have conversations with them about that. There were also suggestions that IRMA could look at producing its own guidance specific to mines or mineral processing operations that are operating/sourcing/transporting minerals/metals in such regions. [See discussion in the Note for 3.4.4.3, and CONSULTATION QUESTION 3.4-3].

Finally, the expert working group also suggested that IRMA should include requirements or guidance on how mines and mineral processing operations can contribute to positive impact on local governance, peace, and stability in CAHRA. At the present time, we have not added any specific requirements related to that suggestion.

Proposed additions and changes:

- The language and requirements have been rewritten to more closely reflect the OECD Due Diligence Guidance expectations.
- We have removed a requirement on CAHRA screening [see <u>CONSULTATION QUESTION 3.4-2</u>]

⁴⁰³ Organisation for Economic Cooperation and Development (OECD). 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) <u>https://mneguidelines.oecd.org/mining.htm</u>

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

PARTICIPATE IN AN EXPERT WORKING GROUP ON MINERAL SUPPLY CHAINS AND RESPONSIBLE SOURCING

This chapter 3.4 on Conflict-Affected and High-Risk Area due diligence has some overlap with <u>a new chapter (1.XX)</u> <u>being proposed on Mineral Supply Chains and Responsible Sourcing</u>. The chapter on Mineral Supply Chains and Responsible Sourcing (Chapter 1.XX) is still under development, and to aid in that process IRMA will be convening an Expert Working Group on the subject. One of the issues that will be considered in that working group is the possibility of combining a responsible sourcing chapter with this CAHRA chapter (since management of risks in CAHRA is a component of responsible sourcing).

The intention is that a draft Chapter 1.XX will be released separately for public consultation in the next few months.

If you are interested in participating in an Expert Working Group on Mineral Supply Chains and Responsible Sourcing, please contact IRMA's Standards Director, Pierre De Pasquale (pdepasquale@responsiblemining.net).

BACKGROUND

Mineral exploration, mining and mineral processing may take place in areas where there are existing or potential conflicts or socio-political instability that can adversely affect the project and local stakeholders. In some cases, conflict may be external to the company's operation, and in other cases conflict may be caused, exacerbated, or supported by a company's activities or presence in an area.

"Companies and their investors are paying increased attention to the challenges and opportunities of doing business in conflictaffected and high-risk areas. These areas differ significantly from more stable operating environments and require companies and investors to take into consideration additional factors."⁴⁰⁴

Developing suitable responses when operating in or sourcing minerals from conflict-affected and high-risk areas (CAHRAs) is challenging, but guidance exists to assist companies in identifying, assessing, and mitigating risks and impacts associated

TERMS USED IN THIS CHAPTER

Artisanal and Small-Scale Mining
Business
Relationships
Collaboration
Competent
Professionals
Confidential Business
Information
Conflict-Affected or High-Risk Area
Consultation
Contractor
Entity
NEW
Exploration
NEW
Grievance
Grievance
Mining
NEW
Mining
NEW
Mitigation
Operation
NEW
Project
NEW
Serious
Human
Rights
Abuses
Stakeholder
Supplier
Whistleblower
NEW
Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

with operating in those areas. The most widely accepted framework is the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.⁴⁰⁵

Such guidance is increasingly being used as a means of cultivating transparent mineral supply chains and corporate engagement in the mineral sector, with a view to enabling countries to benefit from their mineral resources and preventing the extraction and trade of minerals from becoming a source of conflict, human rights abuses, and insecurity.

⁴⁰⁴ UN Global Compact and PRI (2010). They elaborate that "The following conditions often prevail in conflict-affected and high-risk areas: human rights violations; presence of an illegitimate or unrepresentative government; lack of equal economic and social opportunity; systematic discrimination against parts of the population; lack of political participation; poor management of revenues, including from natural resources; endemic corruption; and chronic poverty with associated heightened risks and responsibilities." (UN Global Compact and PRI. 2010. *Guidance on* Responsible Business in Conflict-Affected and High-Risk Areas: A Resource for Companies and Investors. https://www.unglobalcompact.org/docs/issues_doc/Peace_and_Business/Guidance_RB.pdf)

⁴⁰⁵ Organisation for Economic Cooperation and Development (OECD). 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) <u>https://mneguidelines.oecd.org/mining.htm</u>

OBJECTIVES/INTENT OF THIS CHAPTER

To respect human rights and avoid contributing to conflict when operating in, transporting materials through, or sourcing minerals or metals from conflict-affected and high-risk areas.

NOTE ON OBJECTIVES: REVISED. Now reflects that various entities in the supply chain have responsibility (those operating in, transporting minerals through or sourcing from CAHRA).

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

We are considering whether or not to allow some sites to mark this chapter as not relevant if they can provide IRMA auditors with evidence that their project/operation is in no way associated with a CAHRA (see CONSULTATION QUESTION 3.4-2, below).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The <u>entity</u> develops and implements a publicly available policy to manage risks related to <u>conflict-affected and high-risk areas</u> in a manner that protects human rights (3.4.2.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Conflict-Affected and High-Risk Area Due Diligence Requirements

3.4.1. External Certification of OECD Due Diligence

NOTE FOR 3.4.1. This is a NEW criterion. The idea is that IRMA will recognize certifications by other systems, and if a mining and/or mineral processing operation has been evaluated as being compliant with a recognized OECD-aligned auditing system (determined on a case-by-case basis, based on the results of an OECD alignment assessment, and/or potentially if recognized by other entities or regulatory bodies) then IRMA would not necessarily require duplication of auditing efforts.

Our proposal for how this chapter could be audited is:

SCENARIO 1: If a site <u>has not been</u> audited by a recognized OECD-aligned system then IRMA auditors audit the chapter.

SCENARIO 2: If a site <u>has been</u> audited by a recognized OECD-aligned system within the previous two years, AND the entity agrees to make its most recent audit report (and, if relevant, any corrective action plans) available to the IRMA auditor and agrees to allow certain findings to be reported in the IRMA audit report, then the IRMA auditor would review the audit report and:

- If the other system's audit report audit report clearly shows full conformity with all of the OECD due diligence expectations, the entity would score fully meets on 3.4.1.1 (and the IRMA chapter as a whole), and no other requirements would need to be scored.
- If the other system's audit report clearly indicates that not all expectations have been fully met then the IRMA auditor would assign ratings for each requirement in the chapter based on the previous auditor's findings (e.g., if the entity was weak in its reporting on OECD due diligence, the IRMA auditor would not give full marks for that criterion).
- If the other system's audit report is not complete enough to enable verification of any of the requirements in the IRMA chapter (which are aligned with OECD DD expectations), then IRMA auditor would either mark the requirements as 'not met' or the entity would have to furnish evidence to enable a different rating.

In this way, IRMA can maintain consistency with the scoring used in other IRMA chapters, and be consistent with respect to transparency of an entity's performance.⁴⁰⁶

CONSULTATION QUESTION 3.4-1: Do you agree with IRMA recognizing the results of audits conducted for other certification systems (even if the auditing procedures do not fully align with IRMA's assurance procedures)? If not, please explain your rationale.

Do you agree with recognizing audits from other systems conducted within the past two years, or would you suggest a longer or shorter time period in order to recognize past audits? If you prefer a different period, please explain your rationale.

3.4.1.1. Within the past two years, entities:

- a. Have been audited against the due diligence expectations in the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas⁴⁰⁷ (hereafter referred to as "OECD Due Diligence Guidance") within an OECD Due Diligence-aligned standard system;
- b. Have been verified as being fully compliant with the OECD Due Diligence Guidance expectations; and
- c. Shared their full audit results with IRMA auditors.

3.4.2. Establish Strong Company Management Systems

NOTE FOR 3.4.2. REVISED. The name of this criterion was 'Company Management Systems' in the 2018 Mining Standard). It has been changed to align Step 1 of the 5-Step framework in the OECD Due Diligence Guidance).

The idea is that if 3.4.1.1 is not fully met, then requirements 3.4.2 through 3.4.7 are either audited by the IRMA auditor, or the auditor assigns scores on these criterion/requirements based on the results of the audit shared by the entity as per 3.4.1.1. If the audit results are not complete enough to enable verification of the following requirements, the auditor would either mark the requirement as 'not met' or the entity would have to furnish evidence to enable a different rating.

3.4.2.1. (Critical Requirement)

Entities develop and implement a supply chain policy, applicable to operations and activities of the entity, relevant contractors, and mineral suppliers (if applicable), that, at minimum:

⁴⁰⁶ This is required to maintain consistency with the requirements of the IRMA system. IRMA is not pass-fail, but instead rates performance on every requirement, which then adds up to a chapter score, and also contributes to an overall achievement level for a site. RMA also requires the transparent reporting of performance on a requirement-by-requirement basis.

⁴⁰⁷ Organisation for Economic Cooperation and Development (OECD). 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) <u>https://mneguidelines.oecd.org/mining.htm</u>
- a. Outlines the principles and standards that the entity follows to identify and manage risks in the supply chain of minerals potentially from conflict-affected and high-risk areas (CAHRAs);
- b. Is consistent with Annex II of the OECD Due Diligence Guidance;
- c. Includes a commitment by the entity to undertake due diligence on its operations and, where applicable, its supply chain in accordance with the OECD Due Diligence Guidance 5-step framework (and where applicable relevant Supplements) and sets out clear and coherent management processes for risk management;
- d. Is approved at the most senior level of the entity; and
- e. Is made publicly available and, where applicable, communicated to contractors and mineral suppliers.⁴⁰⁸

NOTE FOR 3.4.2.1. REVISED. Requirement 3.4.2.1 and 3.4.2.2.a in the 2018 Mining Standard included a commitment that was meant to align with Annex II of the OECD Due Diligence Guidance (now 3.4.3.1 b). This requirement provides more details on the expectations related to the policy commitment.

This is the closest requirement to the critical requirement in the 2018 Standard, and so we have marked it as critical here (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

3.4.2.2. Entities develop and implement a management system to support due diligence that includes:

- a. Assigning responsibility and authority to senior staff with the necessary competence, knowledge and experience to oversee and ensure accountability for all due diligence activities;
- b. Allocating sufficient resources to ensure the operation and monitoring of due diligence, taking into account entity size and circumstances;
- c. Establishing communication processes to ensure that critical information about due diligence, including the entity's supply chain policy, reaches relevant employees (including senior management) and, where applicable, mineral <u>suppliers</u>;
- d. Undertaking training and capacity building for relevant staff and, where applicable, <u>contractors</u> and mineral suppliers on the supply chain policy and its practical application; and
- e. Maintaining records of findings and decisions made related to the implementation of the supply chain policy and associated due diligence activities.

NOTE FOR 3.4.2.2. NEW. Sub-requirements 3.4.2.2 (a), (b), (c) and (d) align with Step 1.B of the OECD Guidance, and sub-requirement 3.4.2.2.e is typically included in any management system.

3.4.2.3. Entities establish and implement a system of controls and transparency, including:

- a. Maintaining inventory and transaction documentation that includes information on the form, type and physical descriptions of mineral outputs;
- b. Maintaining documentation on the origin of minerals, transportation routes and payment of taxes, royalties and other relevant payments; ⁴⁰⁹
- c. Assigning unique references for minerals produced, processed and sold;
- d. Maintaining due diligence information for a minimum of five years and making due diligence information available to downstream purchasers and relevant institutionalized mechanisms with a mandate to collect and process information on minerals from CAHRAs, and for minerals identified as originating from red-flagged locations (see 3.4.3.1), making this information available in disaggregated format;

⁴⁰⁸ This includes suppliers of minerals that are external to the entity, i.e., large-scale mines owned by other entities, and/or artisanal-scale mines (ASM), mineral traders, etc.

⁴⁰⁹ Documentation for some of these items is required in IRMA Chapter 1.5 (e.g., quantities of minerals produced; mining-related taxes, fees, royalties and other payments made to governments). See requirement 1.5.1.2. Documentation on those particular items does not need to be provided to auditors for the purposes of this chapter if the site has already been verified as meeting the relevant requirements of Chapter 1.5.

- e. Entities that source minerals from external mineral suppliers additionally:⁴¹⁰
 - i. Incorporate disclosure requirements and the entity's supply chain policy into commercial contracts with mineral suppliers in order to collect information on the origin of minerals,⁴¹¹ transportation routes and payment of taxes, royalties and other relevant payments;
 - ii. Collect and maintain mineral supplier details, including know your customer/supplier information and assigning unique references for all mineral purchases;
 - iii. Communicate to mineral suppliers the entity's expectation that suppliers will undertake supply chain due diligence and risk management consistent with the standards defined in Annex II of the OECD Due Diligence Guidance; and
 - iv. Taking into account the entity's own size and capacity, demonstrate that efforts have been undertaken to build capacity amongst mineral suppliers to improve risk management performance and to comply with the company's supply chain policy.

NOTE FOR 3.4.2.3. REVISED. This requirement was previously 3.4.2.2.b in the 2018 Mining Standard. Subrequirements 3.4.2.3.a, b, c and d were previously all in a single paragraph. They have been broken out to more clearly define each expectation.

Also, the requirement has been expanded to include additional requirements for those sourcing minerals from external mineral suppliers (3.4.2.3.e).

3.4.2.4. <u>Stakeholders</u> have access to and are informed about a grievance mechanism that enables stakeholders, including whistleblowers, to voice concerns regarding the circumstances of extraction, trade, handling, and export of minerals.⁴¹²

NOTE FOR 3.4.2.4. This requirement was previously 3.4.2.2.d in the 2018 Mining Standard.

CONSULTATION QUESTION 1.4-2 (repeated from Chapter 1.4 – 'Complaints and Grievance Mechanism and Access to Remedy')

Background: Chapter 1.4 - 'Complaints and Grievance Mechanism and Access to Remedy' includes a range of requirements surrounding the existence of an accessible and effective operational-level grievance mechanism. It is not possible to score well on Chapter 1.4 if the mechanism does not have certain quality-related characteristics. Other chapters (i.e., human rights, gender, resettlement, security, ASM) also have requirements relating to the existence of a grievance mechanism;⁴¹³ however, the requirements in each of those chapters ask only that a mechanism is in place that allows grievances to be filed and addressed, but they do not speak to the overall quality of that mechanism. This is an approach proposed by IRMA to avoid too much repetition across chapters. However, this creates a situation in which an entity could theoretically score 'fully meets' on the grievance-related requirement in an individual chapter (which in most cases only asks that stakeholders have "access to" a grievance mechanism), even if the grievance mechanism as a whole is not an effective one (as reflected in the overall score for Chapter 1.4).

Question: Should an entity's score on grievance-related requirements within individual non-grievance-specific chapters be restrained or linked to the overall score that the entity gets on the grievance chapter (Chapter 1.4) as a whole?

⁴¹⁰ "External mineral suppliers" include, for example, large-scale mines owned by other entities, and/or artisanal-scale mines (ASM), mineral traders, etc.

⁴¹¹This includes identification of the mine(s) of origin for any minerals sourced from external suppliers including ASM and large-scale mines (LSM).

⁴¹² The grievance mechanism may be provided directly by the entity (see IRMA Chapter 1.4), through collaboration with other entities, or through an industry program or institutionalized mechanism

⁴¹³ See: Chapter 1.3, requirement 1.3.3.3; proposed Chapter 1.X, requirement 1.X.3.2; Chapter 2.4, requirement 2.4.3.3; Chapter 3.5, requirement 3.5.6.3; and Chapter 3.6, requirement 3.6.2.1.d.

For example, if a site scores 80% on Chapter 1.4, the most the site could receive for a grievance requirement in the other chapters would be a 'substantially meets,' but if a site scores 100% on Chapter 1.4 then, assuming the mechanism can handle grievances specific to the other chapters, they could possibly get a 'fully meets' rating on those grievance requirements.

3.4.3. Identify and Assess Risks in the Upstream Mineral Supply Chain

NOTE FOR 3.4.3. REVISED. The criterion heading has changed from 'Conflict Risk Assessment' to the proposed 'Identify and Assess Risks in the Upstream Mineral Supply Chain.' The requirements in 3.4.3 align with Step 2 of the OECD Due Diligence Guidance.

3.4.3.1. Using reasonable and good faith efforts, the <u>entity</u> assesses risks to determine if further due diligence steps are required. This involves:

a. Using evidence gathered from credible sources and a review of information gathered in 3.4.2, to identify and assess whether the locations of mineral origin and transit, the nature of mineral <u>suppliers</u> (if applicable) or the circumstances within the supply chain may trigger any of the following 'red flags', as defined in the OECD Due Diligence Guidance:⁴¹⁴

Red-flag locations of mineral origin and transit⁴¹⁵

- i. The mineral originates from or has been transported through a CAHRA.
- ii. The mineral is claimed to originate from a country that has limited known reserves or stocks, likely resources or expected production levels of the mineral in question.
- iii. The mineral is claimed to originate from a country through which minerals from CAHRAs are known or reasonably suspected to transit.

Red-flag suppliers (if applicable)

- i. Suppliers or other known upstream companies operate in one of the above-mentioned red-flag locations of origin and transit, or have shareholder or other interests in suppliers from one of the above-mentioned red-flag locations of origin and transit.
- ii. Suppliers or other known upstream companies are known to have sourced the mineral in question from a red-flag location of origin and transit in the last 12 months.

Red-flag circumstances

- i. Anomalies or unusual circumstances are identified through the information collected in 3.4.2, which give rise to a reasonable suspicion the mineral may contribute to conflict or serious abuses associated with the extraction, transport, or trade of the mineral in question.
- b. Establishing if further due diligence is required based on the following criteria:
 - i. No red-flags identified: if the entities determines that these red-flags do not arise in its operations or supply chain, no additional due diligence is required. The management systems established in 3.4.2 are maintained and reviewed on a regular basis and conflict-related risks are monitored at a level commensurate with the potential that red-flags may arise in the supply chain in the future. If new risks emerge, the entity determines if risks are significant enough to warrant undertaking the additional due diligence steps outlined in the remainder of this chapter. All entities, irrespective of risks identified, report on their due diligence practices and findings in alignment with 3.4.7; and

⁴¹⁴ "Credible sources" may include reports and other information (e.g., maps, statements) from governments, international organizations, NGOs, human rights defenders, industry, media, United Nations or others (e.g., ethical pension funds) relating to mineral extraction, and its impact on conflict, human rights or environmental harm in the country of potential origin, as well as criteria and indicators of conflict-affected or high-risk areas developed through multi-stakeholder initiatives. Sources would be considered credible if they are trusted and/or referred to by a range of stakeholders, including competent professional who work on human rights and/or conflict-affected areas.

⁴¹⁵ This applies to locations of mineral origin and transit for minerals produced at the entity's own mine(s) and to minerals produced by external mineral suppliers, if applicable.

ii. Red-flags identified or information unknown: if the entity identifies one or more red-flags in its supply chain, or is unable to reasonably exclude one or more of these red-flags from its supply chain, then it carries out the additional due diligence starting with requirement 3.4.3.2.

NOTE FOR 3.4.3.1. REVISED. This was requirement 3.4.1.1 in the 2018 Mining Standard. Although there was a similar requirement, the content in this requirement has been significantly revised and expanded to align with language and expectations in the OECD Due Diligence Guidance.

CONSULTATION QUESTION 3.4-2:

Background: The 2018 Mining Standard (requirement 3.4.1.1) included an CAHRA screening step, similar to requirement 3.4.3.1.a, below. The difference is that the 2018 IRMA requirement allowed sites that were clearly not associated with a CAHRA (i.e., did not mine in a CAHRA, did not transport minerals through or to CAHRA, or did not source from other mines in CAHRA), to mark this chapter as not relevant. There was also an expectation that at every audit the sites would need to again demonstrate that the chapter was 'not relevant' (since political and operational contexts can change over time).

However, the revised requirements have been written in a manner that expects that all sites carry out some due diligence, i.e., have a policy, document the circumstances of mineral extraction and/or mineral suppliers, etc. (see requirement 3.4.3.2).

Question: Do you agree with this new approach? Or do you believe that if mining and/or mineral processing operations are clearly not associated with CAHRAs that the chapter should not be applicable to them? A rationale supporting your opinion would be appreciated.

3.4.3.2. Where red-flags are identified or the <u>entity</u> is unable to reasonably exclude the presence of one or more red-flags, entities map the factual circumstances of the upstream supply chain, which includes:

- a. An in-depth review, carried out and documented by <u>competent professionals</u>, of the context of all red-flag locations (actual or potential) and the due diligence practices of any red-flag mineral <u>suppliers</u>, where applicable. This includes a review of relevant reports, maps and other credible information associated with the extraction, transport, and trade of minerals in the red-flagged locations, as well as <u>consultation</u> with relevant local and national <u>stakeholders</u> (such as representatives from government, civil society and upstream companies); and
- b. Identifying if material originates from <u>ASM</u> and/or large-scale mine (LSM) sources, and undertaking on-theground-assessments, performed by independent assessors who are competent professionals, of redflagged sources of mined minerals. This information is made available to downstream companies in the supply chain.

NOTE FOR 3.4.3.2. REVISED. Sub-requirement 3.4.3.2.a, above, aligns with requirement 3.4.3.3 in the 2018 Mining Standard. Sub-requirement 3.4.3.2.b is NEW.

3.4.3.3. <u>Entities</u> assess the factual circumstances of red-flagged supply chains against their supply chain policy (consistent with Annex II of the OECD Due Diligence Guidance as per 3.4.2.1) and determine if there are any inconsistencies between these factual circumstances and the principles and standards of the policy. Any identified inconsistences are considered as risks with the potential for adverse impacts.

NOTE FOR 3.4.3.3. REVISED. Requirement 3.4.3.1 in the 2018 Mining Standard required a risk assessment. It did not link it directly to the entity's policy. This revised requirement is more in alignment with OECD Due Diligence Guidance.

3.4.4. Management of CAHRA-Related Risks and Impacts

NOTE FOR 3.4.4. REVISED. Some of the requirements in this criterion are aligned with Step 3 of the OECD Due Diligence Guidance (other OECD Step 3 expectations are found in IRMA criterion 3.4.5, below).

The criterion heading has changed from 'Conflict Risk Management' to the proposed 'Management of CAHRA-Related Risks and Impacts.' The word 'impacts' has been added because it is possible that the on-the-ground assessment may uncover actual impacts (not just risks, also known as potential impacts).

3.4.4.1. <u>Entities</u> report the results of the risk assessment to senior management, outlining the information gathered from the supply chain mapping exercise (in 3.4.3.2) as well as any risks or impacts identified (in 3.4.3.3).

NOTE FOR 3.4.4.1. REVISED. Requirement 3.4.6.1 in the 2018 IRMA Standard required reporting of risk assessment results to senior management, but this requirement is now more specific on what needs to be reported in order to align more fully with OECD Due Diligence Guidance.

3.4.4.2. Entities that have identified red-flags in the supply chain:

- a. Establish a chain of custody or traceability system that collects and maintains disaggregated information on all inputs (if material is purchased from external mineral suppliers) and outputs of material originating from red-flagged supply chains;
- b. Enhance physical security practices for material as appropriate (e.g., security of transport, sealing material in tamper proof containers);
- c. Physically segregate material for which there is an identified risk of association with conflict and <u>serious</u> human rights abuses; and
- d. Entities that source minerals from external mineral <u>suppliers</u> also enhance engagement with red-flag mineral suppliers and incorporate into commercial contracts the right to conduct unannounced spot checks.

NOTE FOR 3.4.4.2. NEW. Added to align with Step 3 of OECD Due Diligence Guidance.

3.4.4.3. Entities that have identified red-flags in the supply chain develop and implement a risk management plan to respond to identified risks or impacts. The risk management plan:

- a. Includes strategies for <u>mitigating</u> any OECD Annex II risks in accordance with the OECD Due Diligence Guidance;⁴¹⁶
- b. Includes specific measures to address non-Annex II risks; ⁴¹⁷
- c. Includes plans to exercise leverage over actors in its supply chain that can most effectively and most directly prevent or mitigate the risk of adverse impacts;
- d. Includes performance criteria and indicators, linked to adequate baseline data, to enable monitoring and evaluation of the effectiveness of mitigation actions over time;
- e. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁴¹⁸
- f. Includes an implementation schedule and timelines for the demonstration of measurable improvement;⁴¹⁹ and
- g. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 3.4.4.3. Requirement 3.4.4.1 of the 2018 Mining Standard included a requirement for a risk management plan. 3.4.4.3.a, b and c integrate expectations from OECD Due Diligence Guidance.

⁴¹⁶ Annex II identifies risks that should be mitigated by suspending or discontinuing/terminating mining operations or relationships with mineral supplier(s) (i.e., in cases where serious human rights abuses and/or direct or indirect support for non-state armed groups is identified).

⁴¹⁷ The risk of committing, contributing to or being linked to human rights violations is increased in conflict-affected and high-risk areas. When projects/operations are located in conflict-affected or high-risk areas, entities must ensure that any risks to or impacts on human rights are addressed as per IRMA Chapter 1.3. That chapter requires steps to prevent, mitigate and remediate potential and actual human rights impacts.

⁴¹⁸ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

⁴¹⁹ OECD says entities should aim for measurable improvement within 6 months from the adoption of the plan.

Sub-requirements d, e, f, and g are aligned with other management plans in the IRMA Standard.

CONSULTATION QUESTION 3.4-3

Background: Annex II of the OECD Due Diligence Guidance is a "Model Supply Chain Policy for a Responsible Global Supply Chain of Minerals from Conflict-Affected and High-Risk Areas." The annex identifies risks that should be mitigated by suspending or discontinuing/terminating mining operations or relationships with mineral supplier(s). For example, Paragraph 4 of the Annex says:

"We will immediately suspend or discontinue engagement with upstream suppliers where we identify a reasonable risk that they are sourcing from, or linked to, any party providing direct or indirect support to non-state armed groups as defined in paragraph 3."

The direct or indirect support of nonstate armed groups in paragraph 3 of the annex includes, but is not limited to:

"...procuring minerals from, making payments to or otherwise providing logistical assistance or equipment to, non-state armed groups or their affiliates who:

(i) illegally control mine sites or otherwise control transportation routes, points where minerals are traded and upstream actors in the supply chain;

- (ii) illegally tax or extort money or minerals at points of access to mine sites, along transportation routes or at points where minerals are traded;
- (iii) illegally tax or extort intermediaries, export companies or international traders."

While it is completely understandable why these recommendations exist, the codification of OECD Due Diligence creates challenges for standard systems like IRMA, and their auditors who have to determine if an entity has taken action that aligns with OECD Due Diligence Guidance. The OECD guidance says entities "should" suspend or discontinue relationships, leaving room for interpretation, but OECD guidance does not provide any examples of allowable exceptions.

It's additionally challenging for IRMA auditors because the OECD Due Diligence Guidance is somewhat in conflict with the UN Guiding Principles on Business and Human Rights (UNGP), which forms the basis for IRMA's Chapter 1.3 on Human Rights Due Diligence. UNGP action depends on if the entity is causing, contributing to or is linked to an infringement of human rights The table below shows the different approaches.

OECD Due Diligence Guidance

"We will immediately suspend or discontinue engagement with upstream suppliers where we identify a reasonable risk that they are sourcing from, or linked to, any party providing direct or indirect support to non-state armed groups as defined in paragraph 3."

UNGP

"Where a business enterprise has not contributed to an adverse human rights impact, but that impact is nevertheless directly linked to its operations, products or services by its business relationship with another entity, the situation is more complex. Among the factors that will enter into the determination of the appropriate action in such situations are the enterprise's leverage over the entity concerned, how crucial the relationship is to the enterprise, the severity of the abuse, and whether terminating the relationship with the entity itself would have adverse human rights consequences."

The more nuanced approach of the UNGPs allows entities (upstream and downstream) to consider the full scope of impacts of their actions/responses to discovering that they may be implicated in human rights.

Take, for example, the extortion element listed in (ii) above. That particular element of the OECD Due Diligence Guidance can pose a challenge for both upstream entities (mines) and downstream entities (e.g., mineral processing sites, traders, manufacturers, purchasers of mined material) who are either trying to

transport their materials to or receive materials from a mine (which may have been producing the materials in a responsible manner). If there are armed groups who are requiring "fees" to be paid for safe passage along a transport route, then either the mine or the downstream entity transporting the materials would be directly supporting that armed group.

Within OECD, the immediate suspension or discontinuation of engagement would cut off that single source of income for the armed group (a positive impact), but if all downstream entities were to suspend or discontinue sourcing from a mine because it had to pay fees to armed groups to ensure safe passage of its material, there could be a variety of unintended adverse impacts. For example, it would cut off income for all of the workers at the mine and any business that provides goods or services to the mine. Or it could force a mine into bankruptcy, and threaten the ability of the mine to be reclaimed and closed in a safe and environmentally sustainable manner. The UNGPs, in allowing entities to consider "whether terminating the relationship with the entity itself would have adverse human rights consequences," appear to open up a wider range of responses.

IRMA continues to grapple with this issue. We could develop our own guidance on what might be appropriate action in certain circumstances, but if that guidance differs from Annex II of the OECD DD, then it is possible our standard would not be considered to be OECD-aligned. If, however, we require auditors to adhere to the letter of OECD Due Diligence Guidance, then we could be incentivizing the closure of mines in CAHRA and increasing pressure for new mines to be developed elsewhere to meet mineral demand.

Question: Do you believe that IRMA must be fully OECD-aligned, or would you support IRMA integrating the OECD Due Diligence Guidance 5-Step framework but be more nuanced regarding the actions to be taken when Annex II risks are encountered? For example, IRMA could do away with 3.4.4.3.a, and require that all entities following the risk mitigation in 3.4.4.b. Please feel free to suggest additional or different options.

3.4.4.4. Entities collaborate with relevant stakeholders and, if applicable, mineral suppliers, to agree on mitigation strategies, performance criteria and timelines for demonstration of measurable risk mitigation.

NOTE FOR 3.4.4.4. Requirement 3.4.4.2 of the 2018 Mining Standard included a requirement to collaborate with stakeholders on these elements.

3.4.5. Monitoring and Evaluation

NOTE FOR 3.4.5. Some of the requirements in this criterion are aligned with Step 3 of the OECD Due Diligence Guidance (the rest of OECD Step 3 expectations are found in IRMA criterion 3.4.4, above).

3.4.5.1. The <u>entity</u> monitors the implementation of the <u>mitigation</u> strategies included in the risk management plan. Monitoring includes:

- a. Documentation of actual performance in relation to indicators (see 3.4.4.3.3); and
- b. Input from relevant stakeholders, as necessary.

NOTE FOR 3.4.5.1. Requirement 3.4.5.1 in the 2018 Mining Standard included a requirement to collaborate with stakeholders on these elements.

3.4.5.2. The entity evaluates the effectiveness of its risk management plan in addressing the identified risk(s), including undertaking additional fact and risk assessments as needed to evaluate effectiveness,⁴²⁰ and reports to senior management on effectiveness.

NOTE FOR 3.4.5.2. Combined requirement 3.4.5.1 in the 2018 Mining Standard, which mentioned effectiveness, and requirement 3.4.6.1 in the 2018 Mining Standard, which required reporting to senior management on the management plan and monitoring findings.

⁴²⁰ E.g., where the circumstances of the supply chain have changed or new information becomes available during the implementation phase.

3.4.5.3. When monitoring or evaluation reveal that risk management is not being effective, new mitigation strategies or actions are developed, integrated into the management plan, and implemented to more effectively manage the risks.

NOTE FOR 3.4.5.3. REVISED. Requirement 3.4.5.2 from the 2018 Mining Standard required new mitigation strategies or actions to be developed and integrated if monitoring revealed "that the operating company has unknowingly or unintentionally been complicit in armed conflict or serious human rights abuses in conflicted-affected or high-risk areas". We have simplified the language to encompass all situations where monitoring or evaluation reveals that risk management prove is not being effective.

3.4.6. Independent third-party audit of the entity's due diligence practices

NOTE FOR 3.4.6. NEW. The requirement in this new criterion is aligned with Step 4 of the OECD Due Diligence Guidance.

3.4.6.1. The entity commissions an independent, third-party audit of its due diligence practices.⁴²¹

NOTE FOR 3.4.6.1. NEW. Step 4 of the OECD Due Diligence Guidance is addressed via the IRMA third-party assurance program. There are no additional specific steps for companies undergoing assessment against the IRMA Standard other than facilitating auditor access to the entity's site(s), documentation, records and, as appropriate, access to relevant stakeholders or contractors, such as on-the-ground assessment teams.

3.4.7. Reporting and Disclosure

NOTE FOR 3.4.7. Requirements in this criterion are aligned with Step 5 of the OECD Due Diligence Guidance.

3.4.7.1. <u>Entities</u> report annually and publicly on their supply chain due diligence with respect to implementation of the OECD Due Diligence Guidance 5-Step framework.⁴²² The report includes the following elements (as applicable):

- a. The location of the entity's publicly available supply chain policy and a description of the management and internal control systems that have been put into place to support due diligence (see 3.4.2);
- b. A description of the systems used for identifying red-flags, details of any actual red-flags identified and information on actual and/or potential Annex II risks (see 3.4.3); and
- c. Information on steps taken to enhance engagement with red-flag <u>suppliers</u>, where applicable, and to mitigate risks (see 3.4.4).

NOTE FOR 3.4.7.1. NEW. This was 3.4.6.2 in the 2018 Mining Standard.

3.4.7.2. Entities publish the risk assessment and risk management plan with due regard for protection of confidentiality and safety of people, <u>confidential business information</u> and other competitive concerns.

NOTE FOR 3.4.7.2. NEW. These expectations align with OECD Due Diligence Guidance Supplement on Tin, Tantalum and Tungsten (pages 45 and 53).

We have added a reference to consideration of the protection of people when determining the level of disclosure, as too much information could put certain populations in affected communities or workers at risk.

3.4.7.3. Entities publish summary audit report findings with due regard for protection of the confidentiality and safety of people, confidential business information and other commercial concerns.

NOTE FOR 3.4.7.3. NEW. These expectations align with OECD Due Diligence Guidance Supplement on Tin, Tantalum and Tungsten (page 53), and OECD Due Diligence Guidance Supplement on Gold (page 109). IRMA

⁴²¹ Step 4 of the OECD Due Diligence Guidance is addressed via the IRMA third-party assurance program. There are no additional specific steps for companies undergoing certification against the IRMA Standard for Responsible Mining, other than facilitating auditor access to company sites, documentation, records and, as appropriate, access to other relevant stakeholders, such as on-the-ground assessment teams

⁴²² Companies may publish a standalone report, or integrate this into an existing annual sustainability or corporate responsibly report.

requires that audit results are published, so if this chapter is audited in the IRMA system the entity will meet this requirement.

NOTES

The most widely recognized due diligence framework for minerals sourced from conflict zones is the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Due Diligence Guidance).⁴²³ The OECD Due Diligence Guidance forms the basis for the requirements in this chapter.

The risk of committing, contributing to or being linked to human rights violations is increased in conflict-affected and high-risk areas. IRMA Chapter 1.3—Human Rights Due Diligence is the primary chapter in this Standard that addresses IRMA's expectations related to the unknowing or unintentional infringement of human rights. When projects/operations are located in conflict-affected or high-risk areas, entities must ensure that risks to or impacts on human rights are prevented, mitigated or remedied in a manner that conforms with requirements in Chapter 1.3.

Additionally, as mentioned in the Preamble to this draft Standard, IRMA has a draft Policy on Association under review in 2023 that describes when particularly serious actions by any entity engaged in IRMA create a context where IRMA could refuse to associate or could set conditions for association with those entities. In addition, IRMA is also exploring ways that an entity engaged in the IRMA system and the people concerned with impacts (local community members, Indigenous rights holders, purchasing customers, investors, government and others) might use IRMA's system to support discussion on remedy of past harm.

IRMA reserves the right to delay audits for operations located in conflict-affected or high-risk areas if, through consultation with certification bodies, auditors and the entity, IRMA or certification bodies determine that armed conflict in the vicinity of a mine and/or mineral processing operation makes it impossible for auditors to safely visit the operation.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

⁴²³ OECD. 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) <u>https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf</u>

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Whistleblower

A person who raises concerns regarding the unlawful or unethical activity or behavior of a person or organization.

EXISTING DEFINITIONS

Artisanal and Small-Scale Mining (ASM)

Formal or informal operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labor-intensive technology. ASM can include men and women working on an individual basis as well as those working in family groups, in partnership or as members of cooperatives or other types of legal associations and enterprises involving hundreds or thousands of miners. For example, it is common for work groups of 4-10 individuals, sometimes in family units, to share tasks at one single point of mineral extraction (e.g., excavating one tunnel). At the organizational level, groups of 30-300 miners are common, extracting jointly one mineral deposit (e.g., working in different tunnels), and sometimes sharing processing facilities.

Business Relationships

Relationships a business enterprise has with business partners, entities in a value chain, and any other non-state or state entity directly linked to its business operations, products, or services. They include indirect business relationships in its value chain, beyond the first tier, and minority as well as majority shareholding positions in joint ventures.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Conflict-Affected and High-Risk Area (CAHRA)

Areas identified by the presence of armed conflict, widespread violence, including violence generated by criminal networks, or other risks of serious and widespread harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars. High-risk areas are those where there is a high risk of conflict or of widespread or serious abuses of human rights as defined in paragraph 1 of Annex II of the OECD Due Diligence Guidance Area on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk (see source of definition, below). Such areas are often characterized by political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure, widespread violence, and violations of national or international law.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses, stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Leverage

Leverage is an advantage that gives power to influence. In the context of Chapter 1.3, it refers to the ability to effect change in the wrongful practices of the party that is causing or contributing to an adverse human rights impact.

Source: UN Office of the High Commissioner for Human Rights. 2012. *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide.*

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Serious Human Rights Abuses

Includes: i) any forms of torture, cruel, inhuman and degrading treatment; ii) any forms of forced or compulsory labor, which means work or service which is exacted from any person under the menace of penalty and for which said person has not offered himself voluntarily; iii) the worst forms of child labor (as per ILO Convention 182); iv) other gross human rights violations and abuses such as widespread sexual violence; v) war crimes or other serious violations of international humanitarian law, crimes against humanity, or genocide.

Stakeholder

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Suppliers

Providers of goods, services, or materials to a project/operation.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Chapter 3.5 Security Arrangements

NOTES ON THIS CHAPTER: The primary changes made to this chapter versus the 2018 Mining Standard are structural changes to increase clarity and auditability of some criteria, and increase alignment with other IRMA chapters.

Proposed additions and changes:

- As with other chapters, we have altered language referring to the obligation of the entity to report 'if requested by a community,' and now put the onus on the entity to offer this rather than expecting the community to know to request it (requirement 3.5.6.1).
- Also, we have clarified that references to 'security risks' in this chapter are meant to encompass both "security risks" (i.e., risks to the security of the mine site and its personnel, such as from robbery or social unrest) as well as "risks from security" (i.e., risks associated with the presence and use of security personnel, such as potential for conflict between communities and security, potential for unjustified use of force, etc.).
- The requirements for a management plan and monitoring have been updated to align with other IRMA chapters (see 3.5.3.1 and 3.5.3.3).

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

Security risks to mining and mineral processing operations may result from political, economic, civil, or social factors. The role of public or private security forces used in relation to such operations should be to maintain the

rule of law, including safeguarding human rights; provide security to workers, equipment, and facilities; and protect the site or transportation routes from interference with legitimate extraction and trade.

Security arrangements for mining and mineral processing operations that are founded on a substantial understanding of the context, consultation with stakeholders, and adherence to international best practice can help an entity reduce the potential for violent conflicts with communities or workers, contribute to peace and stability in the regions where it operates, and demonstrate respect for the human rights of stakeholders affected by their operations.

OBJECTIVES/INTENT OF THIS CHAPTER

To manage security in a manner that protects operations, assets, and products without infringing on human rights.

TERMS USED IN THIS CHAPTER

Affected Community
Business Relationships
Collaboration
Competent Authority
Competent
Professional
Conflict Analysis
Conflict Risk
Consultation
Contractors
Credible Method NEW
Culturally Appropriate
NEW
Entity
NEW
Grievance
Human Rights
Risk
Mineral
Processing
NEW
Mining
NEW
Mining-Related
Activities
Mitigation
Operation
NEW
Potential
Human
Rights
Impact
Project
NEW

- Remediation/Remedy Site NEW Stakeholder
- Vulnerable Group Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

SCOPE OF APPLICATION

RELEVANCE: The majority of the requirements in this chapter are relevant for any mining or mineral processing operation that employs security personnel (e.g., security guards, public or private security forces) whether as employees or contractors, at the operation and during the transportation of its products.

Some requirements in this chapter are only relevant for <u>entities</u> that have security arrangements involving private security providers (3.5.1.3 and 3.5.4.1), and others are only relevant if public security forces such as police or military personnel are used (i.e., 3.5.1.4, 3.5.4.2, and 3.5.6.3).

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The <u>entity</u> has a policy and procedures in place regarding the use of force and firearms that align with the best practices expressed in United Nations *Basic Principles on the Use of Force and Firearms*⁴²⁴ (3.5.3.4).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Security Arrangements Requirements

3.5.1. Policy Related to Security and Human Rights

NOTE FOR 3.5.1: We have re-structured policy expectation phrasing across chapters to increase overall consistency in the standard. Therefore, we restructured 3.5.1.1 and added 3.5.1.2. below with additional details as to the process through which IRMA expects polices to be developed and shared with stakeholders.

We moved the previous 3.5.1.2 and 3.5.1.3 down to criterion 3.5.3 'Management of Risks and Impacts' where all plans and procedures are now included.

Finally, we renamed this criterion, as previously it referred also to procedures.

- 3.5.1.1. A security policy or its equivalent is in place that:
 - a. Acknowledges the entity's responsibility to:
 - i. Respect human rights in its efforts to maintain the safety and security of operation; and
 - ii. Avoid using public or private security forces that have been credibly implicated in the infringement of human rights, breaches of international humanitarian law or the excessive use of force;⁴²⁵
 - b. Stipulates the entity's expectations of contractors vis-à-vis the above commitments;
 - c. Is approved at the most senior level of the entity; and

⁴²⁴ UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials. Available at: www.ohchr.org/EN/ProfessionalInterest/Pages/UseOfForceAndFirearms.aspx

⁴²⁵ These commitments may be made in a broader Human Rights Policy, or another relevant policy.

d. Is publicly available and communicated to relevant stakeholders.⁴²⁶

NOTE FOR 3.5.1.1: REVISED. Broke out the individual expectations in sub-requirements, and also added a new sub-requirement 3.5.1.1.b, because if contractors are hired to provide security, then the policy should be clear regarding the entity's expectations of contractors. The other sub-requirements are consistent with human-rights related policy requirements in other chapters of the Standard.

3.5.2. Security Risk Identification and Assessment

NOTE FOR 3.5.2: This name of this criterion has changed. It used to be Security Risk Assessment and Management. The management-related requirements (3.5.2.4 and 3.5.2.5) have moved down to the new criterion 3.5.3 "Management of Risks and Impacts" (they are now requirements 3.5.3.1. and 3.5.3.2. respectively).

3.5.2.1. The entity assesses security risks and potential human rights impacts that may arise from security context and security personnel arrangements. Assessments, which may be scaled to the size of the entity and severity of security risks and potential human rights impacts:

- a. Follow a credible process/methodology;427
- b. Are carried out and documented by competent professionals; and
- c. Draw on credible information obtained from a range of perspectives, including different genders, ages, ethnicities, and any potentially vulnerable groups,⁴²⁸ as well as relevant stakeholders such as human rights defenders, and expert advice.⁴²⁹

NOTE FOR 3.5.2.1: REVISED. This combines requirements 3.5.2.1 and 3.5.2.2 from the 2018 Mining Standard.

3.5.2.2. The scope of the security risk assessment includes, but need not be limited to:

- a. Analysis of the political and security context in the host country context (e.g., the human rights records of the government and public and private security forces, adherence to the rule of law, potential for corruption, whether or not the operation is located in a known conflicted-affected or high-risk area, etc.);
- b. <u>Conflict analysis</u> to determine current and potential conflicts or violence in the host country and <u>affected</u> <u>communities;</u>
- c. Identification of security risks and risks from security, paying particular attention to risks to women, children, and other vulnerable groups. These risks include:
 - i. Security risks to the operation (e.g., protecting assets from being vandalized or stolen);
 - ii. Security-related risks to workers (e.g., risks to female workers when walking home or to accommodations at night); and

⁴²⁶ Relevant stakeholders could include women, children or their representatives, and other groups who may be particularly vulnerable to impacts from security arrangements (e.g., this might include ASM operators, human rights defenders, and youth). Other relevant local stakeholders may include local government or community leaders; civil society organizations; and other companies operating in the area.

⁴²⁷ Risk assessments typically include: establishment of scope; identification of sources of risk; identification of risks; assessment of risks; development of risk treatment and mitigation measures; and communications, monitoring and assessment, and revision. The assessment of security risks may be integrated in existing risk assessment processes.

⁴²⁸ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. Relevant stakeholders would include women, children or their representatives, and other groups who may be particularly vulnerable to impacts from security arrangements (e.g., this might include ASM operators, human rights defenders, and youth). Other relevant local stakeholders may include local government or community leaders; civil society organizations; and other companies operating in the area.

⁴²⁹ Special effort should be made to include women, children or their representatives, and other groups who may be particularly vulnerable to impacts from security arrangements (e.g., this might include artisanal and small-scale miners, human rights defenders, or youth). Other relevant local stakeholders may include local government or community leaders, civil society organizations or other companies operating in the area. Expert advice may come from governments, multi-stakeholder initiatives, human rights institutions, civil society, or academics with local knowledge and expertise.

- iii. Security-related risks to communities (e.g., <u>conflict risks</u> between security forces and communities during social protest, etc.).
- d. Risks related to the presence and equipping of security forces (e.g., misappropriation or diversion of security equipment, increased risk of violence associated with firearms or other equipment).

NOTE FOR 3.5.2.2: REVISED. Sub-requirements a, b, c and d were all in the original requirement 3.5.2.3 in the 2018 Mining Standard, but they have been slightly reorganized.

We added more detail to sub-requirement 3.5.2.2.c to further specify the full range of applicable security concerns to be identified and assessed, and included examples in sub-requirements 3.5.2.2.a, 3.5.2.2.c and 3.5.2.2.d, as there was some confusion in early audits around what might need to be assessed. In particular, we have clarified that references to 'security risks' in this chapter are meant to encompass both "security risks" (i.e., risks to the security of the mine site and its personnel, such as from robbery or social unrest) as well as "risks from security" (i.e., risks associated with the presence and use of security personnel, such as potential for conflict between communities and security, potential for unjustified use of force, human rights abuses, etc.).

3.5.2.3. Assessments of security-related risks and impacts are updated periodically, including, at minimum, when there are changes to mining-related activities, security arrangements, business relationships, or in the operational, environmental, or social context that may create new risks or change the nature or degree of an existing impact.⁴³⁰

NOTE FOR 3.5.2.3: NEW. This was part of 3.5.2.1 in the 2018 Mining Standard. We have separated out the updating step to be consistent with other chapters.

3.5.3. Management of Security Risks and Impacts

NOTE FOR 3.5.3: This is a new criterion heading. It encompasses a number of requirements already in the chapter that relate to the actions that should be taken to mitigate and manage security-related risks.

It contains all of the requirements that relate to having plans and procedures in place to manage security risks. This includes requirements that used to be in 3.5.2, as explained above, and also in the criterion 3.5.3 'Due Diligence Prior to Hiring Security Personnel' from 2018 Mining Standard. That criterion heading has now been deleted.

3.5.3.1. The entity develops and implements a risk management plan that includes actions to be taken to prevent or mitigate identified risks in the security risk assessment. The plan:

- a. Is developed by competent professionals;
- b. Outlines the mitigation measures to avoid and, where that is not possible, minimize adverse impacts on human health and the environment (including impacts to land, soil, water, and vegetation). The measures in the plan are specific, measurable, linked to clearly defined outcomes, relevant, and time-bound;
- c. Identifies key indicators, linked to adequate <u>baseline</u> data, to enable measurement of the effectiveness of mitigation activities over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁴³¹
- e. Includes an implementation schedule; and

⁴³⁰ A risk assessment in 3.5.2 is not a one-time occurrence. According to the Voluntary Principles on Security and Human Rights (VP) Implementation Guidance Tools, "Any major decision relating to a project or company might represent an appropriate time to conduct or renew a risk assessment, e.g., a project expansion, an acquisition or merger or any other major business decision. Major changes in external circumstances may bring about the need to conduct a VPs risk assessment. This may include a change in government, the outbreak of conflict, an economic crisis, or a major political or policy decision." (ICMM, IFC and IPIECA. 2012. Voluntary Principles on Security and Human Rights Implementation Guidance Tools. p. 24. <u>https://www.voluntaryprinciples.org/wp-content/uploads/2021/11/Implementation-Guidance-Tools_English.pdf</u>).

⁴³¹ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 3.5.3.1: REVISED. This was 3.5.2.4 in the 2018 Mining Standard. The requirement for monitoring was moved to its own requirement (3.5.3.3), and sub-requirements were added to align with management plans in other IRMA chapters.

3.5.3.2. If the security risk assessment reveals the potential for conflicts between security providers and affected community members or workers, the entity:

- a. <u>Collaborates</u> with communities and/or workers to develop mitigation strategies that are <u>culturally</u> appropriate and that take into consideration the needs of different genders, ages, ethnicities, or any potentially <u>vulnerable groups</u>;⁴³²
- b. If specific risks to human rights are identified in the assessment, mitigation strategies conform with requirements in IRMA Chapter 1.3;⁴³³ and
- c. Mitigation measures are integrated into the management plan (see 3.5.3.1).

NOTE FOR 3.5.3.2: This was 3.5.2.5 in the 2018 Mining Standard. We have added that the mitigation measures are integrated into the management plan.

3.5.3.3. A process is in place for monitoring and evaluating the effectiveness of the implementation of mitigation actions, and if necessary, outlining additional actions and updating the management plan to accord with desired or expected outcomes.

NOTE FOR 3.7.3.3: REVISED. Requirement 3.5.2.4 included both management and monitoring. We have separated out the monitoring element. Most IRMA chapters that include management plans include a step to evaluate the effectiveness of the actions that are implemented, and if necessary, take further action. We are proposing to add this requirement because to create greater consistency throughout the standard.

3.5.3.4. (Critical Requirement)

The <u>entity</u> has procedures in place regarding the use of force and firearms that align with the best practices expressed in United Nations *Basic Principles on the Use of Force and Firearms*.⁴³⁴ At minimum, the entity's procedures require that:

- a. Security personnel take all reasonable steps to exercise restraint and utilize non-violent means before resorting to the use of force;
- b. If force is used it does not exceed what is strictly necessary, and is proportionate to the threat and appropriate to the situation; and
- c. Firearms are only used for the purpose of self-defense or the defense of others if there is an imminent threat of death or serious injury.

NOTE FOR 3.5.3.4: REVISED. This was 3.5.1.2 in the 2018 Mining Standard. Requirement 3.5.1.2 was considered a critical requirement, and given that this requirement contains the majority of what was outlined in the previous 3.5.1.2, this has now become the critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

⁴³² Which stakeholders must be included and what may constitute a 'vulnerable group' requiring additional focus depends on the context. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, particular attention should be paid to those with existing forms of vulnerability to security-related incidents such as women, girls, those located close to risk factors such as workers' camps or major transportation routes.

⁴³³ IRMA Standard, Chapter 1.3—Human Rights Due Diligence. See specifically, requirement 1.3.3.2.

⁴³⁴ UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials. Available at: <u>www.ohchr.org/EN/ProfessionalInterest/Pages/UseOfForceAndFirearms.aspx</u>

3.5.3.5. If private security is used in relation to the operation, the entity has a signed contract with private security providers that at minimum:

- a. Sets out agreed on principles that are consistent with the Voluntary Principles on Security and Human Rights and the entity's procedures on the use of force and firearms;⁴³⁵
- b. Delineates respective duties and obligations with respect to the provision of security in and around the operation and, if relevant, along transport routes;
- c. Outlines required training for security personnel; and
- d. Stipulates termination of relationship between entities and private security providers where there is credible evidence of unlawful or abusive behavior by the latter.

NOTE FOR 3.5.3.5: This was 3.5.1.3 in the 2018 Mining Standard. Sub-requirement (d) is NEW. It is from Voluntary Principles on Security and Human Rights.⁴³⁶

3.5.3.6. If public security forces are used to provide security to the <u>operation</u> and/or transport routes, the <u>entity</u> makes a good faith effort to sign a Memorandum of Understanding or similar agreement with public security providers that includes similar provisions to those in 3.5.3.5.

NOTE FOR 3.5.3.6: This was 3.5.1.4 in the 2018 Mining Standard.

3.5.3.7. The <u>entity</u> develops and implements due diligence procedures to prevent the hiring of employee or contracted private security providers who have been convicted of or credibly implicated in the infringement of human rights, breaches of international humanitarian law, or the use of excessive force.⁴³⁷

NOTE FOR 3.5.3.7: REVISED. This was 3.5.3.1 in the 2018 Mining Standard. Clarified that this requirement applies to either security guards hired as company employees and/or contracted security providers.

3.5.3.8. The <u>entity</u> makes a good faith effort to determine if public security personnel providing security to the mine have been convicted of or credibly implicated in the infringement of human rights, breaches of international humanitarian law or the use of excessive force.

NOTE FOR 3.5.3.8: This was 3.5.3.2 in the 2018 Mining Standard.

3.5.4. Training of Security Personnel

NOTE FOR 3.5.4: Minor change to title to clarify who needs the training.

3.5.4.1. Prior to deployment of private security personnel (whether employees of the <u>entity</u> or <u>contractors</u>), the entity provides training that incorporates, at minimum, information related to ethical conduct and respect for the human rights of <u>workers</u> and <u>affected communities</u>, with specific reference to <u>vulnerable groups</u>, and the entity's procedures on the appropriate use of force and firearms. Both initial training and refresher courses are mandatory for all security employees and for any private security contractors that have not received equivalent training from their employers.

NOTE FOR 3.5.4.1: REVISED. This was 3.5.4.1 in the 2018 Mining Standard. It has been revised slightly to clarify that both employees and contractors who hired to prove security need to be trained.

⁴³⁵ Voluntary Principles on Security and Human Rights. 2014. <u>www.voluntaryprinciples.org</u>

⁴³⁶ See Voluntary Principles on Security and Human Rights: Implementation Guidance Tool. pp. 53. <u>https://www.voluntaryprinciples.org/wp-</u>content/uploads/2021/11/Implementation-Guidance-Tools_English.pdf

⁴³⁷ Due diligence includes research or investigations to vet prospective private security providers and security personnel such as: history of respect for/violations of human rights law and international humanitarian law; personal/business reputation; management style and ethics of key executives; litigation and criminal offence history; procedures on use of force and firearms; compliance with health, safety, and environmental regulations; etc. (VP Implementation Guidance Tool. pp. 52, 53).

3.5.4.2. If public security forces are to be used, the <u>entity</u> determines if public security personnel are provided with training on human rights and the appropriate use of force and firearms. If this training is not provided, the entity offers to facilitate training for public security personnel that provide mine-related security.

NOTE FOR 3.5.4.2: This was 3.5.4.2 in the 2018 Mining Standard.

3.5.5. Response to Security Incidents

NOTE FOR 3.5.5: Minor change to title to clarify that this refers to how the entity responds to incidents. 3.5.3 refers to management of security more generally.

3.5.5.1. The entity:

- a. Develops and implements systems for documenting and investigating security incidents, including those involving impacts on human rights or the inappropriate use of force;
- b. Takes appropriate actions to prevent or <u>mitigate</u> and provide <u>remediation</u> for human rights impacts (as per Chapter 1.3),⁴³⁸ injuries, or fatalities caused by security providers;
- c. Takes appropriate actions, including disciplinary measures, to prevent and deter abusive or unlawful acts by security personnel and acts that contravene the entity's policies on rules of engagement, the use of force and firearms, human rights, and other relevant policies;
- d. Provides medical assistance to all injured people, including offenders;
- e. Ensures the safety of victims and those filing security-related allegations; and
- f. Reports security incidents, including any credible allegations of human rights abuses by private or public security providers, to <u>competent authorities</u> and national human rights institutions, and cooperates in any investigations or proceedings.

NOTE FOR 3.5.5.1: This was 3.5.5.1 in the 2018 Mining Standard. The order of the sub-requirements has been shifted around to more accurately reflect the process entities would likely follow in terms of addressing incidents. No change in content or intent.

3.5.5.2. In the event of security-related incidents that result in injuries, fatalities, or alleged human rights impacts on community members or workers, the entity:

- a. Provides communities and/or workers with information on the incidents and any investigations that are underway; and
- b. <u>Consults</u> with communities and/or workers to develop strategies to prevent the recurrence of similar incidents.

NOTE FOR 3.5.5.2: This was 3.5.5.2 in the 2018 Mining Standard. This requirement was separated into two sub-requirements to make it clear that there are two distinct items to be audited. No change in content or intent.

3.5.6. Communication, Reporting, and Disclosure

3.5.6.1. The entity engages with stakeholders on security issues as follows:

- a. Stakeholders, including host governments and <u>affected communities</u>, are <u>consulted</u> about the impact of the entity's security arrangements on those stakeholders, and the consultations occur at a frequency commensurate with the risks associated with security arrangements; and
- b. Community stakeholders are offered a briefing on the entity's procedures on the use of force and firearms.

NOTE FOR 3.5.6.1: REVISED. This requirement combines 3.6.5.1 and 3.6.5.2 from the 2018 Mining Standard.

⁴³⁸ IRMA Standard, Chapter 1.3—Human Rights Due Diligence. (See specifically, requirement 1.3.3.2).

For 3.5.6.1.a, the requirement previously said that consultations were to happen regularly. However, we are proposing to revise this to say "consultations occur at a frequency commensurate with the risks associated with security arrangements." Depending on the circumstances, there may not be a need for regular consultations (e.g., the commodity being mined is not high value so the level of security at the site is low, security guards are not armed, and there is no nearby community), whereas in situation where there are obviously risks to communities from security arrangements frequent consultation may be necessary. We can add guidance to this effect.

In 3.5.6.1.b, we are proposing to require entities to explicitly offer to provide a briefing to communities. Previously, the language was "if requested by a community structure." However, if no such request is made, there is nothing to audit. Furthermore, if communities do not know that this is an option then they are unlikely to request such a briefing.

3.5.6.2. The entity reports annually on its efforts to manage security in a manner that respects human rights.⁴³⁹

NOTE FOR 3.5.6.2: REVISED. This was previously combined with the consultation requirement in requirement 3.5.6.2 from the 2018 Mining Standard. We moved that as explained above, so that this requirement could focus solely on reporting.

3.5.6.3. <u>Stakeholders</u> have access to and are informed about a mechanism to raise and seek recourse for concerns or grievances related to the operation's security.⁴⁴⁰

NOTE FOR 3.5.6.3: This was requirement 3.5.6.3 in the 2018 Mining Standard.

CONSULTATION QUESTION 1.4-2 (repeated from Chapter 1.4 – 'Complaints and Grievance Mechanism and Access to Remedy')

Background: Chapter 1.4 - 'Complaints and Grievance Mechanism and Access to Remedy' includes a range of requirements surrounding the existence of an accessible and effective operational-level grievance mechanism. It is not possible to score well on Chapter 1.4 if the mechanism does not have certain quality-related characteristics. Other chapters (i.e., human rights, gender, resettlement, security, ASM) also have requirements relating to the existence of a grievance mechanism;⁴⁴¹ however, the requirements in each of those chapters ask only that a mechanism is in place that allows grievances to be filed and addressed, but they do not speak to the overall quality of that mechanism. This is an approach proposed by IRMA to avoid too much repetition across chapters. However, this creates a situation in which an entity could theoretically score 'fully meets' on the grievance-related requirement in an individual chapter (which in most cases only asks that stakeholders have "access to" a grievance mechanism), even if the grievance mechanism as a whole is not an effective one (as reflected in the overall score for Chapter 1.4).

Question: Should an entity's score on grievance-related requirements within individual non-grievance-specific chapters be restrained or linked to the overall score that the entity gets on the grievance chapter (Chapter 1.4) as a whole?

For example, if a site scores 80% on Chapter 1.4, the most the site could receive for a grievance requirement in the other chapters would be a 'substantially meets,' but if a site scores 100% on Chapter 1.4 then, assuming the mechanism can handle grievances specific to the other chapters, they could possibly get a 'fully meets' rating on those grievance requirements.

⁴³⁹ The entity could report verbally (e.g., at a public meeting) or publish a report (such as an annual progress report produced by companies participating in the Voluntary Principles on Human Rights) that is available to stakeholders. Or this reporting could be part of the reporting on human rights due diligence required in Chapter 1.3. See Guidance Notes for more information.

⁴⁴⁰ The operational-level grievance mechanism developed as per Chapter 1.4 may be used as the mechanism to receive and address securityrelated grievances, or a separate mechanism may be created to handle only security-related concerns.

⁴⁴¹ See: Chapter 1.3, requirement 1.3.3.3; proposed Chapter 1.X, requirement 1.X.3.2; Chapter 2.4, requirement 2.4.3.3; Chapter 3.5, requirement 3.5.6.3; and Chapter 3.6, requirement 3.6.2.1.d.

3.5.6.4. If public security forces are providing security for any aspect of the <u>operation</u>, the <u>entity</u> encourages host governments to make, or allow the entity to make, security arrangements such as the purpose and nature of public security transparent and accessible to the public, subject to any overriding safety and security concerns.⁴⁴²

NOTE FOR 3.5.6.4: This was 3.5.6.4 in the 2018 Mining Standard. Minor wording changes, but no change in content or intent.

NOTES

This chapter draws on the Voluntary Principles on Security and Human Rights ("Voluntary Principles"), which provides a widely recognized framework for risk assessment and management of security providers that is respectful of human rights.⁴⁴³ Entities are encouraged to become corporate participants in the Voluntary Principles initiative, to learn from and share knowledge with other companies and participants regarding best practices related to security and human rights.⁴⁴⁴

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Corruption

Any unlawful or improper behavior that seeks to gain a private advantage through illegitimate means. Any kind of bribery is a form of corruption; but corruption also includes abuse of power, extortion, fraud, deception, collusion, cartels, embezzlement, and money laundering.

Source: Adapted from Responsible Jewellery Council 2019. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

⁴⁴² As explained in the Voluntary Principles Implementation Guidance Tool, information that could create security and safety concerns or human rights risks would include specific troop movements, supply schedules, company personnel movements, locations of valuable or hazardous equipment, etc.). ICMM, IFC and IPIECA. 2012. Voluntary Principles on Security and Human Rights Implementation Guidance Tools. p. 47. https://www.voluntaryprinciples.org/wp-content/uploads/2021/11/Implementation-Guidance-Tools_English.pdf

⁴⁴³ Voluntary Principles on Security and Human Rights. 2014. www.voluntaryprinciples.org

⁴⁴⁴ ibid. "Voluntary Principles Initiative – Guidance on Certain Roles and Responsibilities of Companies." <u>https://www.voluntaryprinciples.org/wp-content/uploads/2019/12/RolesResponsibilities-Companies.pdf</u>

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Business Relationships

Relationships a business enterprise has with business partners, entities in a value chain, and any other non-state or state entity directly linked to its business operations, products, or services. They include indirect business relationships in its value chain, beyond the first tier, and minority as well as majority shareholding positions in joint ventures.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Authority

The government department or other authority having power to issue and enforce regulations, orders, or other instructions having the force of law in respect of the subject matter of the provision concerned.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Conflict Analysis

The systematic study of the profile, issues, and stakeholders that shape an existing or potential conflict, as well as factors in the interaction between the three. It helps companies gain a better understanding of the environment in which they operate and their role in that context.

Conflict Risk

The assessed potential consequences of any conflicts that may emerge or be exacerbated because of an entity's presence, activities, or relationships; and the probability that such conflicts will occur. Conflicts may arise within or between communities and/or stakeholder groups, or between the company and communities/stakeholders.

REVISED. Added that risk is based on an assessment of potential consequences and probability of conflicts.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Human Rights Defenders

Any person or group of persons working to promote human rights and contributing to the effective elimination of all violations of human rights and fundamental freedoms of peoples and individuals. Defenders can be of any gender, of varying ages, from any part of the world and from all sorts of professional or other backgrounds, i.e., not only found within NGOs and intergovernmental organizations but might also, in some instances, be government officials, civil servants or members of the private sector, and individuals working within their local communities.

Source: Adapted from UN Office of the High Commissioner for Human Rights website: "Who is a defender."

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management,

monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Potential Human Rights Impact

An adverse impact on human rights that may occur but has not yet done so. (May also be referred to as human rights risk).

Remediation/Remedy (including in relation to human rights impacts or grievances)

Remediation and remedy refer to both the processes of providing remedy for an adverse impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

REVISED. Added reference to grievances.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Chapter 3.6 Artisanal and Small-Scale Mining

NOTES ON THIS CHAPTER: This chapter is similar to the 2018 Mining Standard, with only minor wording changes and some enhancements to requirements for entities that source from artisanal and small-scale mines (ASM), to better align with expectations in other standards (see 3.6.4.1).

Glossary:

• We are proposing new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements. The full glossary is at the end of the document. Feedback on definitions is welcome.

BACKGROUND

It has been estimated that there are between 20 and 30 million men, women and children involved in artisanal and small-scale mining (ASM) worldwide, and that the ASM sector is responsible for 15 to 20 percent of the production of global minerals and metals.⁴⁴⁵

While there is no single definition of artisanal and smallscale mining (ASM), it is generally understood to encompass a range of activities, including prospecting, exploration, extraction, processing and transportation, and use more simplified and labor-intensive technologies and practices than industrial or large-scale mining (LSM).

The ASM sector is complex and diverse. It includes individuals or families mining to earn or supplement their livings, as well as small-scale commercial operations that employ numerous workers. Much of ASM is informal, with entities operating in in contravention to laws, or in the absence of an appropriate legal framework, although some ASM operators do have permits, pay taxes and abide by

TERMS USED IN THIS CHAPTER

Affected Communities Area of Influence Artisanal and Small-Scale Mining (ASM) Collaboration Conflict-Affected or High-Risk Area Consultation Entity NEW Exploration NEW Grievance Mechanism Host Country Law Inform Legitimate ASM NEW Livelihoods Mineral Processing NEW Mining NEW Mitigation Coperation NEW Project NEW Scoping NEW Stakeholder Suppliers Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

social and environmental regulations.⁴⁴⁶ In some contexts, there may be a criminal element to ASM activities, such as smuggling, tax evasion, money laundering, trafficking in illegal chemicals, or financing of conflict.⁴⁴⁷

ASM sometimes occurs in areas close to or on LSM concessions. ASM miners may have traditionally operated in those areas, full-time or seasonally, or in other cases miners may have arrived during LSM exploration or after the development of the large-scale mine.

Given the diversity within the ASM sector, it is understandable that interactions between LSM and ASM entities can also take on a variety of forms, from violent confrontation to harmonious co-existence.⁴⁴⁸

⁴⁴⁵ Buxton, A. 2013. Responding to the Challenge of Artisanal and Small-Scale Mining: How can knowledge networks help? Institute for Environment and Development (IIED), London. p. 3. <u>http://pubs.iied.org/16532IIED/</u>

⁴⁴⁶ ibid. p. 4; Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). 2017. IGF Guidance for Governments: Managing Artisanal and Small-Scale Mining. International Institute for Sustainable Development (IISD).p. 5. <u>https://www.igfmining.org/resource/guidance-for-governments-managing-artisanal-and-small-scale-mining/</u>

⁴⁴⁷ IGF, 2017, p. 12; and Echavarria, C. 2014. 'What is legal?' Formalising Artisanal and Small-Scale Mining in Colombia. Institute for Environment and Development (IIED), London and Alliance for Responsible Mining (ARM), Columbia. P. 23. <u>http://pubs.iied.org/pdfs/16565IIED.pdf</u>

⁴⁴⁸ Communities and Small-Scale Mining, World Bank/IFC Oil, Gas and Mining Sustainable Community Development Fund and ICMM. 2010. Working Together - How Large-Scale Mining Can Engage with Artisanal and Small-Scale Miners. p. 5. <u>https://www.commdev.org/publications/working-together-how-large-scale-mining-can-engage-with-artisanal-and-small-scale-miners/</u>

ASM is playing a growing role in many national economies,⁴⁴⁹ and holds the potential to provide decent livelihoods if conducted in an organized and responsible manner and afforded more secure access to capital and markets. Large-scale mines that operate in the same regions as ASM, or that purchase minerals produced by ASM, have the opportunity to contribute to positive transformations in the ASM sector.

OBJECTIVES/INTENT OF THIS CHAPTER

To avoid conflict and, where possible within the scope of host country law, foster positive relationships between entities managing large-scale mining and mineral processing operations and artisanal and small-scale mining (ASM) entities, and support the development of ASM that provides positive livelihood opportunities and is protective of human rights, health, safety, and the environment.

NOTE ON OBECTIVES: REVISED. Added reference to mineral processing.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all <u>exploration</u>, <u>mining</u>, and <u>mineral processing projects</u> and <u>operations</u> that have the potential to interact with <u>ASM</u> entities due to proximity. In such situations, criteria 3.6.1, 3.6.2 and 3.6.3 are applicable.

Criterion 3.6.4 is relevant for mining operations that are currently sourcing from ASM, and for proposed mining or mineral processing projects that may have commercial relationships with ASM (such as sourcing ore or minerals from ASM entities, or processing ASM materials).

If mineral processing operations are currently sourcing from ASM but do not have the potential to interact with ASM due to proximity, then only the requirements in criterion 3.6.4 apply.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Artisanal and Small-Scale Mining Requirements

3.6.1. Understand the ASM Context

⁴⁴⁹ Freundenberger, M., Ali, S., Fella, T. and Pennes, S. 2013. Property Rights and Artisanal Mining: Clarifying and Strengthening Rights: Options for Policymakers. USAID Issue Brief. p. 1. <u>https://www.land-links.org/wp-content/uploads/2016/09/Property-Rights-and-Artisanal-Mining.pdf</u>

3.6.1.1. A scoping process (or equivalent) is undertaken to understand the legal, social, and environmental context in which ASM activities are occurring in the project/operation's area of influence.

NOTE FOR 3.6.1.1. REVISED. This was 3.6.1.1 in the 2018 Mining Standard. Previously this requirement referred to ASM on the LSM concession or in close proximity. We have changed to in the area of influence, as "close proximity" is not clear.

3.6.2. Engage with ASM Entities and Communities

3.6.2.1. A good faith effort is made to:⁴⁵⁰

- a. Engage with ASM entities including, where relevant, informal ASM operators and formal ASM associations, as part of ongoing stakeholder engagement efforts (see Chapter 1.2);
- b. <u>Consult</u> with informal and formal ASM entities during relevant risk and impact assessments and <u>closure</u> planning (see Chapters 2.1 and 2.6);
- c. Engage with communities that are or may be affected by ASM activities or interactions between the <u>entity</u> and ASM entities; and
- d. Informs ASM entities and communities that there is an operational-level grievance mechanism available to raise concerns and resolve conflicts related to the entity and its project/operation (see Chapter 1.4).

NOTE FOR 3.6.2.1. This was 3.6.2.1 in the 2018 Mining Standard.

3.6.3. Foster Positive Relationships and Opportunities for ASM and Communities

3.6.3.1. The project's/operation's security personnel are trained in respecting the human rights of individuals engaged in ASM activities and members of affected communities.

NOTE FOR 3.6.3.1. This was 3.6.3.1 in the 2018 Mining Standard.

3.6.3.2. The <u>entity</u> collaborates with <u>ASM</u> entities and <u>affected</u> communities to develop and implement measures to improve the safety and enhance the positive environmental and social impacts of ASM activities.

NOTE FOR 3.6.3.2. This was 3.6.3.2 in the 2018 Mining Standard.

3.6.4. Perform Due Diligence in Commercial Relationships with ASM⁴⁵¹

3.6.4.1. When a mining or mineral processing project proposes to source from ASM, or a mining operation sources minerals from ASM entities, the entity:

- a. Identifies the legal status of the ASM entities and maintains commercial relationships only with entities engaged in legitimate ASM;
- b. Regularly assesses the safety, social and environmental risks and impacts related to the ASM entities with whom it may have or has a commercial relationship;⁴⁵²

⁴⁵⁰ Recognizing that some outreach may be difficult in some situations that pose a material risk to the entity's personnel.

⁴⁵¹ Criterion 3.6.4 is only relevant if the LSM has a commercial/business relationship with an ASM entity. LSM with commercial relationships must carry out 3.6.4 in addition to 3.6.1, 3.6.2 ad 3.6.3.

⁴⁵² An array of social and environmental issues at ASM operations may pose social and environmental risks. These include, but are not limited to lack of legal compliance, bribery and corruption, child labor, forced labor, low wages, lack of labor rights, poor occupational health and safety (e.g., exposure of workers and communities to toxic chemicals such as mercury and cyanide), lack of gender equality, security risks, human rights abuses, especially in conflict-affected areas, environmental pollution and degradation from poor waste management practices, and operating in protected areas or areas of key biodiversity.

- c. <u>Collaborates</u> with those ASM entities with whom it can legally and legitimately engage to develop and implement a plan to eliminate or <u>mitigate</u> the most significant risks⁴⁵³ and, over time, address other social and environmental risks related to those ASM operations; and
- d. Periodically monitors the effectiveness of mitigation strategies, and adapts plans as necessary to facilitate continued minimization of risks;
- e. Participates in or supports initiatives that promote the professionalization, formalization and/or certification of ASM entities, as appropriate to the situation;
- f. Supports development opportunities for ASM communities; and
- g. Offers fair commercial terms to all ASM suppliers.

NOTE FOR 3.6.4.1: REVISED. Sub-requirement (a) has been added. The previous 3.6.4.1 was missing the step of identifying the status of ASM and sourcing from those deemed legitimate. This is consistent with guidance provided by the OECD and others.⁴⁵⁴ Sub-requirements (e), (f) and (g) align requirements in the Responsible Jewellery Council Code of Practices.⁴⁵⁵

To support interpretation of 3.6.4.1.a, we are proposing the following definition of Legitimate Artisanal and Small-Scale Mining (ASM):

ASM that is conducted in a manner that is consistent with applicable laws and does not contribute to conflict and serious abuses associated with the extraction, transport or trade of minerals (as defined in Annex II of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas), or, in the absence of a legal framework or if the legal framework is not enforced, where ASM entities can demonstrate 'good faith efforts' to work within the legal framework (i.e., obtaining permits where available) and pursue formalization. (Source: Adapted from OECD.⁴⁵⁶)

3.6.4.2. When a <u>project</u> proposes to, or an <u>operation</u> actually sources minerals from <u>ASM</u> entities that are located in a <u>conflict-affected or high-risk area</u>, the <u>entity</u> carries out additional due diligence requirements in Chapter 3.4.⁴⁵⁷

NOTE FOR 3.6.4.2. This was 3.6.4.2 in the 2018 Mining Standard.

NOTES

To be determined. There were no notes in the 2018 Mining Standard.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

⁴⁵³ The most significant risks will vary, depending on the ASM operations. However, if present, the following should always be considered "significant risks": serious human rights abuses, including the worst forms of child labor, forced labor, torture, cruel, inhuman or degrading treatment, widespread sexual violence, war crimes or serious violations of international humanitarian law, crimes against humanity or genocide.

⁴⁵⁴ For example, see: OECD. 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) p. 84. <u>https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf</u>

⁴⁵⁵ Responsible Jewellery Council. 2019. Code of Practices. Requirement 8.1.b. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-</u> <u>COP-2019-V1.2-Standards.pdf.</u>

 ⁴⁵⁶ OECD. 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) p.
 <u>https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf</u>

⁴⁵⁷ In addition to relevant requirements in Chapter 3.4, entities are also expected to meet the requirements outlined in 3.6.4.1.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Legitimate Artisanal and Small-Scale Mining (ASM)

ASM that is conducted in a manner that is consistent with applicable laws and does not contribute to conflict and serious abuses associated with the extraction, transport or trade of minerals (as defined in Annex II of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas), or, in the absence of a legal framework or if the legal framework is not enforced, where ASM entities can demonstrate 'good faith efforts' to work within the legal framework (i.e., obtaining permits where available) and pursue formalization.

Source: Adapted from OECD. 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) p. 69. <u>https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf</u>

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.

REVISED. Streamlined - removed examples.

Artisanal and Small-Scale Mining (ASM)

Formal or informal operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labor-intensive technology. ASM can include men and women working on an individual basis as well as those working in family groups, in partnership or as members of cooperatives or other types of legal associations and enterprises involving hundreds or thousands of miners. For example, it is common for work groups of 4-10 individuals, sometimes in family units, to share tasks at one single point of mineral extraction (e.g., excavating one tunnel). At the organizational level, groups of 30-300 miners are common, extracting jointly one mineral deposit (e.g., working in different tunnels), and sometimes sharing processing facilities.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Conflict-Affected and High-Risk Areas

Areas identified by the presence of armed conflict, widespread violence, including violence generated by criminal networks, or other risks of serious and widespread harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars. High-risk areas are those where there is a high risk of conflict or of widespread or serious abuses of human rights as defined in paragraph 1 of Annex II of the OECD Due Diligence Guidance Area on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk (see source of definition, below). Such areas are often characterized by political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure, widespread violence, and violations of national or international law.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses, stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Inform

The provision of information to inform stakeholders of a proposal, activity, or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Suppliers

Providers of goods, services, or materials to a project/operation.

Chapter 3.7 Cultural Heritage

NOTES ON THIS CHAPTER: A number of changes have been made to more closely align the structure and flow of the chapter with other IRMA chapters, and also to streamline Chapter 3.7.

Proposed additions and changes:

- There is one significant change discussed in Consultation Question 3.7-2, below.
- Also, streamlining was done by moving the specific mitigation actions that should be taken if certain types of cultural heritage are encountered into normative Annexes (i.e., sites will still be assessed against the elements in the Annexes, if applicable). Since all of the different types of cultural heritage are not found at all sites, rather than mark 5 or 6 requirements as "not relevant" we believe this is a better approach. (See requirement 3.7.3.2)
- One requirement related to Indigenous Peoples living in voluntary isolation was moved from this chapter to Chapter 2.2—Indigenous Peoples and Free, Prior and Informed Consent.
- We are also proposing to add a definition of cultural heritage. In the 2018 version of the Mining Standard, we only defined particular types of cultural heritage (e.g., intangible, tangible, replicable, non-replicable, critical) but not cultural heritage in its own right. We are proposing this definition, in particular, to make it clear that cultural heritage encompasses a broad suite of concepts, including not only those that relate to human cultures, but also paleontological resources (e.g., fossils of animals and plants that existed in previous geologic periods).

Cultural Heritage

Refers to (i) tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.

Source: Adapted from IFC Performance Standard 8.

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

CONSULTATION QUESTION 3.7-1

Background: The original 2018 version of IRMA's chapter was based on the IFC Performance Standard 8 (PS8) on Cultural Heritage, but we have received some comments from practitioners engaged in cultural heritage protection that while IFC is a globally known cultural heritage framework, it is "not well used/ mobilized/connected to best available practice thinking."

Question: We would be interested to hear if there are other frameworks being used by in cultural heritage practitioners if there are particularly areas of IRMA's standard that could be strengthened to better reflect current best available practices in the field of cultural heritage protection.

CONSULTATION QUESTION 3.7-2

Background: This proposed version of Chapter 3.7 has one significant addition to fill a gap that was identified with the current IRMA Standard. While the 2018 version of the chapter clearly addresses new impacts on cultural heritage, it does not provide adequate coverage of expectations for existing operations that may have impacted

cultural heritage in the past. While many types of cultural heritage cannot be put back or restored once they have been disturbed, there are, nevertheless, steps that can be taken to provide mitigation or remedy after the fact.

As mentioned above, the original 2018 version of IRMA's chapter was based on the IFC Performance Standard 8 (PS8) on Cultural Heritage. A guidance note in IFC PS8 says that PS8 applies both to cultural heritage that has not been disturbed as well as that which has already been disturbed,⁴⁵⁸ but the requirements in PS8 do not specifically reference what to do in the case of past impacts on cultural heritage.

A number of new requirements are being proposed in IRMA's revised chapter to help fill the gap in the IRMA and IFC Standards, such that if cultural heritage was disturbed at any point during the mineral development life cycle, those impacts need to be assessed, and, if necessary, addressed. The steps involved include identifying if past impacts have occurred (3.7.1.1) assessing the extent of the impacts and any past mitigation efforts and determining if additional mitigation is required (3.7.2.1), and developing and implementing additional mitigation measures to protect resources such as remediation of impacted areas, compensation for impacts, or other measures (3.7.3.1).

Question: Do you agree that all operating mines and mineral processing sites should have to demonstrate an understanding of whether or not their past activities have impacted cultural heritage resources, and if residual impacts exist, mitigate them?

BACKGROUND

Cultural heritage is the legacy of physical structures, landscapes, and artifacts, as well as intangible attributes of a group or society, such as language, activities, or knowledge that has cultural, scientific, spiritual, or religious value.⁴⁵⁹

Over time, mining and other forms of industrial development can both create and result in profound and irreversible damage to cultural heritage. Most obviously, mining activities can destroy or damage tangible cultural heritage, such as historical buildings or sites of spiritual significance. Damage to intangible cultural heritage may also occur, for example, as a result of inappropriate visitation of sites or the inappropriate use of traditional knowledge.⁴⁶⁰

Increasingly, mining entities are recognizing the importance of protecting and where possible promoting cultural heritage to respect the rights of and strengthen relationships with communities wherever they operate.⁴⁶¹

TERMS USED IN THIS CHAPTER

Affected Community
Area of Influence Baseline
Biosphere Reserve
Chance Find (Procedure)
Collaboration
Competent Professionals
Consultation
Contractor
Critical Cultural Heritage
Cultural
Heritage NEW
Entity NEW
Exploration NEW
Free,
Prior and Informed Consent
Host Country Law
Indigenous Peoples
Intangible Cultural Heritage
Mineral Processing NEW
Mining NEW
MiningRelated Activities
Mitigation
Non-Replicable Cultural
Heritage NEW
Operation NEW
Project NEW
Protected Area
Protected Area Management Category
Replicable Cultural
Heritage
Rights Holders
Stakeholders
Tangible Cultural
Heritage
Tentative
List for World Heritage
Site

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of this chapter.

⁴⁵⁸ "Performance Standard 8 applies to cultural heritage that has been undisturbed as well as disturbed. The client may undertake measures for the protection of already-disturbed cultural heritage that are different from measures for the protection of untouched cultural heritage. Many types of cultural heritage cannot be put back once they have been disturbed, but they may still be valued." (Source: IFC Guidance Note 8-Cultural Heritage. GN9. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>)

⁴⁵⁹ Adapted from: Daes, E. 1995. Protection of the heritage of Indigenous people. Final report of the Special Rapporteur, Mrs. Erica-Irene Daes, in conformity with Subcommission resolution 1993/44 and decision 1994/105 of the Commission on Human Rights. E/CN.4/Sub.2/1995/26. June 21, 1995; and IFC. 2012. IFC's Guidance Notes: Performance Standards on Environmental and Social Sustainability. Guidance Note 7, p. 17.

⁴⁶⁰ E.g., some Indigenous heritage sites may be gendered—safe for one sex but dangerous to the other; Indigenous Peoples' knowledge regarding the existence, location and significance of sites is often not public; and in some cases, if knowledge of sacred sites is transferred inappropriately it may be dangerous to both the giver and receiver. (O'Faircheallaigh, C. 2008. Negotiating Cultural Heritage? Aboriginal-Mining Company Agreements in Australia. p. 7)

⁴⁶¹ E.g., see Anglo American. 2009. The Anglo Social Way: Management System Standards. p. 12. https://www.angloamerican.com/development/approach-and-policies/human-rights/~/media/Files/A/Anglo-American-

OBJECTIVES/INTENT OF THIS CHAPTER

To protect and respect the cultural heritage of communities and Indigenous Peoples.

SCOPE OF APPLICATION

RELEVANCE: The first requirement in this chapter is applicable to all <u>exploration</u>, <u>mining</u> and <u>mineral processing</u> <u>projects</u> and <u>operations</u>.

Based on the outcome of that requirement, some <u>entities</u> may be able to demonstrate to auditors that they have not impacted and do not have the potential to impact <u>Indigenous Peoples' cultural heritage</u> and/or the cultural heritage of non-Indigenous communities. In such cases, the remainder of the chapter may be deemed not relevant.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Cultural Heritage Requirements

3.7.1. Cultural Heritage Due Diligence and Scoping

NOTE FOR 3.7.1. In the 2018 version of the Mining Standard, criterion 3.7.1 was called General Stipulations. It included expectations related to use of competent professionals, stakeholder engagement, and access to information on cultural heritage. The General Stipulations criterion has been removed, but the expectations have not been lost – they have been integrated into criteria and requirements below, in a manner more consistent with other IRMA chapters.

In the 2018 version of the Mining Standard, requirements related to scoping and assessment of potential impacts on cultural heritage were listed under a criterion called Cultural Heritage Screening and Assessment. We are using the work scoping to be more consistent with other IRMA chapters. And have now created one criterion for scoping, and other for assessment in order to be more consistent with the structure of other IRMA chapters.

<u>Plc/siteware/docs/aa_social_way.pdf;</u> and also: Rio Tinto. 2011. Why Cultural Heritage Matters. <u>https://cdn-rio.dataweavers.io/-</u>/media/content/documents/sustainability/corporate-policies/rt-why-cultural-heritage-matters.pdf?rev=cf46a63414e84401aa1642ae6b7fe181

- 3.7.1.1. All operations demonstrate an understanding of their cultural heritage context by:⁴⁶²
 - a. Using competent professionals to:
 - i. Identify if replicable, non-replicable or critical cultural heritage exists in the operation's area of influence; and
 - ii. Determine if there have been any past impacts on cultural heritage related to the operation;
 - Identifying Indigenous Peoples and others who may have rights associated with cultural heritage (hereafter collectively referred to as rights holders) and stakeholders who may have an interest in cultural heritage; and
 - c. <u>Consulting</u> with relevant rights holders and stakeholders in the identification of cultural heritage and determination of past impacts on cultural heritage that may be related to the operation (3.7.1.1.a).

NOTE FOR 3.7.1.1: NEW. Requirement 3.7.1.1 has been added to fill a gap with the 2018 IRMA Mining Standard. The version of this chapter in the 2018 Standard clearly addresses the screening and assessment of potential *new* impacts on cultural heritage but does not outline expectations for existing operations that may have impacted cultural heritage in the past. While many types of cultural heritage cannot be put back or restored once they have been disturbed, there are steps that can be taken to provide mitigation or remedy after the fact.

Requirement 3.7.1.1 therefore asks that companies be able to demonstrate an understanding of the impacts of their past activities on cultural heritage. Later in the chapter, we propose that if some of those impacts have not been sufficiently remediated, there will be additional steps that must be taken. See <u>CONSULTATION</u> <u>QUESTION 3.7-2</u> above.

Re: 3.7.1.1.c, we use the wording "impacts on cultural heritage related to the operation" rather than impacts related to a particular entity's activities, because it is possible that the entity that caused the impact is not the entity in charge of the mine or mineral processing operation. No matter who caused the damage, the current owner/operator of the project/operation bears the responsibility for ensuring that mitigation for those impacts occurs, if necessary.

If the results of 3.7.1.1 or 3.7.1.2, below, demonstrate that no replicable, non-replicable, or critical cultural heritage exists in the actual or proposed area of influence, then the remainder of the chapter may be marked as not relevant.

3.7.1.2. When new projects are proposed and/or when changes are proposed to mining-related activities, a scoping (or equivalent) process is undertaken that includes:

- a. Using competent professionals to:
 - i. Identify if replicable, non-replicable, or critical cultural heritage exists in the project's/operation's area of influence, If not done previously;⁴⁶³ and
 - ii. Identify if there are risks to cultural heritage posed by proposed mining-related activities;⁴⁶⁴
- b. Identifying Indigenous Peoples and others who may have rights associated with cultural heritage (hereafter collectively referred to as rights holders), and stakeholders who may have an interest in cultural heritage;

⁴⁶² Some or all of this may already have been done as part of an ESIA.

⁴⁶³ This may already have been done at sites where changes are being proposed to current operations.

⁴⁶⁴ If screening does not identify any risks or potential impacts to cultural heritage, then further assessment is not needed.

Note that screening may take place as part of the ESIA in IRMA Chapter 1.2, or as part of the biodiversity, ecosystem services and protected areas screening in IRMA Chapter 4.6.

Screening should include a determination of whether or not the proposed project is in an area currently or traditionally occupied or used by Indigenous Peoples, where cultural heritage of other communities may be affected, where there may be Indigenous Peoples living in voluntary isolation, or where nearby areas have been legally protected to preserve cultural heritage.

c. Conducting consultations with relevant stakeholders and rights holders in the identification of cultural heritage and determination of risks to cultural heritage posed by proposed mining-related activities (3.7.1.2.a).

NOTE FOR 3.7.1.2: This requirement differs from proposed requirement 3.7.1.1 in that companies are assessing the <u>risks to</u> cultural heritage in 3.7.1.2, rather than the past impacts on it.

Requirement 3.7.1.2 has been expanded compared to the version of the requirement in the 2018 Mining Standard. We've added a sub-requirement (b) that potentially affected Indigenous Peoples and stakeholders be identified.

Use of competent professionals (a) and requirements related to consultations with stakeholders/rights holders (c) were previously part of the criterion on General Stipulations, which is being proposed for deletion.

3.7.2. Cultural Heritage Assessment

3.7.2.1. If past impacts on <u>cultural heritage</u> are identified (see 3.7.1.1), a damage assessment (or equivalent) is undertaken that:⁴⁶⁵

- a. Is carried out by competent professionals;
- b. Documents the nature of the <u>cultural heritage</u> that has been impacted (i.e., was it <u>replicable</u>, <u>non-replicable</u> or <u>critical cultural heritage</u>, and was it <u>tangible</u> or <u>intangible</u>), the location of the impacts, and extent of the impacts;
- c. Documents any past activities taken to mitigate the impacts on cultural heritage;
- d. Determines if past mitigation efforts were agreed by affected Indigenous Peoples, if relevant;
- e. Includes consultations with relevant rights holders and stakeholders in the identification of past impacts and the nature of the cultural heritage that was impacted; and
- f. If past mitigation measures did not accord with the measures related to replicable, non-replicable or critical cultural heritage found in <u>Annex 3.7-A</u>, or, if relevant, the measures for cultural heritage in <u>protected areas</u> found in <u>Annex 3.7-B</u>, then additional mitigation measures are developed in <u>collaboration</u> with affected rights holders and stakeholders.

NOTE FOR 3.7.2.1: NEW. See note for 3.7.1.1. Depending on the outcome of the due diligence undertaken in 3.7.1.1, additional assessment of past impacts on cultural heritage may be necessary. Requirement 3.7.2.1 outlines a proposal for what that assessment might entail.

The term "mitigation measures" is meant to encompass the range of strategies that could be taken to prevent further impacts, minimize actual impacts, restore, or remediate areas that have been impacted, or compensate for past impacts. Strategies could include, for example, actions like stabilization, use of barriers or protective devices, rehabilitation of disturbed areas, restoration, repair, removal, and preservation of cultural resources, and/or compensation to Indigenous Peoples or affected communities.

3.7.2.2. If proposed mining-related activities may lead to new or additional impacts on <u>cultural heritage</u> (see 3.7.1.2), an assessment is undertaken that:

- a. Is carried out by competent professionals;
- b. Documents the nature of the cultural heritage that may be affected (i.e., is it <u>replicable</u>, <u>non-replicable</u> or <u>critical cultural heritage</u>, and is it <u>tangible</u> or <u>intangible</u>), and the likely extent of the potential impacts;
- c. Includes consultations with relevant rights holders and stakeholders in the identification of the nature of and extent of the potential impacts on cultural heritage; and

⁴⁶⁵ For example, see: Welch, J., Cowell, S., Ryan, S., Whiting, D., & Cantley, G. 2023. "Cultural Resource Damage Assessment," Advances in Archaeological Practice, 11(2), 111-125. <u>https://www.cambridge.org/core/journals/advances-in-archaeological-practice/article/cultural-resource-damage-assessment/5256E58A791028468B0660B5A35679EC</u>
d. Includes <u>collaboration</u> with affected rights holders and stakeholders to identify mitigation measures that are consistent with the measures related to replicable, non-replicable and critical cultural heritage found in <u>Annex 3.7-A</u>, and the measures for cultural heritage in <u>protected areas</u> found in <u>Annex 3.7-B</u>, as relevant.

NOTE FOR 3.7.2.2: All of the provisions in 3.7.2.2 are in the 2018 Mining Standard. Assessing the nature of the cultural heritage is in the original 3.7.2.2. The use of competent professionals (a) and requirements related to consultations with stakeholders/rights holders (c) and (d) were originally in criterion 3.7.1 'General Stipulations' in the 2018 Mining Standard, which is being proposed for deletion.

3.7.3. Cultural Heritage Management

3.7.3.1. A <u>cultural heritage</u> management plan or its equivalent is in place and implemented to protect cultural heritage. The plan:

- a. Is developed by competent professionals;
- b. Outlines specific actions to mitigate past and/or potential impacts on cultural heritage;
- c. Identifies key indicators, tied to an identified <u>baseline</u>, to enable evaluation of the effectiveness of mitigation activities over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff, ensuring that only competent professionals carry out the mitigation work;
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 3.7.3.1: REVISED. This was 3.7.7.1 in the 2018 Mining Standard. We have updated this requirement to be more consistent with management plan expectations in other IRMA chapters.

3.7.3.2. The mitigation measures in the management plan are:

- a. Consistent with the mitigation measures for replicable, non-replicable, and critical cultural heritage in <u>Annex 3.7-A</u>, as relevant; and
- b. If actual or potential impacts are associated with cultural heritage in a protected area, mitigation is aligned with the requirements in <u>Annex 3.7-B</u>.

NOTE FOR 3.7.3.2: NEW. This replaces a number of requirements in the 2018 version of this chapter (see the Annexes for more information on which ones have been moved there). Rather than include all of the specific mitigation measures in the chapter itself, we are proposing to move them to Annexes to improve readability and flow of the chapter. Those measures are still normative and, if not being met, will be reflected in the rating and narrative for the requirement in the public audit report.

3.7.3.3. A process is in place for monitoring and evaluating the effectiveness of the implementation of mitigation actions, and if necessary, outlining additional actions and updating the management plan to accord with desired or expected outcomes.

NOTE FOR 3.7.3.3: NEW.

CONSULTATION QUESTIONS 3.7-3:

Background: This is a new requirement. Most IRMA chapters that include management plans include a step to evaluate the effectiveness of the actions that are implemented, and if necessary, take further action. We are proposing to add this requirement because to create greater consistency throughout the standard.

Most IRMA chapters also have requirements related to monitoring, which typically include expectations that indicators be developed, and sampling or inspections occur to determine if mitigation measures are being effectively implemented. IFC Performance Standard 8 does not include monitoring of mitigation measures implemented for the protection of cultural heritage.

Question: Do you agree that it is reasonable for mitigation actions to be evaluated for effectiveness? If you agree that the lack of monitoring-related requirements is a gap that should be filled in the IRMA Standard, can you suggest examples of best practices in the monitoring or surveillance of cultural heritage mitigation activities?

3.7.3.4. When Indigenous Peoples' cultural heritage exists in a project's/operation's area of influence:

- a. Proposed mining-related activities that may impact Indigenous Peoples' critical cultural heritage proceed only with the free, prior and informed consent of the affected Indigenous Peoples;
- b. <u>Mitigation</u> strategies for past impacts and new impacts on Indigenous Peoples' cultural heritage are agreed by Indigenous Peoples prior to their implementation;
- c. The commercial use of Indigenous Peoples' cultural heritage only takes place:
 - i. After the Indigenous Peoples have been informed of their rights under <u>host country law</u>, the scope and nature of proposed commercial development, and the potential consequences of such development; and
 - ii. With the free, prior and informed consent of the Indigenous Peoples.

NOTE FOR 3.7.3.4: NEW. Although a new requirement, none of the content is new. All of the provisions include content related to the free, prior and informed consent and agreements with Indigenous Peoples from requirements that have been moved to <u>Annex 3.7-A</u>.

- 3.7.3.5. Procedures are in place and implemented for:
 - a. Managing <u>chance finds</u>, including, at minimum, a requirement that employees and <u>contractors</u> do not further disturb any chance find until an evaluation by <u>competent professionals</u> is made and <u>mitigation</u> actions consistent with <u>Annex 3.7-A</u> and <u>Annex 3.7-B</u> of this chapter are developed, as relevant;
 - b. Managing potential impacts to cultural heritage from visitors to the project/operations site;
 - c. Allowing continued access to cultural sites, subject to:
 - i. Consultations with relevant Indigenous Peoples and affected communities; and
 - ii. Any overriding health, safety, and security considerations; and
 - d. The sharing of information related to Indigenous Peoples' cultural heritage, subject to agreement with affected Indigenous Peoples.

NOTE FOR 3.7.3.5: This was requirement 3.7.7.2 in the 2018 Mining Standard. Only minor changes have been proposed to increase clarity of expectations and more consistent auditor scoring.

3.7.3.6. Relevant employees and <u>contractors</u> receive training on <u>cultural heritage</u> site recognition and care, and the <u>entity's</u> plans and procedures related to cultural heritage management.

NOTE FOR 3.7.3.6: This was 3.7.7.3 in the 2018 Mining Standard. Removed reference to training on cultural awareness because that is now being addressed in Chapter 1.2-Stakeholder Engagement, so that any of the entity's staff that interact with Indigenous Peoples, or peoples from a different cultural background, be trained in cultural awareness and sensitivity.

3.7.4. Disclosure

3.7.4.1. <u>Cultural heritage</u> assessments, management plans and procedures are publicly available or a publicly available access to information (or equivalent) policy that commits the <u>entity</u> to providing <u>stakeholders</u> with this information upon request is in place, and shared with stakeholders.⁴⁶⁶

⁴⁶⁶ As per Chapter 1.2, requirement 1.2.4.3, an access to information policy is proposed to be required in the revised IRMA Standard. It is expected that this policy could include the relevant provisions related to stakeholder access to entity-generated information and data on reclamation and closure.

NOTE FOR 3.7.4.1: REVISED. This was 3.7.1.3 in the 2018 version of the Mining Standard. It required that information be provided to stakeholders upon request. As with other chapters, we have added that information can also proactively be made public.

Note that we now refer to an access to information policy (or equivalent). That change is related to a proposed requirement in Chapter 1.2 (see explanation in <u>Note for requirement 1.2.4.3</u>).

NOTES

This chapter uses, as its basis, the IFC Performance Standard 8, Cultural Heritage.⁴⁶⁷

While this chapter applies to both Indigenous and non-Indigenous cultural heritage, it does not specify requirements applicable to Indigenous and Community Conserved Areas (ICCAs) designated as such by Indigenous Peoples or local communities. These are areas governed and/or managed by the people or community in a manner that conserves nature and/or cultural values.468 Such areas may be considered by Indigenous Peoples as a part of their cultural heritage and, as such, could be raised during the cultural heritage scoping process and addressed in Chapter 3.7, and/or addressed during the free, prior and informed consent process in Chapter 2.2—Free, Prior and Informed Consent.

NOTE: A consultation question regarding ICCAs has been added to Chapter 4.6—Biodiversity, Ecosystem Services and Protected Areas. See <u>CONSULTATION QUESTION 4.6-1</u>.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Cultural Heritage

Refers to (i) tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.

Source: Adapted from IFC Performance Standard 8.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

⁴⁶⁷ IFC. 2012. Performance Standard 8 Cultural Heritage. Guidance Note 8. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

⁴⁶⁸ ICCA Consortium website: "Three defining characteristics for ICCAs." <u>https://www.iccaconsortium.org/index.php/discover/</u>

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Non-Replicable Cultural Heritage

Cultural heritage that (i) is unique or relatively unique for the period it represents, or (ii) unique or relatively unique in linking several periods in the same site.

Source: IFC. 2012. Performance Standard 8. Guidance Note.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.

REVISED. Streamlined - removed examples.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Biosphere Reserves

Biosphere reserves are areas comprising terrestrial, marine and coastal ecosystems. Each reserve promotes solutions reconciling the conservation of biodiversity with its sustainable use. Biosphere reserves are 'Science for Sustainability support sites' – special places for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Their status is internationally recognized.

Chance Find (Procedure)

A chance find procedure is a project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered.

REVISED. Changed term from 'Chance Find' to 'Chance Find (Procedure)'.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Critical Cultural Heritage

Consists of: (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes, (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation; or (iii) natural areas with cultural and/or spiritual value such as sacred groves, sacred bodies of water and waterways, sacred trees, and sacred rocks.

Free, Prior and Informed Consent (FPIC)

Consent based on: engagement that is free from external manipulation, coercion and intimidation; notification, sufficiently in advance of commencement of any activities, that consent will be sought; full disclosure of information regarding all aspects of a proposed project or activity in a manner that is accessible and understandable to the people whose consent is being sought; acknowledgment that the people whose consent is being sought can approve or reject a project or activity, and that the entities seeking consent will abide by the decision.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic ,or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Intangible Cultural Heritage

Knowledge, innovations and/or practices, including oral expressions of folklore, performing arts, rituals, and festivals that are inherited from past generations, maintained in the present, and bestowed for the benefit of future generations.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Protected Area/Protected Area Management Categories (IUCN)

A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

The definition is expanded by six "protected area management categories" (one with a sub-division), summarized below.

Ia *Strict nature reserve:* Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values.

Ib *Wilderness area:* Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition.

II *National park:* Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.

III *Natural monument or feature*: Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove.

IV *Habitat/species management area*: Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category.

V *Protected landscape or seascape*: Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI *Protected areas with sustainable use of natural resources:* Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims.

Replicable Cultural Heritage

Tangible forms of cultural heritage that can themselves be moved to another location or that can be replaced by a similar structure or natural features to which the cultural values can be transferred by appropriate measures. Archeological or historical sites may be considered replicable where the particular eras and cultural values they represent are well represented by other sites and/or structures.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights, and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected, or protected.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Tangible Cultural Heritage

A unique and often non-renewable resource that possesses cultural, scientific, spiritual, or religious value, and are considered worthy of preservation for the future. Includes moveable or immovable objects, sites, structures, groups of structures, natural features, or landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural value.

Tentative List for World Heritage Site Inscription

The list of sites that relevant State Parties are formally considering for nomination as a World Heritage Site in the next five to ten years.

World Heritage Site

A site/property inscribed on the World Heritage List, which has outstanding universal value and meets the conditions of authenticity and integrity. The World Heritage property includes within its borders all of the attributes that are recognized as being of outstanding universal value.

ANNEXES AND TABLES

ANNEX 3.7-A: BEST PRACTICE MITIGATION MEASURES BASED ON THE NATURE OF THE CULTURAL HERITAGE (*Normative*)

TYPE OF CULTURAL HERITAGE	BEST PRACTICE MITIGATION MEASURES
Replicable Cultural Heritage that is not considered Critical Cultural Heritage Replicable cultural heritage is defined as tangible forms of cultural heritage that can themselves be moved to another location or that can be replaced by a similar structure or natural features to which the cultural values can be transferred by appropriate measures. Archeological or historical sites may be considered replicable where the particular eras and cultural values they represent are well represented by other sites and/or structures.	NOTE: These mitigation measures were in 3.7.3.1 and 3.7.3.2 in the 2018 Mining Standard.
	1. The mitigation hierarchy is applied as follows:
	 Mitigation measures, as a priority, favor avoidance. Where avoidance is not feasible, adverse impacts are minimized and in situ
	restoration measures that ensure maintenance of the value and functionality of the cultural heritage, including maintaining or restoring any ecosystem processes needed to support it, are implemented;
	 Where restoration in situ is not possible, the functionality of the cultural heritage, and any ecosystem processes needed to support it, is restored in a different location;
	iv. Where restoring the functionality of the cultural heritage in a different location is demonstrably not feasible, a justification for that determination is provided based on a competent expert's review of the circumstances. ⁴⁶⁹ Only then may historical and archeological artifacts and structures be permanently removed.
	v. If removal occurs, and affected communities have been using the tangible cultural heritage for long-standing cultural purposes, they are compensated for loss of that tangible cultural heritage. Compensation is only paid to affected communities that have been using tangible cultural heritage for long standing cultural purposes. It is not given for removal of archeological material from cultural horizons that pre-date the current affected communities or for other cultural heritage that has not been used within the living memory of the community. Compensation is also not given for loss of intangible cultural heritage.
	 All mitigation work involving replicable cultural heritage is carried out by competent professionals.
	3. All mitigation work is conducted using the best available techniques
	 All mitigation, documentation and field-based studies use internationally recognized practices for the protection of cultural heritage.

⁴⁶⁹ Added from IFC. 2012. Performance Standard 8 Cultural Heritage. Guidance Note 8. p. 6. <u>https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-guidance-note-en.pdf</u>

Non-replicable Cultural Heritage	NOTE: These mitigation measures were in 3.7.4.1 and 3.7.4.2 in the 2018 Mining Standard.
Non-replicable cultural heritage is cultural heritage	 No tangible nonreplicable cultural heritage is removed unless all of the following conditions are met:
that (I) is unique or relatively	i. There are no technically or financially feasible alternatives to removal;
represents, or (ii) unique or relatively unique	The overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal;
in linking several periods in the same site.	iii. Any removal of cultural heritage uses best available techniques that are peer reviewed by external experts before being implemented.⁴⁷⁰
	 All mitigation work involving non-replicable cultural heritage is carried out by competent professionals.
	 All mitigation, documentation and field-based studies use internationally recognized practices for the protection of cultural heritage.
Critical Cultural Heritage	NOTE: These mitigation measures were in 3.7.5.1 in the 2018 Mining Standard.
Critical cultural heritage consists of: (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes, (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation; or (iii) natural	 Critical cultural heritage is not removed, significantly altered or damaged except in exceptional circumstances when impacts on critical cultural heritage are unavoidable and all of the following conditions are met:
	i. The assessment and mitigation measures to protect cultural heritage are carried out by competent professionals, and external experts are also retained to assist in the assessment and selection of protection of internationally recognized practices to protect of cultural heritage; ⁴⁷¹ and
	 Collaboration occurs with affected communities to negotiate measures to protect critical cultural heritage and provide equitable outcomes for affected communities, and document the mutually accepted negotiation process and outcomes.
areas with cultural and/or spiritual value such as sacred groves, sacred bodies of water and waterways, sacred trees, and sacred rocks.	2. Where impacts may occur to the critical cultural heritage of Indigenous Peoples the critical cultural heritage is not removed, significantly altered or damaged without their free, prior and informed consent (See IRMA Chapter 2.2).
Commercial Use of Intangible	NOTE: These mitigation measures were in 3.7.3.1 in the 2018 Mining Standard.
Cultural Heritage Intangible cultural heritage includes knowledge, innovations and/or practices, including oral expressions of	 When an entity proposes to use the intangible cultural heritage, including knowledge, innovations or practices of local communities for commercial purposes, the entity informs these communities of their rights under national and international law, of the scope and nature of the proposed commercial development, and of the potential consequences of such development.
folklore, performing arts, rituals, festivals, that are	2. The entity does not proceed with such commercialization unless it:
inherited from past generations, maintained in the present and bestowed for the benefit of future generations.	 Collaborates with affected communities using a good faith negotiation process that results in a documented outcome; and
	Provides for fair and equitable sharing of benefits from commercialization of such knowledge, innovation, or practice, consistent with local customs and traditions.
	iii. When an entity proposes to use Indigenous Peoples' cultural heritage for commercial uses, negotiation shall take place through the free, prior and informed consent process outlined in IRMA Chapter 2.2, unless otherwise agreed by the Indigenous Peoples.

⁴⁷⁰ Added from IFC PS8, Guidance Note 22.

⁴⁷¹ For example, the best available technique proposed by competent professionals hired by the entity could undergo a peer review by international external experts, or technical experts selected by stakeholders, to ensure that no better, feasible techniques are available.

ANNEX 3.B-B: BEST PRACTICE MITIGATION MEASURES IF CULTURAL HERITAGE IS IN A PROTECTED AREA (*Normative*)

LOCATION OF CULTURAL HERITAGE	BEST PRACTICE MITIGATION MEASURES
 Cultural heritage is in: World Heritage Sites, and areas on a state Party's official Tentative List for World Heritage Site Inscription; International Union for Conservation of Nature (IUCN) protected area management categories I-III; and Core areas of UNESCO biosphere reserves. 	NOTE: The mitigation measures in 1 were in 3.7.5.3 in the 2018 Mining Standard. The measures in 2 were in 3.7.5.4.
	 If these protected areas were designated to protect cultural heritage, then no proposed mining-related activities may adversely affect the cultural heritage values being protected Where operations existed in the location prior to the designation to protect cultural heritage: Develop a management plan and implement mitigation measures agreed by relevant management authorities (i.e., agencies or bodies responsible for protected area governance and management) to ensure that activities during the remaining life cycle do not permanently and materially damage the integrity of the cultural values for which the area was designated or recognized; and
	II. Collaborate with relevant management authorities to integrate the operation's management strategies into the protected area's management plan.
Cultural heritage is in:	NOTE: These mitigation measures in 1 were in 3.7.5.1 in the 2018 Mining Standard.
A legally protected area designated to protect cultural heritage (including areas proposed by host governments for such designation, or a legally defined protected area buffer zone)	 All mining-related activities comply with the protected area's management plan. If proposed activities are legally permitted, collaborate with protected area management authorities (i.e., agencies or bodies responsible for protected area governance and management) and rights holders, and consult with other key stakeholders, on the proposed mining-related activities, and on proposed mitigation measures and additional programs to promote and/or enhance the conservation aims and cultural heritage values in the area.
	Collaborate with management authorities to integrate the agreed mitigation measures into the protected area's management plan.
	 Implement mitigation measures agreed by management authorities and rights holders.
	5. Implement additional programs, as appropriate and agreed by management authorities and <u>rights holders</u> , to promote and enhance the conservation aims and cultural heritage values of the protected area.

Principle 4: Environmental Responsibility

Chapter 4.1 Waste and Materials Management

NOTES ON THIS CHAPTER: We are proposing a NEW APPROACH to this chapter. In the 2018 Mining Standard, the primary emphasis was on 'mine waste,' which included tailings, waste rock, spent ore from heap leaches, and wastes generated during mineral processing (e.g., residues and used processing fluids, wastes from thermal processing). Much less attention was paid to understanding risks and managing risks from chemicals that were used in the processing, or the chemical constituents of brines, or other substances like fuels, etc. Also, there was little attention paid to the management of non-mine wastes, which can be generated in considerable volumes at industrial-scale mines and processing facilities, and, depending on the wastes, can pose varying degrees of environmental and health hazards.

Proposed additions and changes:

We are proposing to separate the aspects of waste management into two chapters: this Chapter (4.1) will be focused the management of the chemicals and the potential pollution-related aspects of wastes, and a new Chapter 4.X- 'Management of Physical Stability,' currently inserted after Chapter 4.2, has been designed to evaluate the physical stability risks related to mine waste (and other) facilities.

Because the waste issues are now split between two chapters, we have not included criterion 4.1.1 from the 2018 Mining Standard, which required a waste policy, and have opted to focus more on waste assessment and management processes and procedures. Also, most other environmental chapters do not require policies.

We are proposing that this chapter now focus on systems to better understand the hazardous properties of materials and wastes. We are proposing to present requirements according to three categories of materials and wastes (see 'Scope of Application' section, below for more details):

- Materials and chemicals brought to the site;
- Materials that are produced (or extracted) as part of the mining and mineral processing processes; and
- Wastes that are produced (wastes generated by the mining/mineral processing processes, and wastes generated as a result of using the materials and chemicals that are brought to the site).

One of the challenges with having a chapter on wastes and materials management is that there is a considerable overlap with a number of other chapters in the IRMA Standard. Depending on the characteristics and volumes of materials and wastes, as well as treatment and disposal methods, materials/chemicals and wastes have the potential to adversely impact: workers (occupational health and safety), community health and safety, cultural heritage, water quality, air quality, soil quality, biodiversity and ecosystem services, human rights, and Indigenous Peoples' rights.

Thus, we have added numerous cross references to other chapters when information gained through the requirements in 4.1 can be integrated into other chapters. For example, we have retained requirements to characterize the potential contaminants in ore, concentrates and waste rock in this chapter. If contaminants of concern are identified, the risks from those contaminants can be evaluated alongside other risks in the air, water and soil chapters, and then mitigated/managed accordingly.

Other changes:

- We are proposing some management-related requirements, for example, that there be some evidence that efforts are made to reduce the volume of hazardous materials and wastes (using the waste mitigation hierarchy), and that procedures be put in place to ensure safe handling, storage, treatment and disposal of hazardous materials and wastes, and emergency response procedures for accidental releases of the materials.
- Reporting requirements have been updated to be more consistent with other IRMA chapters. (see criterion 4.1.9)

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

BACKGROUND

Mineral exploration projects, mines and mineral processing operations use various materials and create wastes and products and by-products that, if poorly managed, create risks to human health, safety and the environment. The range of materials and wastes with hazardous characteristics varies significantly from one site to the next, based on the commodity, throughput, processing method, and other factors.

Materials brought to a site that may have hazardous properties include chemicals and reagents used during beneficiation, mineral processing, or wastewater treatment; drilling muds; explosives used in both surface and underground mining; fuels including coal and petroleum products; solvents and lubricants associated with the use and maintenance of machinery; construction fill; and cement.

Also, some materials extracted/produced as a result of exploration, mining and mineral processing operations, such as ores, brines and concentrates, may contain constituents that create ecological or human health hazards if released to the natural environment.

Wastes produced at a site that may have hazardous properties include residues from beneficiation, mineral processing (e.g., tailings, slag) and by-product waste streams from those processes (e.g., mercury from gold

recovery/refining); waste rock; spent ores from leaching operations; laboratory wastes; used equipment and batteries; and others. Mining-related operations may also create waste as a result of mitigation or remediation activities such as water treatment residuals or spill cleanup. Additionally, both solid and liquid wastes (e.g., garbage, sewage) are produced at all mining and mineral processing sites.

There are proven technologies and practices to prevent and greatly reduce the potential for materials and wastes to impact human health, safety and the environment. This includes identification of the potential hazards, elimination of the hazards where possible, the use of appropriate design criteria and engineering controls to otherwise minimize risks, regular inspection and maintenance of facilities and equipment, and spill response plans, and appropriate training of workers who transport, handle and work with hazardous materials and wastes.

TERMS USED IN THIS CHAPTER

Acid Rock Drainage (ARD) ■ Affected Communities ■ Artisanal and Small-Scale Mining
Associated Facilities Biodiversity ■ Brine NEW ■ Closure ■ Contaminants of Potential Concern (COPCs) NEW ■ Contractors ■ Control ■ Ecosystem Services
Entity NEW
Exploration NEW Facility NEW ■ Hazard ■ Hazardous Material NEW ■ Hazardous Waste **NEW** Mercury Emission Control System ■ Mercury Waste ■ Metals Leaching (ML) ■ Mine-Influenced Water
Mineral Processing NEW
Mining NEW ■ Mitigation ■ Operation NEW ■ Pollution NEW ■ Process Water
Project NEW
Post-Closure
Release
Project NEW Safety Data Sheets NEW Secondary Containment Site **NEW** Soil Remediation **NEW** Stakeholder Stormwater ■ Tailings ■ Water Quality Criteria ■ Waste Mitigation Hierarchy NEW ■ Workers ■ Worker Health and Safety Representatives

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

OBJECTIVES/INTENT OF THIS CHAPTER

To transport, handle, store, treat and dispose of materials and wastes in a manner that protects worker and community health and safety, and the environment.

NOTE ON OBJECTIVES: REVISED. Now references management life cycle (transport, handle, store, treat and dispose), and removed references to physical and chemical risks.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining, and mineral processing projects and operations that use or produce the materials or create the wastes listed below.

Materials and chemicals transported to the site that may have hazardous properties

- Fuel including petroleum products, coal, etc.
- Solvents, lubricants and anti-freeze used in equipment, machine shops and vehicles
- Explosives used in mining including solid, gel, ammonium nitrate/fuel oil mixtures, detonators and caps
- Mineral beneficiation and processing reagents including chemicals used in flotation, leaching (e.g., cyanide, acids, bases) or other process (e.g., solvent extraction and electrowinning SX/EW, smelting fluxes)
- Ores, concentrates, scrap, or recycled materials purchased/brought to the site as feedstock for mineral processing
- Treatment plant chemicals
- Construction fill
- Cement
- Drilling chemicals/mud
- Instrumentation such as weighing gauges (which may contain radioactive elements/radionuclides)

Materials that are produced (or extracted) at the site that may have hazardous properties

- Ore
- Brines
- Concentrate

Wastes produced at the site that may have hazardous properties

- Tailings
- Waste rock (which may be a material considered as a construction material at some sites)
- Overburden
- Spent ore (from heap and dump leach operations)
- Mine-influenced water (e.g., from dewatering of underground or open pit operations, tailings supernatant, industrial stormwater, pregnant and barren solution pond water, seepage from mine facilities, acid mine drainage, treatment plant surge pond water)
- Mineral processing wastes (e.g., slag from iron, copper, lead, zinc or other processing, red and brown muds from bauxite refining, dross from aluminum production, wastes from solvent extraction and electrowinning (SX/EW), refractory lining/bricks, spent pot linings, wet scrubber sludges, baghouse dusts and other residues from thermal processes, wastewaters from various processes, etc.)
- Laboratory waste including chemical and solid waste (e.g., assay crucibles and cupels)
- Equipment and machine shop waste including solvents, waste oil and grease and anti-freeze
- Used batteries, used tires, electronics, etc.
- Unrepairable equipment and machinery, including broken instrumentation such as weighing gauges (which may contain radioactive elements/radionuclides)
- Construction wastes
- Wastes generated during spill cleanup
- Water treatment sludge, residue and materials (e.g., filters)
- Human-generated waste including garbage and sewage produced at sites, accommodations and camps.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CONSULTATION QUESTION 4.1-1: Can you suggest other materials or wastes that you believe should be included in the list above, or recommend that any of the materials or wastes in the list be removed? Please provide your rationale for suggested inclusions/exclusions.

CRITICAL REQUIREMENTS IN THIS CHAPTER

Mine wastes are not disposed of in rivers, lakes or marine environments (4.1.6.3).⁴⁷²

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Waste and Materials Management Requirements

4.1.1. Identification and Characterization of Materials and Wastes

NOTE FOR 4.1.1: In 4.1.1.3 and 4.1.1.4, below, we use the terms "hazardous material" and "hazardous waste." We recognize that in some jurisdictions these terms may have a regulatory definition. We are not proposing to adopt any one jurisdiction's definition, but rather, use the term hazardous more generally, as in "creating a danger or a risk."

Thus, we are proposing the following definitions:

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health or environmental hazard.

Hazardous Wastes

Wastes with properties or characteristics that make them a physical, health or environmental hazard.

4.1.1.1. The entity identifies:

- a. All chemicals and materials that are transported to the site and <u>associated facilities</u>, including, if relevant, ores, concentrates or other materials from third-parties used as feed materials for <u>mineral processing</u> operations;⁴⁷³
- b. All solid and semi-solid materials/products that are produced (e.g., ore, concentrates) and wastes that are produced (e.g., <u>tailings</u> or other residues, <u>waste rock</u>, overburden, slag or mineral processing wastes, etc.) as a result of <u>mining-related activities</u> at the site and <u>associated facilities</u>;⁴⁷⁴ and
- c. All liquid materials/products that are produced (e.g., <u>brines</u>) and liquid wastes that are produced (e.g., <u>mine-influenced waters</u> stored in pregnant and barren solution ponds, tailings supernatant ponds, industrial <u>stormwater</u> ponds, treatment plant surge ponds, etc.) as a result of mining-related activities at the site and associated facilities; and

⁴⁷² "Mine waste" include tailings, waste rock, spent ore from heap leaches, wastes generated during mineral processing (e.g., residues and used processing fluids, wastes from thermal processing).

⁴⁷³ 4.1.1.1.a applies if mineral processing operations purchase feed materials from third parties. However, if the processing operation is integrated with a mining operation that is being assessed, then the ores or concentrates being processed could be considered as being produced as a result of mining-related activities at the site or associated facilities (as per 4.1.1.1.b).

⁴⁷⁴ Note that this could include mine waste materials that get re-used or re-purposed, for example as road-bed or construction fill.

d. All wastes that are produced at the site and associated facilities that are not derived from mining or processing activities (e.g., spent equipment, used materials, used containers, garbage, sewage, construction waste, etc.).

NOTE FOR 4.1.1.1: NEW. The results of this requirement feed into 4.1.1.2, below.

We have started a list of potential materials and wastes that may contain chemicals or substances that make them potential hazards. (See the Scope of Application section, above) These can be included in an Annex or in Guidance.

4.1.1.2. For each chemical and material transported to the <u>site</u> or <u>associated facilities</u> (see 4.1.1.1.a), including ores, concentrates or other materials from third-parties used as feed materials for <u>mineral processing</u> operations, the <u>entity</u>:

- a. Determines if it has characteristics or properties that make it dangerous or capable of having a harmful effect on human health or safety, the environment, or communities;
- b. If relevant, identifies contaminants of potential concern (COPCs) in feed materials purchased for mineral processing operations; ⁴⁷⁵ and
- c. Documents the hazardous properties or characteristics, and the related potential health, safety, environmental or community impacts.

NOTE FOR 4.1.1.2: REVISED. 4.1.1.2.a was previously 4.1.2.1.a in the 2018 Mining Standard.

Re: 4.1.1.2.a, in guidance note we can elaborate on methods that could be used to identify chemicals, materials and wastes that pose hazards.⁴⁷⁶

And we can add more guidance on what sorts of chemicals and materials might pose physical, health or environmental hazards. For example, the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS) elaborates on chemicals and physical, health and environmental hazards.⁴⁷⁷

4.1.1.2.b is NEW. This information will feed into risk assessments in 4.1.3.1.

CONSULTATION QUESTION 4.1-2

Background: We are not proposing to require that mineral processing entities carry out a chemical characterization of purchased ore, concentrates or other feed materials from third-party suppliers, as we are assuming that elements present at concentrations in the feed with the potential to impact human health or the environment would be disclosed as part of the contract with the supplier. However, this is an assumption,

⁴⁷⁵ For materials coming from third parties to be used as feedstock for mineral processing operations, if the supplier does not disclose to the entity detailed information on the principal components and contaminants that are considered likely to be routinely or periodically present in feed materials, the entity will need to carry out some sort of characterization to determine this for themselves.

⁴⁷⁶ For example, hazardous properties of chemicals and some materials being used (or that will end up as wastes) can be found in Material Safety Data Sheets (also referred to as Safety Data Sheets) provided by chemical manufacturers, and also on International Chemical Safety Cards (International Labour Organization/World Health Organization International Chemical Safety Cards (ICSCs) available at: <u>https://www.ilo.org/safework/info/publications/WCMS_113134/lang--en/index.htm</u>)

⁴⁷⁷ The United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) lists properties of chemicals, including: Chemicals posing <u>physical hazards</u> (e.g., explosives, flammable gases, aerosols and chemicals under pressure, oxidizing gases, gases under pressure, flammable liquids, flammable solids, self-reactive substances and mixtures, pyrophoric liquids, pyrophoric solids, self-heating substances and mixtures, substances and mixtures that emit flammable gases when in contact with water, oxidizing liquids, oxidizing solids, organic peroxides, corrosive to metals, desensitized explosives).

For <u>health hazards</u> the properties include acute toxicity, skin corrosion/irritation, serious eye damage/irritation, respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, reproductive toxicity, specific target organ toxicity (single or repeated exposure) and aspiration hazard.

For <u>environmental hazards</u>, properties include being hazardous to the aquatic environment or hazardous to the ozone layer. (EDITORIAL NOTE: Others would likely go beyond these factors to include not only hazards to aquatic but also terrestrial environment, including any living organizations within those environments).

⁽Source: United Nations. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). 9th revised edition. 2021. https://unece.org/transport/standards/transport/dangerous-goods/ghs-rev9-2021)

and we are not clear if <u>all</u> elements that may pose a hazard to humans or the environment are disclosed, or if only those that interfere with or affect the efficiency of the mineral processing are included.

As a result, we have added a footnote for 4.1.1.2.b, that if information from the supplier on feed constituents is not comprehensive, then the mineral processor would need to carry out a characterization in order to credibly predict potentially hazardous emissions and develop strategies to address them.

Question: Do you agree with this approach? Is it reasonable to expect that if supplier information is not sufficient that mineral processors do a thorough analysis of all feed materials in order to fully understand the range and concentrations of potential contaminants that may be emitted to air or present in effluent? If not, then how else can the mineral processor demonstrate to auditors that they fully understand the range of containments that may be released (and that have adequate controls in place to address them)?

4.1.1.3. For each solid or semi-solid material and waste produced as a result of <u>mining-related activities</u> (as identified in 4.1.1.1.b), a chemical characterization, using industry best practice, is carried out to determine the potential for <u>acid rock drainage (ARD)</u>, and the potential for contaminant or <u>metals leaching (ML)</u>, including, as relevant:

- a. Analysis of petrology, mineralogy, and mineralization;
- b. Identification of geochemical test units or representative ranges of chemical composition;
- c. Estimation of an appropriate number of samples for each geochemical test unit or range of material compositions;
- Performance of comprehensive geochemical testing on all samples from each geochemical test unit, or, for solid wastes for which geochemical test units are not relevant (e.g., mineral sands), on samples representative of the range of compositions;⁴⁷⁸ and
- e. Identification of COPCs for each material.479

NOTE ON 4.1.1.3: REVISED. This requirement was 4.1.3.2 in the 2018 Mining Standard.

The requirement now has more detail, as it was unclear that both the potential for acid rock drainage (ARD) and the potential for metal/contaminant leaching from materials need to be evaluated. Depending on the ore and waste mineralogy, some mines can have a low ARD potential but still leach metals, sulfate, and other contaminants of concern at circumneutral pH or higher. For example, Price (2009) reports that "Circumneutral drainage can contain relatively high dissolved concentrations of trace elements such as nickel, cobalt, zinc, molybdenum, arsenic, and antimony. Concentrations of molybdenum, arsenic, and antimony, in particular, may remain elevated even as pH increases above 7."⁴⁸⁰

Additionally, we have elaborated in a footnote that "comprehensive geochemical testing" of solids should include tests for radioactivity, as this is a concern for worker exposure at some mining operations and may also show up in the mined ores or wastes. An example is the Lisbon Valley Copper Mine, an active, open pit, heap leach copper mine in southeastern Utah, USA, that has identified uranium as a constituent of concern and is located near uranium deposits.⁴⁸¹

4.1.1.4. For each liquid material and waste produced as a result of <u>mining-related activities</u> (as identified in 4.1.1.1.c), chemical characterization is carried out as follows:

⁴⁷⁸ Comprehensive testing would include determining ARD potential, metal/contaminant leaching potential, and an estimate of radioactivity for relevant solids materials using a gamma or scintillation counter or similar instrumentation.

⁴⁷⁹ COPCs are identified using the results of laboratory short-term and long-term (kinetic) leach tests or results of chemical analysis of extracted brines and liquid wastes. If laboratory leachate, brine or liquid waste concentrations exceed numeric IRMA water quality criteria (Tables 4.2.a – 4.2.h), those constituents are identified as COPCs. A risk assessment will be conducted to determine final COCs (see 4.1.3.1.b).

⁴⁸⁰ Price, W.A. 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. MEND Report 1.20.1. December, 579 pages. https://mend-nedem.org/wp-content/uploads/1.20.1_PredictionManual.pdf

⁴⁸¹ See Lisbon Valley Mining Company, 2022. Notice of intent to commence large mining operations & modification of plan of operations. <u>https://eplanning.blm.gov/public_projects/2023385/200544401/20073334/250079516/2022%2010%2024%20LVMC_Proposed%20Plan%20of%20Operations%20Modification%20UTU-72499.pdf</u>

- a. Full chemical characterization of the liquids and <u>brines</u> for constituents identified in the IRMA water quality criteria (see Tables 4.2.a 4.2.h in Chapter 4.2); and
- b. Identification of the COPCs for each liquid and brine.

NOTE ON 4.1.1.4: NEW. This requirement has been added to ensure that contaminants of potential concern are also identified for mineral processing operations, given that we are proposing that this version of the IRMA Standard also applies to standalone processing facilities. The first audits of lithium operations also identified chemical characterization of brines as something that needed more elaboration.

We can add more detail on tests that can be conducted to determine if wastes have potentially dangerous or harmful characteristics.⁴⁸²

4.1.1.5. Chemical characterization of solid, semi-solid and liquid materials/products and wastes produced as a result of mining-related activities are updated regularly to account for variability in properties and processing.

NOTE ON 4.1.1.5: This requirement aligns with 4.1.3.4 in the 2018 Mining Standard.

4.1.1.6. For each waste material not derived from <u>mining</u> or processing activities (as identified in 4.1.1.1.d), the entity:

- a. Determines if the waste has characteristics or properties that make it dangerous or capable of having a harmful effect on human health, safety or the environment; and
- b. Documents the hazardous properties or characteristics, and any related potential health, safety or environmental impacts.

NOTE ON 4.1.1.6: NEW. This was a gap identified through early audits. Previously, there was no specific requirement to identify (and therefore, no expectations to manage) waste facilities containing hazardous or harmful substances unrelated to mining or processing activities that could be released to the environment.

We can add more detail on tests that can be conducted to determine if wastes have potentially dangerous or harmful characteristics.

4.1.2. Material and Waste Reduction and Mitigation

NOTE FOR 4.1.2: NEW. This is a new criterion, and all of the requirements within are new.

Other standards refer to the waste mitigation hierarchy, and we have incorporated that concept here. This hierarchy differs from the mitigation hierarchy referred to in other chapters, but like the general mitigation hierarchy the waste mitigation hierarchy sets out a priority of actions that should be taken in managing wastes, moving in order of highest priority to lowest as follows: Prevention, reduction/minimization, re-use, recycling, energy recovery and disposal.

The proposed definition for waste mitigation hierarchy is:

A ranking of waste management options according to what is best for the environment. The priority order is to prevention, reduction, reuse, recycling (including composting), recovery (e.g., of energy from waste) and disposal, with prevention being the most preferred option and the disposal at a landfill being the least preferred option.

⁴⁸² For example, the U.S. EPA has information on tests that can undertaken to determine hazardous characteristics of wastes, such as test methods for ignitability (e.g., Pensky-Martens Closed-Cup Method for Determining Ignitability), use of pH values to identify corrosivity (e.g., aqueous wastes with a pH of less than or equal to 2, a pH greater than or equal to 12.5), and Toxicity Characteristic Leaching Procedure (TCLP) to determine toxicity of leachate from wastes. (U.S. Environmental Protection Agency website. "Defining Hazardous Waste." https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes#characteristic)

CONSULTATION QUESTION 4.1-3

Background: There are some who believe that the step of energy recovery from waste (also known as waste-toenergy) should not be part of the hierarchy because waste incineration can lead to toxic air emissions, contribute to climate change, destroy resources that could otherwise be re-used or recycled, and the ash by-product still requires landfilling and management for toxic leachate. Opponents of waste-to-energy argue that it is outdated concept, and cite that some European financial institutions are beginning to exclude the practice from financial support.⁴⁸³ Others argue that with more efficient incineration technology, the emissions are minimal, and that combustion of wastes results in lower greenhouse gas emissions because landfills generate and release methane, which is a powerful greenhouse gas. And the waste ash can be used, for example in road building, rather than disposed of in a landfill.⁴⁸⁴

Question: Do you think energy recovery from waste is still considered an acceptable practice in terms of human health, safety or environment? Should IRMA include it in the list of waste mitigation hierarchy options?

CONSULTATION QUESTION 4.1-4

Background: The top tiers of the mitigation hierarchy approach (prevention, minimization, re-use, recycling) fits in with the concept of circularity, which was a topic of discussion in one of IRMA's Expert Working Groups in 2022. For example, the top priority in the mitigation hierarchy is to prevent generation of waste in the first place, which aligns with the circularity-based idea of designing and using durable products so that the generation of waste is prevented (rather than using products that by design will be obsolete and thrown away in a short period of time). Circularity also stresses the re-use and repurposing of materials, which is also a high priority in the mitigation hierarchy.

Both mining and mineral processing offer opportunities for re-use/repurposing of waste streams. For example, tailings can be "re-mined" to extract minerals/metals, and mineral processing operations can include recycled content in their processes so that the products are not solely from newly mined materials. However, these opportunities may not exist at every site, or there may be technical, environmental, safety or climate implications that create obstacles or barriers to implementation.

As a result, in this revised chapter we have stopped short of <u>requiring</u> that entities demonstrate that they are integrating circularity concepts, but in requirements 4.1.2.2 and 4.1.2.3 we are proposing that entities at least document a rationale as to why they cannot successfully achieve the higher levels of the mitigation hierarchy such as prevention/reduction and re-use. It is hoped that at least this will get companies exploring circularity concepts.

Question: Should IRMA go further to integrate concepts of circularity into this chapter? For example, rewarding (i.e., give higher ratings to) entities that demonstrate a higher proportion of waste products that are being recycled/re-used/remined than those who clearly are not prioritizing those circularity-type strategies? We'd be interested in your input on this suggestion, or other suggestions for how IRMA might integrate circularly concepts into this chapter or others in the Standard (see also Chapter 2.1, where we are proposing additional circularity requirements - Note for 2.1.3.3, and <u>CONSULTATION QUESTION 2.1-4</u>).

4.1.2.1. For each chemical or material with hazardous properties or characteristics (hereafter referred to as "hazardous material") the entity:

- a. Investigates and implements measures to eliminate the use of the hazardous material;
- b. Investigates and implements measures to substitute with a material that poses lower physical, health and/or environmental risks, if elimination is not possible; and
- c. If elimination or substitution are not possible, carries out a risk assessment to determine the level of risk that the material poses to human health or safety, the environment or communities (see 4.1.3.1).

NOTE ON 4.1.2.1: This requirement doesn't follow the waste mitigation hierarchy, but rather something called the hierarchy of controls, which is applied in the workplace to prevent exposures to hazards. It includes,

⁴⁸³ For example, see: Zero Waste Europe. "The EU is clear: Waste-To-Energy incineration has no place in the sustainability agenda," <u>https://zerowasteeurope.eu/2021/05/wte-incineration-no-place-sustainability-agenda/</u>

⁴⁸⁴ For example, see: "Cooled by Controversy in the U.S., Trash Incinerators are Firing Up in Europe," https://www.wbur.org/hereandnow/2019/05/03/copenhagen-trash-incinerator

in order of priority: elimination, substitution, engineering controls, administrative controls and personal protective equipment.⁴⁸⁵

4.1.2.2. For each waste with hazardous properties or characteristics (hereafter referred to as "hazardous waste"), the entity:

- a. Investigates and implements measures to mitigate risks in a manner that aligns with the <u>waste mitigation</u> <u>hierarchy</u>, taking into consideration the potential human health, safety and environmental impacts of each option.⁴⁸⁶ Options are evaluated in the following order of priority:
 - i. Prevent generation of the hazardous waste;
 - ii. Reduce the generation of the hazardous waste;
 - iii. Re-use (or remine) hazardous wastes;
 - iv. Recycle hazardous wastes;
 - v. Recover energy from the wastes; and
 - vi. Dispose of any remaining hazardous waste;
- b. Documents the rationale for any decisions that do not conform with the waste mitigation hierarchy; and
- c. Carries out risk assessment(s) to determine the level of risk to human health, safety and the environment associated with all selected mitigation strategies for the hazardous waste (see 4.1.3.1).

NOTE ON 4.1.2.2: As mentioned in the Note for 4.1.2, this requirement uses the waste mitigation hierarchy. The reason we are proposing that a risk assessment still be done after applying the hierarchy is that there will be associated risks with any of the hierarchy steps below prevention. For example, even if the generation of hazardous waste is reduced, there will still be some hazardous waste that will present a risk. Similarly, even the recycling of hazardous wastes will come with risks that need to be managed.

We have added the caveat in 4.1.2.2.a that in evaluating options according to the waste mitigation hierarchy, entities should be "taking into consideration the potential health, safety and environmental impacts of each option." This is added because it may be the case that a higher-priority option may have greater health, safety or environmental impacts. Therefore, options should be evaluated with all potential impacts in mind.

4.1.2.3. For each non-hazardous waste, the entity:

- a. Develops and implements measures in a manner that aligns with the <u>waste mitigation hierarchy</u>, taking into consideration the potential health, safety and environmental impacts of each option.⁴⁸⁷ Options are evaluated in the following order of priority:
 - i. Prevent generation of non-hazardous waste;
 - ii. Reduce generation of non-hazardous waste;
 - iii. Re-use the waste products;
 - iv. Recycle wastes (or compost food or organic wastes);
 - v. Recover energy from the waste; and
 - vi. Dispose of any remaining waste;

⁴⁸⁶ When considering the waste hierarchy, the highest option in the priority order should be chosen wherever possible, however, impact considerations must be taken into account. This may result in a lower option in the hierarchy being chosen but results in a better overall environmental outcome. (See, e.g., Guidance on Applying the Waste Mitigation Hierarchy to Hazardous Waste. UK Department for Environment, Food and Rural Affairs and Llywodraeth Cymru Welsh Government." 2011.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69457/pb13687-hazardous-wastehierarchy-111202.pdf)

⁴⁸⁵ Centers for Disease Control and Prevention web site. "Hierarchy of Controls." https://www.cdc.gov/niosh/topics/hierarchy/default.html

⁴⁸⁷ Ibid. For more information on the non-hazardous waste management hierarchy, see: <u>https://ec.europa.eu/environment/green-growth/waste-prevention-and-management/index_en.htm</u>; or U.S. EPA. Sustainable Materials Management: Non-Hazardous Materials and Waste Management Hierarchy. https://www.epa.gov/smm/sustainable-materials-management-non-hazardous-materials-and-waste-management-hierarchy

- b. Documents the rationale for any decisions that do not conform with the waste mitigation hierarchy; and
- c. If prevention, reduction, re-use and recycling are not possible or do not entirely eliminate the waste, the entity determines if remaining treatment and/or disposal methods may adversely affect human health, safety or the environment. If there are potential risks associated with the selected method the entity assesses the risks as per 4.1.3.1.

NOTE FOR 4.1.2.3: Because the objective of many IRMA's chapters, including this one, includes the protection of human health, safety and the environment, our approach has been that materials and wastes with hazardous properties should be the primary focus of this chapter, as they pose the most material risks. However, there can be risks from non-hazardous wastes as well, which is why requirement 4.1.2.3 is being proposed. For example, even if wastes do not contain hazardous elements, per se, the disposal method may create hazards (e.g., improperly managed sewage or garbage can lead to impacts on water, aquatic ecosystems and human health, and the inefficient incineration of garbage or waste materials can lead to impacts on air quality and human health).

It is not clear, however, how much emphasis, if any, should be given to applying the mitigation hierarchy to non-hazardous <u>materials</u>, such reducing the use of office supplies or construction materials, or re-using equipment that could be repaired rather than replaced, substituting certain materials with ones that are produced in a more socially or environmentally responsible manner, etc.

CONSULTATION QUESTION 4.1-5: Currently, while we have some limited requirements for <u>non</u>-hazardous <u>wastes</u>, we have not included requirements related to <u>non</u>-hazardous <u>materials</u>, such as materials used in construction of buildings. Do you agree with this approach, or do you think IRMA should include requirements for non-hazardous materials? If you believe there should be requirements, what would you suggest would be appropriate expectations regarding non-hazardous materials? And are there particular types of non-hazardous materials that warrant a greater focus than others?

CONSULTATION QUESTION 4.1-6: Regarding non-hazardous wastes, would it be reasonable to limit this requirement to the non-hazardous wastes that are most likely to have associated environmental and health risks (e.g., wastes like garbage dumps/landfills and sewage). Or should all non-hazardous wastes be evaluated? Also, are there additional requirements for non-hazardous wastes that should be added? For example, currently we do not require procedures or management plans for non-hazardous waste facilities, based on the assumption that any significant risks and subsequent mitigation measures (e.g., to control seepage or air emissions) would be incorporated into the plans in those chapters.

4.1.3. Assessment of Hazardous Materials and Hazardous Wastes

4.1.3.1. The risks posed to human health or safety, the environment, or communities from hazardous materials, hazardous wastes and, if relevant, non-hazardous wastes⁴⁸⁸ that are extracted, used or produced by the project/operation, are assessed as follows:

- a. The entity maps the existing or planned locations where <u>hazardous materials</u>, <u>hazardous wastes</u> and, if relevant, non-hazardous wastes are transported to, stored, used, treated and/or disposed on-site, at <u>associated facilities</u>, or off-site; and
- b. Information on the materials and wastes (e.g., known <u>hazards</u>, volumes, storage, usage, treatment and disposal locations, transport routes, etc.) is integrated into existing risk assessments, as relevant:⁴⁸⁹
 - i. Environmental and social impact assessment (Chapter 2.1);
 - ii. Emergency preparedness and response (Chapter 2.5);

⁴⁸⁸ There can still be risks from non-hazardous wastes. Even if the waste materials themselves do not contain hazardous elements, per se, the disposal method may create risks. For example, depending on the contents, garbage can lead to impacts air quality and human health if incinerated.

⁴⁸⁹ If risks are identified through those assessments, then mitigation, management, monitoring and reporting are carried out as required in the associated chapter.

- iii. Worker occupational health and safety (Chapter 3.2);
- iv. Community health and safety (Chapter 3.3);
- v. Water (Chapter 4.2);
- vi. Physical stability of facilities (proposed Chapter 4.X);
- vii. Air (Chapter 4.3)
- viii. Biodiversity and ecosystem services (Chapter 4.6); and
- ix. Soil (proposed Chapter 4.XX).

NOTE FOR 4.1.3.1: REVISED. In the 2018 Mining Standard, 4.1.3.1 required the identification "mine waste facilities that have the potential to be associated with waste discharges or incidents [...] that could lead to impacts on human health, safety, the environment or communities". We have expanded the scope and clarified to align with the new approach proposed for this chapter: mapping of locations (a), and information on the materials and waste (b).

4.1.4. Management of Hazardous Materials

4.1.4.1. For each identified <u>hazardous material</u>, the entity develops and implements procedures for the safe transportation (to the site and associated facilities), handling and storage, as follows:

- a. Storage container and conveyance materials are appropriate for the specific hazardous contents;
- b. Engineering <u>controls</u> are implemented to prevent the <u>release</u> of the hazardous materials into the work or natural environment, including, but not limited to: ⁴⁹⁰
 - i. Constructing impermeable <u>secondary containment</u> in areas where hazardous material is unloaded, mixed, processed or stored, and for pipelines containing or solutions that have hazardous properties, including pipelines carrying process water/solutions that have a concentration of 0.5 mg/l weak acid dissociable (WAD) cyanide or greater;⁴⁹¹
 - ii. Secondary containment that holds at least 110% of the largest tank within the containment area plus additional capacity for the design storm event; and
 - iii. Audible alarms, interlock systems, and/or sumps;
- c. Appropriate protective equipment and clothing are provided to relevant workers;492
- d. Appropriate hygiene practices are implemented in relevant work areas (e.g., locations and situations where eating, drinking, and/or smoking are prohibited); and
- e. Occupational health and safety training aligns with requirements in Chapter 3.2, and includes instruction on:⁴⁹³
 - i. Where to find safety data information (e.g., safety data sheets) and other relevant information related to the chemicals/materials of concern; and
 - ii. Appropriate methods for transporting, handling, storing,⁴⁹⁴ using and disposing of hazardous materials.

NOTE FOR 4.1.4.1: REVISED. In the 2018 Mining Standard, 4.1.2.1.b required entities to "Document and implement procedures for the safe transport, handling, storage and disposal of those materials, substances

⁴⁹⁰ Other mitigation measures/controls to prevent environmental releases may be developed as part of the water management chapter (see <u>Annex 4.2-B</u>), and the physical stability management chapter (see <u>Annex 4.X.A</u>).

⁴⁹¹ For example, if pipelines are carrying process water/solutions that have a concentration of 0.5 mg/l WAD cyanide or greater.

⁴⁹² Guidance: Depending on the hazards and potential exposure routes, appropriate equipment may include eye, face, skin or respiratory protection, and there may be special requirements (e.g., a specific type of glove material, such as PVC or nitrile rubber gloves, depending on the breakthrough time of the glove material).

⁴⁹³ See criterion 3.2.7 in Chapter 3.2 (Occupational Health and Safety).

⁴⁹⁴ Guidance: e.g., ventilation, temperature, moisture, identification of incompatible materials, and other conditions for safe storage.

and wastes [that have the potential to cause impacts on human health, safety, the environment or communities]."

We have added more detail here, so that there can be consistency in what is evaluated by auditors.

4.1.4.1 does not include disposal, because that is covered in 4.1.4.2, below. Also, note that this requirement does not address the safe use of the hazardous materials, as that should be covered by the occupational health and safety (OHS) requirements in Chapter 3.2.

We recognize that a lot of this material overlaps with other chapters. For example:

- There are specific occupational health and safety elements included above (e.g., protective equipment and clothing, training to minimize health and safety risks to workers are covered in 4.1.3.1 (c), (d) and (e), while other requirements related to occupation health and safety are more generally covered in Chapter 3.2).
- The reference to engineering controls in 4.1.3.1 (a) and (b) would be mitigation measures to prevent or minimize risks to water or soil.

Our intention is that these procedures should be integrated into the management plans, training programs, etc., in other chapters. But we are proposing to include them here so that they will get specific attention during audits, and sites will get a performance rating on these elements. If they are not included here, then they will be one of many elements in the OHS, water, or soil chapters that need to be assessed, and as a result, could potentially be overlooked.

We are also aware that we do not want to either reward or penalize entities for the same action twice. To avoid "double-counting" we could add guidance for auditors on the appropriate way to audit this requirement. Or we could try to reorganize this material to integrate it into the relevant other chapters.

CONSULTATION QUESTION 4.1-7: Do you agree with the current approach in 4.1.3.1 (and 4.1.4.1) of including some specific elements, even though they overlap with other chapters? Or should we try to integrate the relevant requirements from this chapter into the chapters on OHS, water, or other relevant chapters?

4.1.4.2. The entity develops and implements a system to document information on hazardous materials, including at minimum:

- a. The annual quantity of hazardous materials transported to the site and associated facilities, and the quantity produced at the site and associated facilities;⁴⁹⁵
- b. The annual quantity used at the site and associated facilities, and the quantity transferred off-site;
- c. The storage and usage locations on-site and at associated facilities; and
- d. And shipping dates and supplier information for materials coming to the site and associated facilities, and shipping dates and receiver information for any hazardous materials (e.g., ores, concentrates, <u>brines</u>) transported off-site.

NOTE FOR 4.1.4.2: NEW. We have added two requirements related to the documentation of information on hazardous materials (4.1.4.2) and hazardous wastes (4.1.5.2). They include some quantitative metrics that are aligned with the Global Reporting Initiative Standards GRI 301:Materials and 306:Waste.

4.1.5. Management of Hazardous Wastes

⁴⁹⁵ Hazardous materials transported to the site may include chemicals, fuels or other materials that have hazardous properties. They could also include ores or concentrates purchased from other sites.

Produced materials that may have hazardous properties/characteristics include ores, brines and concentrates.

4.1.5.1. For each identified <u>hazardous waste</u>, the <u>entity</u> develops and implements procedures for their safe handling, storage, re-use, recycling, treatment and disposal at the site and <u>associated facilities</u>, and, if relevant, procedures for safe transport (e.g., to off-site treatment, disposal, recycling or re-use facilities), as follows:

- a. Disposal container or containment materials are appropriate for the specific hazardous contents;
- b. Engineering <u>controls</u> are implemented to prevent the <u>release</u> of the hazardous wastes or their components into the environment including, as relevant:⁴⁹⁶
 - i. A leachate/run-off collection system;
 - ii. Impermeable secondary containment for pipelines containing mine-influenced waters that have hazardous properties; and
 - iii. Facility designs that incorporate safe freeboard levels;
- c. Protective equipment and clothing are provided to relevant workers to prevent illness or injury from exposure to hazards;⁴⁹⁷ and
- d. Occupational health and safety training aligns with requirements in Chapter 3.2, and includes instruction on:⁴⁹⁸
 - i. Where to locate <u>safety data sheets</u> and other relevant information related to the chemicals of concern; and
 - ii. Appropriate transport, handling, storage, re-use, recycling, treatment and disposal methods to employ, including any special precautions and prohibitions.⁴⁹⁹

NOTE FOR 4.1.5.1: NEW. As with requirement 4.1.5.1, we recognize that a lot of the material in 4.1.4.1 overlaps with other chapters. Please see <u>CONSULTATION QUESTION 4.1-7</u> in the note for 4.1.4.1.

CONSULTATION QUESTION 4.1-8: Currently, in engineering controls in 4.1.5.1.b, we are only including leachate/runoff collection system. Can you recommend other controls that should be implemented for on-site hazardous waste facilities?

4.1.5.2. The entity develops and implements a system for documenting information on the generation, transportation, treatment and disposal (on-site and off-site) of hazardous wastes, including, at minimum:

- a. Waste volumes generated, including solids/liquids contents;
- b. Engineering controls being used to prevent the release of hazardous wastes into the environment;
- c. Waste treatment and disposal locations (on-site and off-site);
- d. Waste transport, treatment, and disposal dates/periods; and
- e. Regulatory authorization for any waste management vendors engaged by the company for transport, and off-site treatment or disposal.

NOTE FOR 4.1.5.2: NEW. We have added two requirements related to the documentation of information on hazardous materials (4.1.4.2) and hazardous wastes (4.1.5.2). They include some quantitative metrics that are aligned with the Global Reporting Initiative Standards GRI 301:Materials and 306:Waste.

4.1.6. Requirements to Address Specific Hazardous Materials and Hazardous Wastes

⁴⁹⁶ Depending on the risks, other mitigation measures/controls or monitoring may need to be developed as part of the water management chapter (see <u>Annex 4.2-B</u>), and the physical stability management chapter (see <u>Annex 4.X.A</u>), for example monitoring of seismic, ground, or water level movement in areas near hazardous waste facilities.

⁴⁹⁷ Guidance: such as appropriate types of eye, face, skin or respiratory protection needed based on hazards and potential exposure, and any special requirements and information (e.g., specific type of glove material, such as PVC or nitrile rubber gloves, and breakthrough time of the glove material.

⁴⁹⁸ See criterion 3.2.7 in Chapter 3.2 (Occupational Health and Safety).

⁴⁹⁹ For example, there may be special precautions to take for particular circumstances, or there may be practices like disposal of wastes into sewage systems or incineration that are prohibited. This information needs to be conveyed to workers.

4.1.6.1. If cyanide will be transported to and stored on-site in bags or bulk containers, or used as a chemical in any aspect of mining, beneficiation, or processing:

- a. If the <u>operation</u> is eligible, it obtains certification of compliance with the International Cyanide Management Code (The Cyanide Code) in accordance with the verification requirements of the International Cyanide Management Institute (ICMI). If the operation is not eligible to be certified by the ICMI, the operation's cyanide management practices shall be:
 - i. Assessed against the Cyanide Code's "Gold Mining Operation Verification Protocol" by auditors meeting ICMI requirements; and
 - ii. Verified as meeting the Cyanide Code requirements; and
- b. Cyanide producers and transporters supplying the operation are certified as meeting the "Cyanide Production and Transport Practices" of the Cyanide Code.

NOTE FOR 4.1.6.1: MOVED. This requirement combines the requirements from criterion 4.7.1 in Chapter 4.7 – 'Cyanide Management' of the 2018 Mining Standard. We are proposing to delete that chapter, as much of the content overlaps with other chapters. This requirement is one that is very specific to cyanide, however, and so we are proposing to include it here, given that cyanide is hazardous chemical.

Other requirements from Chapter 4.7 are now largely covered elsewhere (e.g., 4.7.2.1 is now covered in 4.1.4.1.b; 4.7.3.1 is covered in 4.2.4.5; 4.2.4.1 is covered in 4.2.1.1.a and 4.2.5.1; 4.2.4.1 is covered in 4.2.5.1; and 4.7.5.1 is covered in 4.2.7.2)

- 4.1.6.2. If mercury is present in ore, concentrates or waste materials:⁵⁰⁰
 - a. The entity performs, documents and annual updates a mercury mass balance based on the calculated amount of mercury in the ore and waste materials, and the amount of mercury that is:
 - i. Released to air; 501
 - ii. Recovered (e.g., from mercury emissions control systems) or produced as a by-product (e.g., from gold and/or silver heap leach processes); ⁵⁰² and
 - iii. Resident in <u>tailings</u> impoundments, <u>waste rock</u> dumps, or processing waste facilities (on-site and/or off-site).
 - b. Mercury wastes from mercury emission control systems:
 - i. Are sent to a regulated repository that accepts mercury wastes; or
 - ii. Are stored on-site or disposed with <u>tailings</u> or with other materials, such as heap or dump leach materials during or after operations (on- or off-site) only if a risk-based evaluation of the storage or disposal of mercury waste demonstrates that the risk of long-term air or water <u>pollution</u> is low, and disposal occurs in fully lined <u>facilities</u> using synthetic liners that have a permeability of 10⁻⁹ cm/sec or less and a leachate collection system.
 - c. Mercury recovered from mercury emission control systems or produced as a by-product (e.g., from heap leach processes):
 - i. Is only sold for an end use listed in Annex A (Products) or Annex B (Processes) of the Minamata Convention on Mercury, subject to the appropriate phase-out dates;⁵⁰³ and
 - ii. Is not sold or given away either directly or indirectly to an entity engaged in <u>artisanal or small-scale</u> mining.
 - d. If mercury is stored or disposed of with tailings or with other materials on-site (see 4.1.6.2.c.ii):

⁵⁰⁰ This would be identified in the process outlined in 4.1.1.3.

⁵⁰¹ This information would be derived from the mercury air quality monitoring program in Chapter 4.3 (see 4.3.5.5.b)

⁵⁰² Some of this information would be derived from the mercury air quality monitoring program in Chapter 4.3 (see 4.3.5.5.b).

⁵⁰³ Annex A and B also list phase out dates after which the manufacture, import or export of the product shall not be allowed. Companies are expected to comply with those phase-out dates. The Minamata Convention text and Annexes are at: <u>https://mercuryconvention.org/en/about</u>

- i. Sampling for mercury in groundwater and surface water is integrated into the monitoring program for water in Chapter 4.2;⁵⁰⁴ and mercury monitoring is included in the air monitoring program plan in Chapter 4.3; and
- ii. The entity carries out environmental impacts monitoring (e.g., fish tissue and stream sediment mercury levels) in locations that are most likely to promote methylation, such as still waters, wetlands, and anaerobic sediment.

NOTE FOR 4.1.6.2: MOVED. This requirement used to be in Chapter 4.8 – Mercury Management. We are proposing to delete Chapter 4.8 – 'Mercury Management' and integrate the requirements into other relevant chapters so that auditors with specialty in water, air, soils, etc., are able to evaluate the requirements alongside other water, air and soil requirements (since the documentation being reviewed in those chapters should also contain mercury-related information, if they are relevant to the project/operation), rather than having a single auditor cross the different areas of expertise.

The characterization of mined material and products occurs in this chapter, and because mercury is a hazardous material that is toxic to people and the environment, we are proposing to include some mercury-specific requirements related to management and disposal in this chapter. Other requirements from Chapter 4.8 (such as monitoring) are now covered elsewhere (e.g., most of 4.8.3.2 and 4.8.3.3 are now covered in Chapter 4.3, and 4.8.3.2.b is now in 4.2.2.1.a.iv). We cross-reference with other chapters where additional mercury-related issues may need to be addressed.

We also REVISED some of the requirements from the 2018 Mining Standard.

- 4.1.6.2.a. Changed to require that the following sub-requirements occur any time mercury is present in ore, concentrates or waste materials. Previously it was only if there was a mercury control system, which is a limited circumstance, and so some sources of mercury could be overlooked (e.g., mercury in tailings, etc.).
- 4.1.6.2.a.ii. This requirement previously said "produced as by-product." At some operations, mercury byproduct can be produced through a series of steps. For example, mercury occurs naturally in some gold and silver ore bodies. Because mercury has such a strong affinity for cyanide, mercury can be leached along with the gold and follow it through the gold refining steps (e.g., carbon adsorption and electrowinning or zinc cementation). If mercury retorts and other processes are used to separate mercury from the gold, then a mercury by-product can be produced. We added "recovered," as some mercury may also be recovered from emissions controls systems.
- 4.1.6.2.b.ii. Added that if disposal occurs there not only needs to be a liner, but also a leachate collection system, as it is important that any leachate that contains mercury be collected and managed appropriately.
- 4.1.6.2.c. Added "or produced as a by-product." As explained in the note for 4.1.6.2.a.ii, mercury can be recovered, but also produced as a by-product. Also added "subject to the appropriate phase-out dates," as some end uses in Annex A of the Minamata Convention have now been phased out.

4.1.6.3. (Critical Requirement)

Entities neither propose to nor actually dispose of mine wastes in natural water bodies (i.e., rivers, lakes or marine environments).⁵⁰⁵

NOTE FOR 4.1.6.3: This requirement was 4.1.8.1 in the 2018 Mining Standard. The wording has changed slightly, but the intent is the same.

⁵⁰⁴ This would be incorporated into the water sampling and analysis plan (see 4.2.2.1.a.iv and the accompanying footnote).

⁵⁰⁵ "Mine waste" include tailings, waste rock, spent ore from heap leaches, wastes generated during mineral processing (e.g., residues and used processing fluids, wastes from thermal processing).

CONSULTATION QUESTIONS 4.1-9

Background: The intent of this requirement is that responsible entities do not dispose of mine wastes (e.g., tailings, waste rock, mineral processing wastes, etc.) in natural water bodies, and if new projects are proposed that would require this form of disposal, then those projects should not go forward unless alternative disposal practices can be developed.

Question: Should IRMA consider expanding this requirement to include all hazardous wastes? Or all wastes (even if they are non-hazardous), since dumping of wastes into water bodies is not best practice for any type of waste?

CONSULTATION QUESTION 4.1-10

Background: There may be cases where riverine, lake, or marine disposal of tailings, waste rock, or other mine wastes was used in the past at a site, but the practice is no longer being used. Or where the practice was used but the site changed ownership and the new owner is wanting to do things better, and as a result, is using other disposal practices.

In such situations, it seems like providing some sort of remediation to address the impacts from past waterbased-disposal practices, if possible, might lead to better outcomes than simply giving sites a 'does not meet' rating on this requirement.

Question: Should IRMA consider adding a remediation step to enable sites that are no longer using these practices but did so in the past to at least partially, or possibly even substantially, meet this requirement? Remediation for damage that has been done might include, for example, waste removal and ecosystem restoration, and/or some sort of offset to create an equivalent ecosystem or ecosystem services elsewhere, or providing other forms of compensation. This is the approach taken in Chapter 4.6 for historic soil pollution.

4.1.7. Spill Preparedness and Response Planning

NOTE ON 4.1.7: The requirements in 4.1.7, below, pertain to <u>on-site</u> spills of materials or wastes that may affect workers. If there are scenarios where spills might occur off-site (e.g., due to transportation accidents) and affect communities or natural resources, then those hazard scenarios would be included in Chapter 2.5 – 'Community Emergency Preparedness and Response.'

4.1.7.1. The entity develops spill response plans (or equivalent)⁵⁰⁶ to manage off-site and on-site spills, leaks, or releases of identified hazardous materials and hazardous wastes, and trains relevant workers, contractors and emergency response providers on the following:⁵⁰⁷

- a. Procedures, methods and materials used for containment, clean-up, decontamination, and remediation;⁵⁰⁸
- b. Instructions for evacuations, if relevant;
- c. Appropriate personal protective equipment and clothing for workers or contractors engaged in spill response;⁵⁰⁹
- d. Any relevant fire-fighting measures, including:

If spills might affect off-site communities, these hazards would need to be included in the risk assessment and procedures developed as per Chapter 2.5, which addresses Community Emergency Preparedness and Response Planning.

⁵⁰⁸ Guidance: e.g., containment could include covering the drains and capping procedures, etc., and clean-up and decontamination could include techniques for neutralization, adsorbent materials, cleaning or vacuuming, etc.

Remediation of soil or groundwater may be necessary.

⁵⁰⁹ Guidance: Use of personal precautions could include, for example, removing ignition sources or moving to an area with sufficient ventilation) and protective equipment and clothing may include respirators, safety glasses, gloves or other equipment to prevent skin, eyes.

⁵⁰⁶ For example, this may be called a Spill Response Plan, or Spill Prevention and Response plan if combined with preventative procedures (e.g., those in 4.1.4.1 and 4.1.5.1)

⁵⁰⁷ The plans or procedures may include different responses for large and small spills where the spill volume has a significant impact on the hazard. And the plans or procedures may be integrated into the OHS Emergency Response Plan (See 3.2.3.6), or may be standalone plans.

- i. Appropriate extinguishing equipment, and information about equipment that is not appropriate for a particular situation; and
- ii. Special protective equipment or precautions related to hazardous combustion products;
- e. Relevant first-aid instructions for exposures that may occur during spill response, including:
 - i. Instructions on where to locate <u>safety data sheets</u> and other relevant information related to the chemicals of concerns
 - ii. Instructions for all relevant routes of exposure for relevant chemicals (inhalation, skin and eye contact, and ingestion);
 - iii. Description of likely symptoms or effects related to exposure to relevant chemicals, including symptoms that are acute or delayed; and
 - iv. Instructions on any immediate medical care and treatment(s).

NOTE FOR 4.1.7.1: NEW. There were no specific spill response requirements in the 2018 Mining Standard.

Some entities may wish to combine these plans with spill prevention measures (which would be part of 4.1.3.1 or 4.1.4.1) into a Spill Prevention and Response Plan.

Similarly, some may wish to integrate workplace-specific spill-related procedures as part of their Emergency Preparedness and Response Plans prepared in Chapter 3.2, requirement 3.2.3.6.

If spills have the potential to affect off-site communities, these hazards would need to be included in the risk assessment and procedures developed as per Chapter 2.5, which addresses Community Emergency Preparedness and Response Planning.

Any approach is fine, as long as all of the relevant elements are covered in a plan(s) or set of procedures, and the appropriate people are trained in response procedures.

4.1.7.2. Spill response plans (or equivalent) related to <u>hazardous materials</u> and <u>hazardous wastes</u> are prepared in <u>collaboration</u> with relevant <u>workers</u>, <u>contractors</u> and/or <u>worker</u> health and <u>safety</u> representatives, and, if relevant, local first responders, communities and government agencies.⁵¹⁰

NOTE FOR 4.1.7.2: NEW. There were no specific spill response requirements in the 2018 Mining Standard. This requirement aligns with requirements in Chapters 2.5 and 3.2, where the expectation is that those who will be intimately involved in or affected by emergency response procedures are also engaged in the preparation of those plans.

4.1.8. Inspections

4.1.8.1. Annually or more frequently the entity inspects:

- a. The condition of areas where hazardous materials and hazardous wastes are handled, mixed, stored or disposed of on-site or at associated facilities;⁵¹¹
- b. The condition of storage and conveyance structures, such as tanks, pipes/pipelines, valves flanges;
- c. The integrity of secondary containment systems;
- d. The functioning of alarms and sumps; and
- e. The effectiveness of any other control or <u>mitigation</u> measures (engineered or others) meant to prevent the release of hazardous materials and hazardous wastes in the workplace or to the environment.

NOTE ON 4.1.8.1: REVISED. In the 2018 Mining Standard, sub-requirement 4.1.5.5.c and requirement 4.1.5.6 outlined inspection and monitoring requirements, but the requirements focused only on mine waste facilities

⁵¹⁰ If spills might affect off-site communities, these hazards would need to be included in the risk assessment and procedures developed as per Chapter 2.5, which addresses Community Emergency Preparedness and Response Planning.

⁵¹¹ By associated facilities, we mean those that are under the control of the entity. If the wastes are being sent to off-site facilities that are run by independent entities, the expectation is that the entity would not carry out inspections of those facilities. See <u>CONSULTATION QUESTION 4.1-13</u>.

(e.g., tailings, waste rock). Specific inspections and surveillance related to physical stability issues at those facilities is now included in proposed Chapter 4.X (criteria 4.X.2 and 4.X.4).

This requirement now focuses on inspection of the facilities where hazardous materials and hazardous wastes are located, and inspection of the systems meant to control movement of those materials and wastes into the workplace or environment where they might cause harm.

CONSULTATION QUESTION 4.1-11: We are proposing annual inspections, but do you think that these types of inspections should occur at a much higher frequency (e.g., weekly, monthly)?

CONSULTATION QUESTION 4.1-12: There will be cases when entities send hazardous wastes to third-party disposal facilities. If those facilities are poorly managed, then it is possible that the entity would be contributing to impacts on human health or safety, or impacts on the environment or communities. Should there be either an up-front due diligence requirement to ensure that any third-party disposal facilities are well managed, adhere to certain standards, etc., and/or should there be any ongoing monitoring of those facilities by the entity?

4.1.8.2. Where waste or materials management procedures or engineering <u>controls</u> are not being effective, the following occurs:

- a. If there is an imminent risk to human health or the environment, immediate actions are implemented to remedy the situation and, if necessary, to stop work in the area until the situation is remedied;
- b. If risks to human health or the environment are not imminent, remedial actions are implemented as soon as possible, but no later than seven days after the inspection; and
- c. The incidents are documented and feed into reviews and updates to <u>hazardous materials</u> management procedures (see 4.1.4), <u>hazardous waste</u> management procedures (see 4.1.5), and occupational health and safety, emergency response, water, air or soil management plans, as relevant.

NOTE FOR 4.1.8.2: NEW. This is similar to expectations in Chapter 3.2 – 'Occupational Health and Safety,' where work can be stopped if unsafe conditions are observed and report. See requirement 3.2.6.1.

4.1.9. Reporting and Disclosure

4.1.9.1. On an annual basis, the <u>entity</u> reports to <u>affected communities</u> on its management of <u>hazardous</u> materials and <u>hazardous</u> wastes.

NOTE FOR 4.1.9.1: REVISED. This was 4.1.7.4 in the 2018 Mining Standard. That requirement was to report to stakeholders, if requested, on mine waste facility management. This is similar to that expectation, except we are proposing that this reporting occur proactively (not be based on stakeholder request) and that reporting relates to hazardous materials and hazardous wastes more generally. The proposed approach is more aligned with other IRMA chapters, where proactive information on management practices is shared (e.g., Chapter 4.2 on water management).

4.1.9.2. An access to information (or equivalent) policy that allows <u>stakeholders</u> to access more detailed information on <u>hazardous materials</u> and <u>hazardous wastes</u> upon request is in place and shared with stakeholders.

NOTE FOR 4.1.9.2: NEW. In the 2018 Mining Standard there was a blanket requirement in Chapter 1.2-Community and Stakeholder Engagement, requirement 1.2.4.1, which states that, "Any information that relates to the mine's performance against the IRMA Standard shall be made available to relevant stakeholders upon request." We are adding this element into each chapter where there was not previously a reporting requirement, to make it clear that information related to the specific topic is included in the blanket requirement.

Note that the requirement for an access to information policy (or equivalent) is being proposed in Chapter 1.2 (see <u>Note for requirement 1.2.4.3</u>).

4.1.9.3. For all <u>hazardous materials</u> and <u>hazardous wastes</u> that may pose a risk to communities, <u>workers</u> or the environment if there were to be an incident or spill, the <u>entity</u> discloses to local authorities and emergency services relevant information on the hazardous properties and health and environmental effects of those materials and wastes.

NOTE FOR 4.1.9.3: NEW. This requirement is being proposed because the information on chemical and waste hazards should be provided to relevant emergency responders, so that they can be prepared for all potential emergency situations.

NOTES

To be developed.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Brine

Groundwater, surface water or sea water that contains valuable dissolved minerals at sufficient concentrations to be economically extractable.

Contaminant of Potential Concern (COPC)

Contaminants that may pose a risk to human health or non-human biological receptors (e.g., flora, fauna, fungi).

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Hazard

A potentially dangerous phenomenon, substance, human activity or condition. It may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Source: International Federation of Red Cross and Red Crescent Societies. https://www.ifrc.org/document/hazard-definitions

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health or environmental hazard.

Hazardous Wastes

Wastes with properties or characteristics that make them a physical, health, or environmental hazard.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Release

An unintentional, unpermitted emission of mine-influenced water to the environment. See also 'Discharge'.

Safety Data Sheet

A document giving information on the properties of hazardous chemicals and how they affect health and safety in the workplace.

Source: RJC. https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf

Secondary Containment

Containment and/or diversionary structures to prevent a release in quantities that may be harmful.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Soil Remediation

The treatment of polluted soils to remove contaminants or convert them to harmless products using physical, chemical and biological processes. Ex-situ and in-situ remediation of soils are both commonly applied methods. Soil remediation may also include removal and deposition in repository.

Waste Mitigation Hierarchy

A ranking of waste management options according to what is best for the environment. The priority order is prevention, reduction, reuse, recycling (including composting), recovery (e.g., of energy from waste) and disposal, with prevention being the most preferred option and the disposal at a landfill being the least preferred option.

Workers' Health and Safety Representative

A worker chosen to facilitate communication with senior management on matters related to occupational health and safety, and to participate in and/or have access to information on health and safety risk assessments, monitoring, inspections and investigations. A representative is selected by other workers, or in unionized facilities may be selected by recognized trade union.

EXISTING DEFINITIONS

Acid Rock Drainage (ARD)

The drainage produced when rocks with sulfide or other acid-producing minerals are under oxidizing conditions (exposed to water and oxygen) and generate an acidic water stream. Acid rock drainage generally contains elevated concentrations of metals, sulfate, and other constituents and has a pH < 6. The terms acid mine drainage and acid and metalliferous drainage (both AMD) are sometimes used as synonyms for ARD.

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Artisanal and Small-Scale Mining (ASM)

Formal or informal operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labor-intensive technology. ASM can include men and women working on an individual basis as well as those working in family groups, in partnership or as members of cooperatives or other types of legal associations and enterprises involving hundreds or thousands of miners. For example, it is common for work groups of 4-10 individuals, sometimes in family units, to share tasks at one single point of mineral extraction (e.g., excavating one tunnel). At the organizational level, groups of 30-300 miners are common, extracting jointly one mineral deposit (e.g., working in different tunnels), and sometimes sharing processing facilities.

Source: OECD. 2016. OECD Due Diligence Guidance on Responsible Mineral Supply Chains from Conflict Affected and High Risk Areas.

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities, construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

Biodiversity/Biological Diversity

The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Control

An act, object (engineered), or system (combination of act and object) intended to prevent or mitigate an unwanted event.

Ecosystem Services

The benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Mercury Emissions Control System

Any system that will limit mercury emissions (either designed specifically for mercury, or mercury capture is a co-benefit), including sorbent technologies that can remove mercury from the gas stream during processing, or oxidation technologies that will increase the percentage of particulate-bound mercury removed by particulate scrubbers.

Mercury Waste

Substances or objects consisting of mercury or mercury compounds, containing mercury or mercury compounds, or contaminated with mercury or mercury compounds, that are disposed of, are intended to be disposed of, or are required to be disposed of by provisions of national law or applicable conventions. Mercury waste does not include ores or waste rock that contain trace quantities of naturally occurring mercury or mercury compounds.

Metals Leaching

The release of metals by contact with solvents. Leaching may be natural or induced (e.g., related to mining operations). Mining commonly accelerates metal leaching. Metals leaching can also be referred to as "contaminant" leaching.

Mine-Influenced Water (MIW)

Any water whose chemical composition has been affected by mining or mineral processing. Also referred to as mining influenced waters or mine-impacted waters. Includes acid rock drainage (ARD), acid mine drainage or acid and metalliferous drainage (AMD), neutral mine drainage, saline drainage, and metallurgical process waters of potential concern. A key characteristic of most mining impacted waters (also known as mining influenced waters) is that they contain elevated metals that have leached from surrounding solids (e.g., waste rock, tailings, mine surfaces, or mineral surfaces in their pathways). This fact is commonly acknowledged by the phrase "metals leaching" (ML), frequently resulting in acronyms such as ARD/ML.

REVISED. Previously 'Mining Impacted Waters'. Now includes more examples of mine-influenced waters.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Process Water

Water that is used to process ore using hydrometallurgical extraction techniques. It commonly contains process chemicals.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Stormwater

Industrial stormwater (also known as contact water) is rainfall, snow or snowmelt runoff that has contacted mined or mineral processing materials (e.g., waste rock, tailings, mine openings, open pits, mineral processing facilities and associated mining roads). Non-industrial stormwater (also known as non-contact water) is rainfall, snow or snowmelt runoff from land and impervious surface areas that do not contain and are not affected by mined or mineral processing materials.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Tailings

The waste stream resulting from milling and mineral concentration processes that are applied to ground ore (i.e., washing, concentration, and/or treatment). Tailings are typically sand to clay-sized materials that are considered too low in mineral values to be treated further. They are usually discharged in slurry form to a final storage area commonly referred to as a tailings storage facility (TSF) or tailings management facility (TMF).

Water Quality Criteria

Numerical concentrations or a narrative statement recommended to support and maintain a designated water use. Criteria are based on scientific information about the effects of water pollutants on a specific water use.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Chapter 4.2 Water Management

NOTES ON THIS CHAPTER: A number of changes have been made to more closely align the structure and flow of the chapter with other IRMA environmental chapters.

Proposed additions and changes:

- A couple of new requirements related to scoping risks/potential impacts on water from mining-related activities (4.2.2.3, 4.2.2.4)
- Requiring risk assessments to determine which predicted impacts are likely to be significant enough to warrant the development of mitigation measures and to identify contaminants of concern (4.2.2).
- Adaptive management separated from water monitoring program. Adaptive management plan has more detailed requirements (4.2.4), and monitoring program now includes a sampling and analysis plan (4.2.5).
- Modifying the requirement that entities make all monitoring data publicly accessible and requiring that the data be made available in a manner that is more comprehensible to stakeholders and be put into context (4.2.7).
- Moved requirements related to long-term water treatment from Chapter 2.6 into this chapter (4.2.4.3, 4.2.4.4)
- Now reference cyanide and mercury (due to proposed deletion of those chapters)

Note on IRMA Water Quality Tables: We are in the process of reviewing updated water quality standards in different jurisdictions. See note on <u>IRMA Water Quality Criteria by End-Use Tables</u>, at the end of the chapter.

There were two flags in this chapter in the 2018 Mining Standard that have been removed from the proposed updated version. The first flag related to exploring exceptions to IRMA's water quality criteria. There have not been any requests for exceptions in the past five years. The second flag had to do with the cyanide water quality criterion. Entities will have the opportunity to comment on proposed updates to all water quality criteria later this year. IRMA will consider if any flags are needed based on the results of those consultations.

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

BACKGROUND

Mining-related activities can affect water quality in many ways, including from: the discharge of process effluents water to the environment, seepage through mine wastes to groundwater and surface water, breaches or failures of tailings and water storage facilities, chemical spills, and the release of uncontrolled stormwater.

Remediation of water <u>pollution</u> can be extremely costly. Consequently, the design of systems to prevent any contamination of surface and groundwater should be a primary goal of the mining or mineral processing operation. Responsible entities can minimize water pollution by using a variety of source control approaches including: limiting infiltration of air and water to acid-generating/metal leaching waste and mined materials, using liners and leachate collection systems, collecting mine-influenced water as close to the source as possible, carefully controlling the discharge of stormwater and treated water to the environment, and reducing waste volumes by evaluating options for circularity.

Mines and mineral processing sites are often a large water user for their locale.⁵¹² The impacts of water used by a mining project are highly location-specific, depending on the local climate as well as on competition for water for uses other than mining. In arid regions water scarcity may be a critical concern, whereas in high rainfall regions or areas where the water table is close to the ground surface, challenges arise from the need to pump or divert water in order to develop a mine. The depletion of groundwater, surface water and springs from mine dewatering operations and general water usage by facilities can take decades to replenish after operations cease, and in some instances, groundwater levels and flow directions can be altered indefinitely.

Entities can protect water resources by minimizing the use of water and using water efficiently, ensuring that total withdrawals maintain environmental flows in streams, springs and other surface waters, minimizing groundwater drawdown, and treating mine-influenced water and discharging it in ways that minimize harm to surrounding water users and environmental resources. They can also clean up previously impacted water to make it usable, and in some cases provide a water supply from an alternative source.

Increasingly, responsible entities are aware of their operating context and pay attention not only to their impacts but to their dependencies and opportunities as well. They are participating in collective actions to address shared water challenges and opportunities among diverse stakeholders, and are adopting approaches that lead to positive water management outcomes at the local and regional levels. Such proactive and collaborative identification of potential water quality and quantity issues and the development of suitable management strategies adapted throughout an operation's life cycle can help prevent or minimize surface water and groundwater pollution and impacts on water quantity.

TERMS USED IN THIS CHAPTER

Acid Rock Drainage (ARD) Adaptive Management Affected Community
Background Water Quality
Baseline (Water Quality)
Best Available/Applicable Practices
Brine NEW ■ Broad Community Support ■ Closure ■ Collaboration ■ Competent Professionals) ■ Conceptual Site Model (CSM) ■ Consultation Contamination NEW Control Credible Methodology NEW
Culturally Appropriate NEW Dewatering ■ Discharge NEW ■ Ecosystem ■ Ecosystem Services
Entity NEW
Exploration NEW
Environmental Flows NEW ■ Facility ■ Free, Prior and Informed Consent ■ Habitat
Hazardous Waste NEW
Indigenous Peoples Livelihood
Long-Term Water Treatment
Metals Leaching (ML) ■ Mine-Influenced Water ■ Mineral Processing NEW ■ Mining NEW
Mining-Related Activities
Mitigation Mitigation Hierarchy
Mixing Zone
Natural Seep/Spring Offset ■ Operation NEW ■ Pit Lake ■ Point of Compliance ■ Pollution NEW
Post-Closure
Practicable
Project NEW Receptor NEW ■ Reclamation ■ Remediation (Groundwater and/or Soil) NEW ■ Rights Holder ■ Scoping NEW ■ Stakeholder Stormwater Tailings Trigger Level Waste Rock Water Balance Water Quality Criteria Water Quantity

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

OBJECTIVES/INTENT OF THIS CHAPTER

To manage water resources in a manner that strives to protect current and future uses of water.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

Existing operations (exploration, mines and mineral processing) are also expected to estimate <u>background</u> water quality and quantity where <u>baseline</u> conditions were not previously established (4.2.1.1).

⁵¹² For example, a study in Australia calculated that smelters and acid plants associated with pyrometallurgical production of copper from sulfide feed directly used approximately 10,000 L of water per tonne of copper produced and a further 10,000 L of water indirectly; smelters associated with pyrometallurgical production of nickel from sulfide feed used approximately 5,000 L of water directly and 15,000 L indirectly per tonne of nickel, while refineries used approximately 15,000 L directly and 5,000 L indirectly per tonne of nickel.

For more details, see: Northey, S and Haque, N. 2013. Life Cycle Based Water Footprint of Selected Metal Production: Assessing Production Processes of Copper, Gold and Nickel. <u>https://publications.csiro.au/rpr/download?pid=csiro:EP137374&dsid=DS3</u>
NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

Adverse impacts are <u>mitigated</u> according to an <u>adaptive management</u> plan (4.2.4.7) and <u>water quantity</u> and quality are being monitored at the site (4.2.5.1) to provide data on whether implemented mitigation measures are effective.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Water Management Requirements.

4.2.1. Baseline/Background Water Quality and Quantity

NOTE FOR 4.2.1: This criterion title is new, but the requirement is not. The requirement was previously in a criterion called Site Characterization and Prediction of Potential Impacts (was 4.2.2 in the 2018 Mining Standard).

4.2.1.1. Data on <u>baseline</u> or <u>background water quality</u> and quantity are gathered in sufficient detail to reliably determine <u>project/operation</u>-related sources of <u>contamination</u> and changes in water quantity or quality that are unrelated to the project/operation.⁵¹³ Data include:

- a. Seasonal and temporal variability in the physical and chemical conditions of surface waters, <u>natural</u> <u>seeps/springs</u> and groundwaters that could be affected by the project/operation, including:
 - Baseline/background concentrations of the comprehensive suite of parameters in <u>IRMA Water</u> <u>Quality Criteria by End-Use Tables</u> (Tables 4.2.a – 4.2.h) including weak acid dissociable cyanide (if cyanide is used or proposed to be used at the operation);⁵¹⁴ and
 - ii. Field parameters (i.e., pH, specific conductance, temperature, and potentially dissolved oxygen and turbidity (in surface waters) and redox potential (in groundwater), measured at the time of baseline/background sampling; and

⁵¹³ Sampling of baseline/background data will be expected to align with the monitoring guidance in <u>Annex 4.2-A</u> (unless entities have a clear and reasonable rationale for using alternative approaches).

⁵¹⁴ This is to establish whether certain constituents are present in the absence of mining activity (i.e., they are naturally occurring, or they are present as a result of third-party activities unrelated to the mineral development project/operation). If baseline data were not collected prior to the commencement of operations, then background data must be collected to estimate likely pre-operational water conditions. For more information see IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). Explanatory Note for 4.2.2.1. Available at: https://responsiblemining.net/resources/#full-documentation-and-guidance

b. Seasonal and temporal variability in flows and levels of surface waters, natural seeps/springs and groundwaters that could be affected by the project/operation.

NOTE FOR 4.2.1.1: REVISED. This was 4.2.2.1 in the 2018 Mining Standard. It has been included here to indicate that a baseline water evaluation should be conducted early in the process of mineral development. Ideally, collection of baseline data begins during exploration, but if it was not gathered at that time, the 2018 Mining Standard and the 2023 Standard still expect that some estimation of water background conditions will be determined. The collection of data would be expected to be collected in a manner that aligns with IRMA Water Monitoring Guidance (see Annex 4.2-A).

We deleted biological conditions from 4.2.1.1.a, as the biodiversity baseline is developed in chapter 4.3, requirement 4.6.1.3.

More specificity has been added in 4.2.1.1.a, to make it clear that the baseline data collection should include the full suite of potential contaminants (i.e., those in the <u>IRMA Water Quality Criteria by End Use Tables</u>) to ascertain if any constituents are present even in the absence of mining activity (i.e., either they are naturally occurring, or they are present as a result of third-party activities unrelated to the mineral development project/operation). There is a specific reference to sampling for weak acid dissociable cyanide if cyanide may be or is being used at an operation. That expectation is from requirement 4.7.4.1 in the 2018 Mining Standard.

4.2.2. Scoping Issues and Risks Related to Water

NOTE FOR 4.2.2: NEW. This is a new criterion heading. Scoping is a heading in many other chapters, it has been added here, and relevant requirements have been moved into the section from two other criteria in the 2018 Mining Standard (4.2.1. Water Management Context and Collaboration at the Local and Regional Level and 4.2.2. Site Characterization and Prediction of Potential Impacts). Note that criterion 4.2.1 in the 2018 Standard also contained an additional requirement to take steps to contribute positively to local and regional stewardship outcomes. That requirement has now been moved to the Management of Water section and is requirement 4.2.4.6.

There is no change to the content of requirements 4.2.2.1 and 4.2.2.2, but in the 2018 Mining Standard they were numbered 4.2.1.1 and 4.2.1.2, respectively.

4.2.2.1. Water users, water rights holders and other stakeholders ("stakeholders") that may potentially affect or be affected by project water management practices are identified.

4.2.2.2. The entity conducts its own research and collaborates with relevant stakeholders to identify:

- a. How water resources that may be affected by the project/operation are currently being used and how they may be used in the future (e.g., for drinking water, recreation, irrigation, livestock watering, fishing, aquaculture, industrial, etc.); and
- b. Water-related concerns, challenges, and opportunities that exist at the local and regional levels.

4.2.2.3. All mining-related activities and facilities that may pose a risk to water quality, including sedimentation risks, from planned discharges or unplanned releases of contaminants of potential concern (COPCs) are identified, including but not limited to:⁵¹⁵

- a. Mine waste facilities (e.g., <u>tailings</u> impoundments, <u>waste rock</u> dumps, slag heaps, heap and dump leach piles, open pits, <u>pit lakes</u>, underground workings, etc.), including catastrophic releases from facility failures;
- b. Other types of waste facilities (e.g., hazardous wastes, solid waste landfills, sewage treatment plants);

⁵¹⁵ Note that information from Chapter 4.1 (Waste and Materials Management) will be instrumental in identifying the risks to water quality. For example, the scoping process in 4.1.1 will identify chemicals and wastes with hazardous properties and waste facilities (e.g., tailings facilities or landfills, etc.) and project/operation components (e.g., pits, underground workings) that may have the potential to release contaminants to the environment and affect water resources.

Also, information from proposed Chapter 4.X (Management of Physical Stability) will help identify facilities that may be subject to catastrophic failures and releases of materials that could affect the environment and water resources.

- c. Mineral beneficiation and processing facilities and activities (e.g., crushing/grinding, flotation, heap or vat leaching, mineral processing);
- d. Evaporation ponds, sedimentation ponds, industrial stormwater retention/detention ponds, pregnant and barren solution ponds, and brine ponds; and
- e. General mining activities (e.g., blasting, transport of chemicals and materials, etc.).

NOTE FOR 4.2.2.3: NEW. This requirement has been added because identification of the activities and facilities that may pose a risk to water quality is necessary in order to scope risks to water, and also to develop a conceptual site model (4.2.2.5).

4.2.2.4. All mining-related activities and facilities that pose a risk to groundwater levels, surface water flows, natural seep/spring flows, or environmental flows are identified, including but not limited to risks from:

- a. The project's/operation's use and discharges of water;
- b. Activities such as groundwater extraction or pumping that may affect water resources; and
- c. The presence of open pits, waste facilities, water and <u>brine</u> impoundments, and processing facilities that modify runoff and infiltration of precipitation.

NOTE FOR 4.2.2.4: NEW. This requirement has been added because identification of the activities and facilities that may pose a risk to groundwater levels, surface water flows, natural seep/spring flows, or environmental flows is necessary in order to scope risks to water, and also to develop a conceptual site model (4.2.4.5).

4.2.2.5. A conceptual site model is developed and shared with stakeholders.⁵¹⁶ This model:

- a. Includes a detailed description and depiction of the physiography, geology (including structural geology such as faults), hydrology, hydrogeology, climatology, and geochemistry of the site as a whole;⁵¹⁷
- b. Includes all potential mine-related sources of contamination (see 4.2.2.3);
- c. Includes all contaminants of potential concern (see Chapter 4.1);⁵¹⁸ and
- d. Describes what is known about sitewide contaminant release, transport, pathways between sources and receptors, and fate of contaminants along pathways and in receptors for the site as a whole.⁵¹⁹

NOTE FOR 4.2.2.5: Minor change. The requirement for a conceptual model was previously 4.1.3.2.c in the Waste Management chapter. It has been moved here due to changes in the structure of that chapter, and because a site-wide conceptual model is important for understanding the big picture of potential sources and fate of contaminants that may affect water quality and quantity. We are proposing that it be shared with stakeholders because it is important for them to have access to this information if they are to understand and participate in discussions on risks to water.

As outlined in the footnote for 4.2.2.5, a conceptual site model should have been developed in the ESIA (Chapter 2.1). But if it was not, it should be developed to inform the scoping of risks to water.

4.2.3. Assessment of Short- and Long-Term Risks to Water

NOTE FOR 4.2.3: NEW. This is a new criterion heading. While implied in the previous version of the water chapter, there were not specific requirements related to how an entity moved from scoping of potential impacts to determining which impacts were likely to be significant enough to warrant the development of mitigation measures.

⁵¹⁶ A conceptual site model may have been developed in Chapter 2.1. More detailed conceptual site and facility models are required in 4.2.3.2.

⁵¹⁷ The description and depiction rely on information provided in requirements 4.2.2.1 (baseline), Chapter 4.1 (Waste and Materials Management) requirements 4.1.1.2, 4.1.1.3, and 4.1.1.4 (source material characterization), and proposed Chapter 4.2 (Management of Physical Stability), criterion 4.X.1.

 $^{^{\}rm 518}$ COPCs are identified in requirements 4.1.1.2, 4.1.1.3, and 4.1.1.4.

⁵¹⁹ For example, a scaled map with a clear legend showing the potential sources (e.g., facilities), the location and flow directions in rivers, streams, springs and seeps; the groundwater flow directions; and the locations of major faults.

That missing step is risk assessment. Both short-term risks (e.g., during development or operations) and long-term risks (e.g., during closure/post-closure) must be evaluated.

4.2.3.1. Where potential sources of risks to water quality or <u>water quantity</u> are identified, a <u>credible</u> <u>methodology</u> is used to assess and document the level of risk posed to health, safety, the environment, and current and future uses of water for each identified risk.

NOTE FOR 4.2.3.1: NEW. See note for 4.2.3. This requirement has also been added to be more consistent with the approach in other IRMA chapters, including the ESIA chapter. An assessment of risks/potential impacts on water should have been done as part of the ESIA, but if not done at the appropriate time we are proposing that it needs to be done post-ESIA to ensure that all risks are assessed, to understand the potential consequences related to the risks, and to determine if mitigation measures are required to prevent or mitigate the risks to water quality and quantity.⁵²⁰

As mentioned in other chapters, we are proposing to define **credible method/methodology** as: A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

4.2.3.2. Risk assessments, management strategies and reclamation and closure planning (see Chapter 2.6) are informed by the use of the following tools:⁵²¹

- a. A conceptual site model (see 4.2.2.5) and conceptual models for facilities;⁵²²
- b. A numeric water balance model for the site as a whole and for each facility that poses a risk to water (as identified in 4.2.2.3) that:
 - i. Predicts expected changes in water inflows and outflows (e.g., dewatering rates, water use amounts and sources, treated water <u>discharges</u>) and water volumes stored on-site in facilities (e.g., in supernatant ponds, water management ponds, water in pits) related to the <u>project/operations</u>;
 - Takes into account the probable maximum precipitation event; low, average, and high precipitation years; and climate change effects on temperature and precipitation using the most reliable, recent, and relevant climate change projections;
 - iii. Clearly identifies model assumptions, inputs, and uncertainty; and
 - iv. Estimates the effects of water management on groundwater levels and stream/spring flows.
- c. Hydrogeochemical and hydrogeological models are used to predict or quantify potential impacts to water resources during all phases of the operation's life cycle (from construction through to <u>post-closure</u>), including estimating concentrations of <u>COPCs</u> at <u>points</u> of <u>compliance</u>.⁵²³

NOTE FOR 4.2.3.2: REVISED. A conceptual site model was required in 4.2.2.3.a, and conceptual facility models were required in 4.1.3.2.c in the 2018 Mining Standard. Both are now included in 4.2.3.2.a.

⁵²⁰ We can add guidance on credible risk assessment methods. For example: https://www.epa.gov/risk/risk-assessment-guidance

⁵²¹ The conceptual site model, site water balance and numerical hydrogeochemical or hydrogeological models mentioned in 4.2.3.2 should inform reclamation and closure planning in Chapter 2.6 (Planning and Financing Reclamation and Closure), requirement 2.6.1.1.k (e.g., whether wet or dry closure will be possible, the potential future impacts of climate change on the site, the water quality and quantity at closure, and potential to avoid long-term water treatment).

⁵²² These facility models would be developed in a manner similar to that for the site model in 4.2.2.5, except for each facility.

⁵²³ Models include, as necessary, groundwater flow models, surface runoff and infiltration models, and/or a combined water balance and load model that can be used alone or in combination to estimate concentrations of COPCs in water resource receptors.

Note: As per Chapter 4.1 (Waste and Materials Management) requirement 4.1.1.3, COPCs from mined material and mine wastes are identified using the results of laboratory short-term and long-term (kinetic) leach tests or results, or as per requirement 4.1.1.4 the results of chemical analysis of extracted brines and liquid wastes. If laboratory leachate, brine or liquid waste concentrations exceed numeric IRMA water quality criteria (Tables 4.2.a – 4.2.h), those constituents are identified as COPCs. The risk assessment will determine final contaminants of concern.

Also, as per requirement 4.1.1.2, for materials coming from third parties to be used as feedstock for mineral processing operations, if the supplier does not disclose to the entity detailed information on the principal components and contaminants that are considered likely to be routinely or periodically present in feed materials, the entity will need to carry out a characterization to determine the characteristics for themselves.

4.2.3.2.b was previously 4.2.2.3.b in 2018 Mining Standard. More detail was added to ensure that facility inflows and outflows, climate change, model assumptions, and model uncertainty are identified and handled numerically (with the exception of model assumptions) in the water balance model.

4.2.3.2.c was 4.2.2.3.c in the 2018 Mining Standard. We have added that the predictions from these models extend through all phases of the life cycle, from construction through to post-closure.

4.2.3.3. If, at any time during project development or operations, the concentrations of contaminants in water resource receptors are predicted to exceed both <u>baseline/background water quality</u> and IRMA water quality criteria by end use, or the potential exists for long-term <u>acid rock drainage</u> or contaminant or <u>metal leaching</u> (see Chapter 4.1),⁵²⁴ the <u>entity</u>:

- a. Evaluates whether water treatment will be required to <u>mitigate</u> impacts on water quality during operations and <u>closure/post-closure</u>, including information on <u>contaminants of potential concern</u> and treatment methods and alternatives; and
- b. Ensures, if long-term treatment will be required:
 - i. The results from the water balance and water quality models are used to estimate the needed timing, volume and duration of water treatment; and
 - ii. The risk assessment includes an evaluation of potential consequences to human health, livelihoods, or ecosystems from a failure in long-term water treatment facilities.

NOTE FOR 4.2.3.3: REVISED. 4.2.3.3.a was 4.2.2.3.d in the 2018 Mining Standard. We have added more detail on the conditions that would prompt the evaluation of whether or not long-term water treatment might be needed.

Additionally, we are proposing to add 4.2.3.3.b.i, so that the potential timing of long-term treatment is determined; and 4.2.4.3.b.ii (that the risk assessment include an evaluation of the potential consequences if there is a failure in long-term water treatment). Understanding the potential consequences of a water treatment failure is important information to share with stakeholders as they evaluate any project that will include long-term water treatment (see 4.2.4.3).

4.2.3.4. Conceptual and numeric models are:

- a. Developed using credible methodologies; and
- b. Evaluated annually using operational monitoring data, and are updated as necessary.⁵²⁵

NOTE FOR 4.2.3.4: REVISED. This was 4.2.2.4 in the 2018 Mining Standard. There were two elements in that requirement that were found in a single paragraph. Here, they have been separated into two sub-requirements to make it clear that both elements need to be audited.

In sub-requirement 4.2.3.4.a, the previous requirement used the wording "industry best practices" to describe the development of the models. This has been changed to credible methodologies to be more consistent with expectations elsewhere in the Standard. This term has also been defined (see glossary at end of chapter).

We are proposing a definition for credible methodologies as follows:

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

⁵²⁴ E.g., determined by the characterization of mined materials and waste in 4.1.1.3.

⁵²⁵ This process includes comparing the predicted model results with actual monitoring data and setting parameters for what constitutes acceptable deviations between modeled and actual results. When predicted and actual results do not agree, conceptual and numeric models should be revised and predictions updated to ensure that water management practices are based on the best possible data.

In sub-requirement 4.2.3.4.b, we have added that the models are evaluated annually, but that they only need to be updated as necessary.

CONSULTATION QUESTION 4.2-1

Background: Requirement 4.2.2.5 on a conceptual site model contains the important elements of design for a conceptual facility model. We would also like to create some guidance on credible codes that can be used for water quality/quantity modeling.

The State of Nevada has developed a list that includes most codes commonly used to create numeric hydrogeologic and geochemical models: <u>https://ndep.nv.gov/uploads/land-mining-regs-guidance-docs/20210830_BMRR_CodesListing_Rev01_ADA.pdf</u>. We note that GoldSim is not on the list. Although GoldSim is not technically a computer code and is proprietary, it is frequently used for creating water balance and water balance and load models for mine sites.

Question: Are there other codes or programs that you would recommend including? And should IRMA's list only include credible codes that are publicly available, or also include proprietary programs like GoldSim? What guidance can we offer if the codes or software are proprietary that would assist auditors in their evaluations?

4.2.3.5. Risk assessments are reviewed and, if necessary, updated when there are proposed changes in <u>facilities</u>, activities, extracted materials, and processes, and when there are changes in operational context that have the potential to increase the severity of consequences of any identified risks, or when updates have been made to model predictions.

NOTE FOR 4.2.3.5: NEW. With the proposed addition of a risk assessment this requirement is also necessary, as risk assessment is an ongoing process.

4.2.4. Water Management Planning and Implementation

NOTE FOR 4.2.4: NEW. This is a new criterion heading. In the 2018 Mining Standard, the development of measures to prevent and mitigate impacts to water were included in criterion 4.2.3 Prevention and Mitigation of Impacts to Water. This new criterion combines the mitigation measures with the development of an adaptive management plan for water (previously found in criterion 4.2.4 Monitoring and Adaptive Management). This approach is consistent with other chapters in the IRMA Standard.

4.2.4.1. Measures to manage risks to water quality for all significant risks identified in the risk assessment are:

- a. Developed, documented and implemented by competent professionals;
- b. Developed in <u>consultation</u> with potentially affected or affected <u>stakeholders</u> in a manner that aligns with the <u>mitigation hierarchy</u>, as follows:
 - i. Priority is given to source control and other measures that prevent or avoid the use or generation of contaminants or the <u>release</u> of contaminants, including increased sediment load, relative to <u>baseline</u> conditions;
 - ii. Where elimination of contaminants through substitution or source control measures is not <u>practicable</u> or effective, migration <u>control</u> measures are implemented to minimize the movement of contaminants to <u>receptors</u> where they can cause harm to human or <u>ecosystem</u> health; and
 - iii. If necessary, <u>polluted</u> waters are captured and treated to remove contaminants and restore water quality before water is returned to the environment or used for other purposes; and
 - iv. If prevention and minimization measures are not feasible or do not eliminate impacts, compensation is used as a last resort to offset any remaining impacts; and
- c. Align with best available/applicable practices described in Annex 4.2-B.

NOTE FOR 4.2.4.1. REVISED. This requirement, along with 4.2.4.2, replaces requirement 4.2.3.1 in the 2018 version of the IRMA Standard. The previous requirement was very general and therefore difficult to audit

consistently. We have elaborated here to provide more detail on what the mitigation hierarchy means for avoidance, minimization/mitigation, restoration, or compensation of impacts to water quality.

Also, we are proposing a new <u>Annex 4.2-B</u> of best-practice measures to minimize risks to water associated with different facilities. The purpose of the annex is to help sites and auditors get a sense of some best practices to safeguard water. Without such guidance, it will be difficult for auditors, who cannot be experts on every type of facility associated with a mining or mineral processing, to confidently or consistently assess whether the mitigation measures being proposed and implemented by sites are consistent with best practices. The current proposal is that entities could either demonstrate alignment with the best practices or provide auditors with a rationale as to why those practices are not appropriate for their situation or provide evidence that alternative approaches are as effective at protecting water.

The proposed content in <u>Annex 4.2-B</u> is a starting point for a conversation. Any input on the approach or the content in the guidance in the annex would be appreciated.

CONSULTATION QUESTION 4.2-2: Do you agree with this approach to create guidance to guide auditor's assessments? If not, how do you suggest auditors determine whether or not the measures at a site are sufficient to safeguard water resources? Would you be interested in being part of a working group to help work on this guidance? If so, please contact IRMA (<u>comments@responsiblemining.net</u>) and we will be in touch as we move forward with this process.

4.2.4.2. Measures to manage risks to water quantity/water supply for all significant risks identified in the risk assessment are:

- a. Developed, documented and implemented by competent professionals; and
- b. Developed in <u>consultation</u> with potentially affected or affected <u>stakeholders</u> in a manner that aligns with the <u>mitigation hierarchy</u> as follows:
 - i. Priority is given to measures that avoid the use or extraction of fresh water, or to measures that avoid activities that adversely affect water resources and the ecosystem services that they support;
 - ii. If that is not possible, measures are implemented, as relevant, to reduce the volumes of water used or extracted, or to minimize the water quantity/water supply impacts from other project-related activities on water resources and the ecosystem services that they support; and
 - iii. If necessary, affected water supplies and ecosystem services are restored; and
 - iv. If other options are not <u>practicable</u> or possible, water supplies are replaced with other sources in a manner that is agreed to by potentially affected or affected stakeholders (see also 4.2.6.2), and any impacts on <u>ecosystems</u> or ecosystem services are <u>offset</u> as per Chapter 4.6.

NOTE FOR 4.2.4.2: REVISED. This requirement, along with 4.2.4.1, replaces requirement 4.2.3.1 in the 2018 version of the IRMA Standard (See Note for 4.2.4.1). We are proposing this language to elaborate on what the mitigation hierarchy means in relation to the mitigation of impacts to water quantity/water supply. Also, 4.2.4.2 will now provide the information needed to audit requirement 4.2.6.2, which requires that if water supplies are affected, there must be stakeholder agreement on any impacts to water supplies.

- 4.2.4.3. If the need for long-term water treatment is predicted, a proposed project is not developed unless:⁵²⁶
 - a. Risk assessment assumptions and findings are discussed with potentially affected communities; and
 - b. As relevant:
 - i. As per IRMA Chapter 2.3, broad community support is expressed for the project; and/or

⁵²⁶ Chapter 2.6—Planning and Financing Reclamation and Closure also requires that any post-closure long-term water treatment measures must include treatment technologies proven to be effective under similar climatic conditions and at a similar scale to the volume of water that will need to be treated. See requirement 2.6.1.2.k.

ii. As per IRMA Chapter 2.2, if <u>Indigenous Peoples</u>' rights or interests may be affected by proposed <u>long-term water treatment</u> (including from potential accidents or incidents associated with the treatment facility), the <u>entity</u> obtains the <u>free</u>, <u>prior and informed consent</u> from Indigenous Peoples for the proposed project.

NOTE FOR 4.2.4.3: REVISED. In the 2018 Mining Standard this was requirement 2.6.6.2 in Chapter 2.6— Planning and Financing Reclamation and Closure (criterion 2.6.6 'Post-Closure Water Treatment'), as it related to issues that would need to be addressed during post-closure. It has been moved here to keep all of the water-related requirements together.

The overall intent of this requirement has always been that new projects (not existing operations) that will require long-term water treatment only be developed if the risks have been thoroughly understood, disclosed, and discussed with those who will bear the potential consequences should a water treatment failure occur, and that all possible steps be taken to minimize the adverse impacts if a decision is made to proceed with the project.

The 2018 Mining Standard included additional requirements related to an engineering and risk assessment that should take place. Now that a risk assessment requirement exists in the Water Chapter (4.2.3.1), we are proposing to remove those expectations here. However, we have added that the risk assessment must include an evaluation of potential consequences to human health, livelihoods, or ecosystems from a failure in long-water treatment (see 4.2.3.3.b), and have retained that the risk assessment assumptions and findings (and assumptions) be explicitly discussed with affected communities prior to those communities deciding whether to support the project, and that if Indigenous Peoples rights may be affected, risk assessments must be discussed with Indigenous Peoples as part of the free, prior and informed consent process.

We have also removed the sub-requirement that stated that all practicable efforts to avoid/prevent long-term water treatment be taken, as that is included in 4.2.4.1.

Reviewers should note, as well, that there are additional requirements in Chapter 2.6—Planning and Financing Reclamation and Closure that stipulate if long-term water treatment is required there are sufficient funds in place to ensure that treatment operations would be able to continue for as long as necessary to protect water quality. See 2.6.1.4.i and 2.6.3.1.c.

CONSULTATION QUESTION 4.2-3: Do you have any suggestions on alternative language or approaches, or alternative means for safeguarding water resources and those who rely on them if long-term water treatment is necessary, would be welcome.

4.2.4.4. If broad community support is obtained from affected communities and/or Indigenous Peoples provide free, prior and informed consent for a proposed project that requires long-term water treatment (see 4.2.4.3), or if long-term water treatment is deemed necessary at any point during operations:

- a. An action plan that contains all the <u>practicable</u> steps that can be taken to minimize the volume of water to be treated is developed and implemented; and
- b. The entity demonstrates that funding is in place to implement the actions in 4.2.4.4.a, and to construct, operate and maintain an effective water treatment plant.⁵²⁷

NOTE FOR 4.2.4.4: REVISED. In the 2018 Mining Standard this was requirement 2.6.6.2 in Chapter 2.6— Planning and Financing Reclamation and Closure. That requirement stated that all practicable steps shall be taken to minimize the volume of water to be treated.

We have added in 4.2.4.4.a. that an action plan be developed to outline those steps, and also that such a plan be developed if it is discovered at any point during operations that long-term water treatment is going to be necessary (as sometimes early-phase predictions that water treatment will not be necessary are not correct).

⁵²⁷ This information should feed into Chapter 2.6, requirement 2.6.1.4.i.

And we have added 4.2.4.4.b, that entities demonstrate that such plans are funded, to ensure that such steps are carried out, and that the treatment plant itself needs to be funded.

- 4.2.4.5. If a surface water or groundwater mixing zone is proposed as a mitigation strategy:
 - a. A risk assessment is carried out to identify, evaluate and document risks to human health, local economies and aquatic life from use of the proposed mixing zone, including, for surface water mixing zones, an evaluation of whether there are specific contaminants in point source <u>discharges</u>, such as certain metals, that could accumulate in sediment and affect aquatic life (including through bioaccumulation); and
 - b. If any significant risks are identified, mitigation measures are developed to protect human health, aquatic life and local economies including, at minimum:
 - i. Surface water or groundwater mixing zones are as small as practicable;
 - ii. Water in a surface water mixing zone is not acutely toxic to aquatic life;
 - iii. A surface water mixing zone does not interfere with the passage of migratory fish;
 - iv. Surface water or groundwater mixing zones do not interfere with a pre-project use of water for irrigation, livestock or drinking water, unless that use can be adequately provided for through another source of similar or better quality, volume and accessibility, and that this substitution is agreed to by all potentially affected water users; and
 - c. Discharges into a surface water mixing zone match the local hydrograph for surface water flows to the extent practicable.

NOTE FOR 4.2.4.5: This was 4.2.3.2 in the 2018 Mining Standard.

4.2.4.6. Options to address shared challenges and contribute positively to local and regional water stewardship outcomes are developed through <u>collaboration</u> with relevant <u>stakeholders</u>, and are included in an action plan or equivalent.

NOTE FOR 4.2.4.6: This was 4.2.1.3 in the 2018 Mining Standard.

4.2.4.7. (Critical Requirement)

An adaptive management plan for water (or equivalent) is developed and implemented that:

- a. Identifies potential water quality/quantity effects that could occur at monitoring locations, based on the risk assessment (see 4.2.3);
- b. Identifies key water quality/quantity indicators that will best characterize the potential effects;
- c. Includes trigger levels for water quality and quantity to provide early warning of negative changes in water characteristics;
- d. Includes general responsive (adaptive management) actions to be taken if trigger levels or exceedance of legal or other thresholds are reached, and estimated timelines for completion of actions;⁵²⁸
- e. Assigns implementation of adaptive management actions, or oversight of implementation, to responsible staff;⁵²⁹

⁵²⁸ These actions could include: first confirming if the sample results are accurate (see Proposed Guidance below); implementation of measures to regain control of a situation/stop an exceedance/come back into compliance; suspension of mine discharge until water quality meets criteria; reporting within the entity, to government agencies and stakeholders; increase in sampling frequency; changes to monitoring regime, etc.

Proposed Guidance regarding steps to take if water quality trigger levels or thresholds are reached or exceeded in a single sample:

¹⁾ The sample is reanalyzed by the laboratory if the sample still exists and meets holding and QA/QC requirements;

²⁾ If the reanalyzed result reaches or exceeds the relevant value, another sample is taken at the same location as quickly as possible, noting any substantial differences in flow, levels, or other characteristics at the site;

³⁾ If resampling confirms concentrations exceed relevant values, the frequency of sampling at that location is increased (e.g., if monthly, sample weekly; if quarterly, sample monthly or more frequently), and the monitoring plan is updated accordingly; and the planned adaptive management actions are implemented.

⁵²⁹ If work is carried out by third party contractors, there needs to be a staff employee responsible for overseeing quality of work, timelines, etc.

- f. Includes creation of an action plan if exceedance of IRMA Water Quality Criteria (see 4.2.6.1) or another threshold is confirmed. The plan includes:
 - i. Determination of the areal extent of the impacts;
 - ii. Investigation of the cause/source of the exceedance;
 - iii. Evaluation and selection of <u>adaptive management</u> actions developed as per 4.2.4.7.d and/or development of additional or different actions that are likely to correct the exceedance;⁵³⁰
 - iv. Development of estimated timeline and budget needed to implement the corrective action plan, and a financing plan to ensure that funding is available for effective implementation of the corrective actions; and
 - v. Creation of a report summarizing the action plan, the outcome of the response measures taken, and needed changes to improve the effectiveness of implemented <u>mitigation</u> measures identified in 4.2.4.1 and 4.2.4.2.

NOTE FOR 4.2.4.7: REVISED. This was 4.2.4.4 in the 2018 Mining Standard. The requirement has been revised to reflect that there are two broad categories of actions that need to be included in one or more management plan(s). The first, found in 4.2.4.1 (for water quality) and 4.2.4.2 (for water quantity/supply), are the proactive mitigation measures that will be implemented to prevent or minimize impacts on water, such as engineered controls, operational measures, or others. These measures were included in the original requirement, but sub-elements have been added to be more consistent with the expectations regarding management plans in other IRMA chapters.

The second category of actions are the adaptive management actions that are to be taken in response to a situation that affects water quality or quantity (e.g., water quality reaches a trigger level or exceeds a water quality thresholds). The remaining sub-requirements are elements of the adaptive management plan. Entities may choose to have separate water management plans and adaptive management plans if they so choose. In general, separate adaptive management plans are now the norm.

Sub-requirements 4.2.4.7.c and 4.2.4.7.d were 4.2.4.4.b in the 2018 Standard. They have been separated here to ensure that trigger levels are identified (4.2.4.7.c) and response actions to the triggers (4.2.4.7.d) are included in the adaptive management plan and audited separately.

Sub-requirements 4.2.4.7.f is NEW. It was added to emphasize that if trigger levels or thresholds are exceeded in a single sample, adaptive management actions are not required to be implemented until a more thorough evaluation proves whether an exceedance actually occurred. Although quality assurance/quality control measures are included in the sampling and analysis plan (requirement 4.2.5.1.a), laboratory errors are fairly common and should be checked as part of due diligence. Guidance for 4.2.4.7.f will note that the steps to evaluate an individual exceedance should take place as quickly as possible to avoid longer term water impacts.

Sub-requirements 4.2.4.7.g is NEW. It was added for two reasons. First, if there is an exceedance of a threshold related to water quality or water quantity, entities need to determine the extent of the impact. Second, to be clear that it is not uncommon that the initial adaptive management actions (4.2.4.7.d) and mitigation measures (4.2.4.1 and 4.2.4.2) may need to be modified or new actions and measures developed, and that this is acceptable practice as long as they are documented in an adaptive management action plan.

CONSULTATION QUESTION 4.2-4: An adaptive management plan is also required for land and soil management (4.XX.4.3). Should adaptive management plans be required for the management of other resources (e.g., biodiversity, or air)?

⁵³⁰ Once a threshold exceedance is confirmed, different or additional actions may be needed than those in the adaptive management plan (in 4.2.4.7.d), because situations may not always unfold as expected, or more may need to be done than was originally anticipated. Often, actions are more specific to the observed exceedance. Examples of actions include: installing groundwater pumping wells downgradient of a waste rock pile, improving removal of arsenic in a treatment plant, increasing the freeboard of the barren solution pond to avoid overtopping, etc.

4.2.4.8. Annually or more frequently, if necessary, the <u>entity</u> reviews monitoring data and evaluates the effectiveness of the implemented <u>mitigation</u> measures and <u>adaptive management</u> plan actions, and, as necessary, develops new mitigation measures and/or revises the adaptive management plan to improve water management outcomes.

NOTE FOR 4.2.4.8: This was 4.2.4.5 in the 2018 Mining Standard. Minor clarification has been added that an evaluation of the effectiveness of mitigation measures and review of the monitoring results are part of the review of the adaptive management plan.

4.2.4.9. <u>Stakeholders in affected communities</u> are provided with the opportunity to review adaptive management plans and provide feedback on revisions to the plans.⁵³¹

NOTE FOR 4.2.4.9: This was 4.2.4.6 in the 2018 Mining Standard.

4.2.5. Water Monitoring Program

NOTE FOR 4.2.5: Monitoring was previously combined with Adaptive Management in the 2018 Mining Standard (criterion 4.2.4). Ideally a water monitoring program should be designed and implemented before mining-related activities begin, and then expanded during operations. Monitoring results inform scoping and assessment of risks to water (Criteria 4.2.2 and 4.2.3) and adaptive management. Although a monitoring program is needed as early as possible in a project, positioning it here and before the comparison of monitoring results to water quality/quantity criteria is consistent with its placement in other chapters.

4.2.5.1. (Critical Requirement)

A program to monitor effects on water quantity and quality is developed and implemented that:

- a. Includes a sampling and analysis plan (or equivalent) that is consistent with best practices (see <u>Annex 4.2-B</u> Annex 4.2-B) and includes:
 - i. Sample collection, handling and transportation protocols, sample hold times, analysis, quality assurance/quality control methods (e.g., collecting replicate, trip blank, and equipment blank samples), and reporting requirements;
 - A sufficient number of monitoring locations at sites unaffected by the project (baseline locations) and sites potentially affected by the project to provide reliable data on changes to water quantity, including environmental flows, and the physical and chemical conditions of surface waters, natural seeps/springs and groundwater (hereafter referred to as water characteristics);
 - iii. Collection of water quality and quantity samples on a frequent enough basis to account for seasonal fluctuations, storm events and extreme events that may cause changes in water characteristics;
 - Analysis of water quality samples for field parameters and all other parameters that have a reasonable potential to adversely affect identified current and future water uses, including, if relevant, cyanide and mercury;⁵³² and

⁵³¹ As per 4.2.7.5, adaptive management issues are discussed with the entity on an annual basis, or more frequently if requested by stakeholders.

⁵³² Field parameters include pH, temperature, specific conductance, and potentially dissolved oxygen, redox potential and turbidity.

^{&#}x27;Parameters with a reasonable potential to adversely affect identified current and future water uses' are based on baseline (see requirement 4.2.1.1) and geochemical characterization results (See criterion 4.1.1 in Chapter 4.1) and the IRMA water quality criteria by end use tables (Tables 4.2.a – 4.2.h).

Where the entity can demonstrate that there is no reasonable potential for a parameter to exceed the baseline/background values or numeric criteria in the IRMA Water Quality Criteria by End-Use Tables, those parameters only need to be measured in samples every five years as per 4.2.2.1.b. The entity can demonstrate that there is no reasonable potential, for example, if baseline or background monitoring do not detect the parameter, and source characterization, modeling, and other site-specific information indicate no/low probability that the parameter will be detected.

Note that if cyanide is likely to be used at the site (see 4.1.6.1) then water samples at compliance locations would need to be monitored for weak acid dissociable (WAD) cyanide. If WAD cyanide is detected in discharges to surface waters, the entity would also monitor total cyanide, free cyanide, and thiocyanate levels. These expectations are from requirements 4.2.7.1 and 4.2.7.2 in the 2018 Mining Standard.

- v. Analysis of water quality samples in laboratories using equipment capable of detecting contaminants at levels below the values in the relevant <u>IRMA Water Quality Criteria by End-Use Tables</u>.
- b. Includes sampling and analysis of the comprehensive suite of parameters in relevant <u>IRMA Water Quality</u> <u>Criteria by End-Use Tables</u> at <u>points of compliance</u> every five years, at a time of year when concentrations are expected to be the highest, to determine if unanticipated contaminants may be present (e.g., due to changes in ore, waste, or <u>brine</u> characteristics as operations progress); and
- c. Includes sampling of water quality and documentation of the quantity of <u>mine-influenced waters</u> destined for re-use by external third-party entities.

NOTE FOR 4.2.5.1: REVISED. This requirement includes elements from 4.2.4.1 and 4.2.4.2 in the 2018 Mining Standard because both contained elements of the water monitoring program. The numbering has changed (4.2.5.1.a.ii was 4.2.4.1.a; 4.2.5.1.a.iii was 4.2.4.1.b; 4.2.5.1.a.iv was 4.2.4.2; 4.2.5.1.a.v was 4.2.4.1.e and f.). In the 2018 Mining Standard requirement 4.2.4.1 was a critical requirement, and we have carried over that designation (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

Also, following modifications are noted:

- Some content in 4.2.5.1.a is REVISED. Reference to a sampling and analysis plan was added because all credible water monitoring programs have sampling and analysis plans to guide collection, handling, transport, analysis, and reporting. This was not clear in the 2018 Standard.
- Added more detail in 4.2.5.1.a.i, which, in addition to more detailed best practices for water quality and quantity monitoring (included as <u>Annex 4.2-B</u>) will improve the auditability of the requirement. Guidance will also be developed on some of the core elements of monitoring best practices to help sites and auditors know what important elements must be implemented to meet the IRMA requirement.
- 4.2.5.1.a.ii was modified to include environmental flows. There may be enough flow in a river to meet the needs for human uses, but leave aquatic ecosystems unsustainable, especially if environmental flows are disrupted for significant periods or during particularly sensitive times. Monitoring flows with this in mind will be important for understanding impacts. We are proposing a definition of environmental flows to align with IUCN definition: "the water provided within a river, wetland or coastal zone to maintain ecosystems and their benefits where there are competing water uses and where flows are regulated." For more information on the monitoring of environmental flows see, for example: Dyson, M. et al. 2008.⁵³³
- 4.2.5.1.a.iv now includes reference to cyanide and mercury because we are proposing to delete Chapter 4.7 on Cyanide and Chapter 4.8 on Mercury Management and integrate the requirements into other relevant chapters so that auditors with specialty in water, air, soils, etc., are able to evaluate the requirements alongside other water, air and soil requirements, rather than having a single auditor cross the different areas of expertise.
- In 4.2.5.1.a.v, a reference to accredited laboratories, was removed because in many parts of the world there may not be a national program for laboratory accreditation. However, we retained the requirement that the laboratories used must have the ability to detect parameters at concentrations below IRMA water quality criteria.
- 4.2.5.1.b is NEW. Previously this was a recommendation in IRMA Guidance for requirement 4.2.4.2. The rationale for sampling for the full suite of relevant potential contaminants is to evaluate whether a contaminant has unexpectedly appeared in water.

If mercury is released to air or disposed on-site (see 4.1.6.2.d) then inorganic mercury (total and dissolved) and methyl mercury and sulfate are sampled in wetlands and water bodies located on or downwind of the operation and at compliance locations regardless of identified current and future water uses, and methylmercury is monitored in tissue, stream sediment and locations most likely to promote methylation, such as still waters, wetlands, and anaerobic sediment. The sediment 4.8.3.2.b in the 2018 Mining Standard.

⁵³³ Dyson, M., Bergkamp, G. and Scanlon, J., (eds). 2008. Flow – The essentials of environmental flows, 2nd Edition. Gland, Switzerland Available at: https://protosh2o.act.be/VIRTUELE_BIB/Werken_in_het_Water/IWB-Integraal_WaterBeheer/W_IWB_E44_flow_essentials.pdf

CONSULTATION QUESTION 4.2-5: We do not currently have any prescribed frequency for sampling. We are considering requiring that samples be collected and analyzed monthly unless there is a legitimate reason for a different sampling frequency, but would appreciate feedback on this topic.

CONSULTATION QUESTION 4.2-6: At the present time, IRMA does not have any water quality criteria for rare earth elements (REEs). We would be interested in knowing of any international or national water quality standards for REEs. If none exist, should IRMA still require that rare earth mining and processing operations at least measure certain elements as part of their characterization of ores, wastes, brines, and concentrates (see Chapter 4.1, 4.1.1) to, at minimum, establish a baseline? If so, which elements should be monitored?

4.2.5.2. The monitoring program is reviewed annually, and updated as needed (e.g., if there are changes in ore, waste, or brine characteristics, available monitoring locations, or water or waste management practices).

NOTE FOR 4.2.5.2: NEW. The 2018 Mining Standard did not call for an annual review of the monitoring program (only of the adaptive management plan). Both will change as the mine progresses, and so we are proposing to add an annual review to the monitoring program here, as well.

Also, because this proposed updated Standard includes more references to lithium brine extraction and processing, and because the chemical composition of brines can change over time, a reference to brine characteristics is added to this requirement.

4.2.5.3. <u>Stakeholders</u> from affected communities are actively solicited by the entity to participate in water monitoring and to review and provide feedback on the water monitoring program:

- a. Participation may involve the use of independent experts selected by the community; and
- b. If requested by community stakeholders, costs related to participation in monitoring and review of the monitoring program are covered in full or in part by the entity, and a mutually acceptable agreement for covering costs is developed.

NOTE FOR 4.2.5.3: This was 4.2.4.3 in the 2018 Mining Standard.

4.2.6. Comparison of Monitoring Results to Water Quality/Quantity Criteria

NOTE FOR 4.2.6. This is a NEW criterion heading. It was previously in a criterion called Prevention and Mitigation of Impacts to Water (4.2.3). That criterion name no longer exists due to restructuring of this chapter.

4.2.6.1. Water quality monitoring results demonstrate that parameters/contaminants measured at points of compliance are:⁵³⁴

- a. Being maintained at <u>baseline</u> or <u>background</u> levels, which in some cases could exceed IRMA Water Quality Criteria; or
- b. Being maintained at levels that are protective of the identified uses of those waters (see <u>IRMA Water</u> <u>Quality Criteria by End Use-Tables</u> 4.2.a to 4.2.h, which correspond to particular end uses); or
- c. Being maintained at levels or conditions according to host country regulatory requirements that are lower (more protective) than IRMA Water Quality Criteria for identified uses, or that fill gaps where no IRMA Water Quality Criteria exist.

NOTE FOR 4.2.6.1: This was 4.2.3.3 in the 2018 Mining Standard. Language has been slightly amended, but the intent is still the same.

4.2.6.2. Water quantity monitoring results demonstrate that surface waters, groundwater levels, <u>natural</u> <u>seep/spring</u> flows and <u>environmental flows</u> are being maintained in a manner that supports continued current

⁵³⁴ Note that if this requirement is not met, then corrective actions would need to be developed as part of the adaptive management plan for water. See requirement 4.2.4.7.f.

and potential future uses of the water resources and the <u>ecosystem services</u> that they support,⁵³⁵ unless affected <u>stakeholders</u> have agreed that some decline in flows or water levels is acceptable.⁵³⁶

NOTE FOR 4.2.6.2: This requirement was 4.2.3.4 in the 2018 Mining Standard and has been revised to include environmental flows. (See note for 4.2.5.1.a.ii for more background on environmental flows.)

4.2.7. Reporting and Disclosure of Water Management Performance

4.2.7.1. The results of the <u>baseline</u> or <u>background</u> water quantity and quality evaluation for surface water, <u>natural seep/springs</u>, and groundwater are publicly available.

NOTE FOR 4.2.7.1: This requirement used to be combined with the following requirement in criterion 4.2.5 of the 2018 Mining Standard. We are proposing to separate the requirements, because baseline/background values are established either before mining or during mining and those values hold steady, although the monitoring sites originally identified as baseline or background locations could become influenced by mining activity over time.

4.2.7.2. Summaries of water data are published and shared with <u>stakeholders</u> from <u>affected communities</u> on a monthly basis. The summaries:

- a. Present information in a <u>culturally appropriate</u> format, and in a manner that is understandable to affected communities;
- b. For water quality:
 - i. Present data using graphical or other suitable representations that clearly show whether parameters measured at monitoring locations are the same as, higher than, or lower than IRMA water quality criteria;⁵³⁷ and
 - ii. Put any deviations from criteria into context, taking into consideration likely stakeholder concerns regarding risks to human health and impacts on the environment.
- c. For water quantity:
 - i. Present data on flows and levels for surface waters and <u>natural seeps/springs</u>, groundwater level/elevation, and the volume of water <u>discharged</u> and extracted for use by the <u>project/operation</u> using graphical or other suitable representations that clearly show whether the flows, levels, and volumes are the same as, higher than, or lower than <u>baseline/background</u> and agreed-upon values;
 - ii. Put any deviations from baseline/background and agreed-upon values into context, taking into consideration likely effects on aquatic life habitat and conditions (environmental flows) and water quantity amounts needed to maintain domestic, community, and local commercial water supplies.

NOTE FOR 4.2.7.2: This requirement is NEW. In discussions with the Water Expert Working Group in 2022, there was general agreement that rather than requiring sites to create systems to make all data accessible, it would be more useful if data were regularly made available in a manner that is comprehensible to stakeholders, and that data need to be put into context so that the information does not create concern where none may be warranted, but also daylights issues of non-compliance with regulatory and IRMA standards when they occur.

We have prepared some examples of how data could be presented. They are available here: https://responsiblemining.net/wp-content/uploads/2023/07/4.2.7.2WaterGraphExamples.pdf

⁵³⁵ As identified in collaboration with relevant stakeholders (see 4.2.2.2).

⁵³⁶ The acceptability of some reduction in flows would have been determined through consultations with affected stakeholders that happened in 4.2.4.2.b. If this requirement is not met, then corrective actions should be developed as part of the Adaptive Management Plan.

⁵³⁷ Baseline/background, permit limits and/or trigger levels could be added to graphs if requested by affected stakeholders.

CONSULTATION QUESTION 4.2-7: Do you know of best practice examples of how water data are shared with affected communities? We would be interested in seeing those examples so that we can provide ample guidance to entities seeking to meet this requirement.

4.2.7.3. An access to information (or equivalent) policy that allows <u>stakeholders</u> to access the following data upon request is in place and shared with stakeholders:

- a. Water quality monitoring data for surface water and groundwater points of compliance; and
- b. Monitoring data for water quantity (i.e., flows and levels of surface waters, <u>natural seeps/springs</u> and groundwater, and the volume of water <u>discharged</u> and extracted for use by the <u>project/operation</u>).

NOTE FOR 4.2.7.3: REVISED. This requirement was 4.2.5.1 in the 2018 Mining Standard.

It has been revised. The previous requirement said that all monitoring data in 4.2.5.1.a and b needed to be published annually. The revised requirement still expects that these data are provided to stakeholders <u>if</u> requested, but we are proposing to remove the obligation that <u>the raw</u> data be published annually. It is not reasonable to expect that auditors will be able to adequately review the voluminous raw data for a site, and graphs or other visual displays required in 4.2.7.2, above, will be easier for auditors to evaluate, especially if relevant IRMA water quality criteria are included on the displays. Also, the information in 4.2.7.2 will be more comprehensible to stakeholders.

However, there may still be some stakeholders that want the detailed information, and so we have retained the requirement that they be able to access the information. Note that the requirement for an access to information policy (or equivalent) is being proposed in Chapter 1.2. See that chapter for more information.

4.2.7.4. Effective procedures for rapidly communicating with relevant <u>stakeholders</u> in the event that changes in <u>water quantity</u> or quality occur that pose an imminent threat to human health or safety, or commercial or natural resources, are developed and tested in <u>collaboration</u> with stakeholders from <u>affected communities</u>.

NOTE FOR 4.2.7.4: REVISED. This requirement was 4.2.5.2 in the 2018 Mining Standard. Added that the procedures are developed and tested with stakeholders. This is consistent with the requirements in IRMA Chapter 2.5 - 'Emergency Preparedness and Response.'

4.2.7.5. Water quality management strategies and performance and <u>adaptive management</u> issues are discussed with relevant <u>stakeholders</u> on an annual basis or more frequently, if requested by stakeholders.

NOTE FOR 4.2.7.5: This was 4.2.5.3 in the 2018 Mining Standard.

NOTES

None.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Brine

Groundwater, surface water or sea water that contains valuable dissolved minerals at sufficient concentrations to be economically extractable.

Contamination

The presence of a substance where it should not be or at concentrations above background, but not necessarily high enough to have an adverse impact on ecosystem and/or human health. See also 'Pollution'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Contaminant of Potential Concern (COPC)

Contaminants that may pose a risk to human health or non-human biological receptors (e.g., plants, animals).

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study. (See Proposed Glossary Additions at the end of the chapter).

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

Discharge

A permitted release of treated mine-influenced water or compliant water to surface water, groundwater, or the land. See, also, 'Release'.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Environmental Flows

The water provided within a river, wetland or coastal zone to maintain ecosystems and their benefits where there are competing water uses and where flows are regulated.

Hazardous Wastes

Wastes with properties or characteristics that make them a physical, health, or environmental hazard.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Receptor

Any human, plant, animal, or structure which is, or has the potential to be, affected by the release or migration of contaminants.

Reclamation

The process of achieving stability, hydrologic balance and converting disturbed land and/or water resources to a productive post-mining (or post-mineral processing) land use, or establishing the potential for productive use. Components of reclamation may include: removal or isolation of hazardous material and waste, decommissioning and removal of buildings and other structures, removal and disposal of polluted soils, adjustment and stabilization of landforms (e.g., earthwork including backfilling, grading, recontouring, stormwater controls), creation of suitable conditions for the introduction of desired flora and fauna (topsoil placement, revegetation, ecological restoration), and any other planned mitigation (e.g., wetlands construction, water diversion, other).

Release

An unintentional, unpermitted emission of mine-influenced water to the environment. See, also, 'Discharge'.

Remediation (Groundwater)

The treatment of contaminated groundwater to remove contaminants or convert them to harmless products. Ex-situ groundwater remediation is the most commonly used approach (with the remediated water being replaced underground following treatment), but in-situ treatment may be possible in some cases.

Remediation (Soil)

The treatment of contaminated soils to remove contaminants or convert them to harmless products using physical, chemical and biological processes. Ex-situ and in-situ remediation of soils are both commonly applied methods. Soil remediation may also include removal and deposition in repository.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Acid Rock Drainage (ARD)

The drainage produced when rocks with sulfide or other acid-producing minerals are under oxidizing conditions (exposed to water and oxygen) and generate an acidic water stream. Acid rock drainage generally contains

elevated concentrations of metals, sulfate, and other constituents and has a pH < 6. The terms acid mine drainage and acid and metalliferous drainage (both AMD) are sometimes used as synonyms for ARD.

Adaptive Management

A structured, iterative process of robust decision-making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. It includes the development of management practices based on clearly identified outcomes, and monitoring to determine if management actions are meeting desired outcomes. If outcomes are not being met, the process requires development and implementation of management changes to ensure that outcomes are met or re-evaluated.

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Background Water Quality

Established after an operation has commenced, it is the water quality in a similarly mineralized area outside of the operation's influence (e.g., surface water quality upstream of the mine site or upgradient for groundwater).

REVISED. Changed wording from mining to operation.

Baseline (Water Quality)

The water quality at the site or in the area surrounding a proposed mining or mineral processing operation, before construction of the operation commences.

Best Available/Applicable Practice (BAP)

Encompasses management systems, operational procedures, techniques and methodologies that, through experience and demonstrated application, have proven to reliably manage risk and achieve performance objectives in a technically sound and economically efficient manner. BAP is an operating philosophy that embraces continual improvement and operational excellence, and which is applied consistently throughout the life of a facility, including the post-closure period.

Broad Community Support (BCS)

A collective expression by the community in support of the mining project. Support may be demonstrated through credible (i.e., transparent, inclusive, informed, democratic) local government processes or other processes/methods agreed to by the community and entity. There may be BCS even if some individuals or groups object to the business activity.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision

which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Conceptual Site Model (CSM)

A qualitative description, based on site measurements and observations, of what is known about the release, transport and fate of contaminants at a site or facility. A CSM includes a schematic or diagram and an accompanying narrative description.

REVISED. Added that CSM can also apply to a facility.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle, the company should take into account the concerns and views expressed by stakeholders in the final decision.

Control

An act, object (engineered), or system (combination of act and object) intended to prevent or mitigate an unwanted event.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Source: United Nations Environment Programme, Convention on Biological Diversity 1992, Art. 2. Available at

Ecosystem Services

The benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Free, Prior and Informed Consent (FPIC)

Consent based on: engagement that is free from external manipulation, coercion and intimidation; notification, sufficiently in advance of commencement of any activities, that consent will be sought; full disclosure of information regarding all aspects of a proposed project or activity in a manner that is accessible and understandable to the people whose consent is being sought; acknowledgment that the people whose consent

is being sought can approve or reject a project or activity, and that the entities seeking consent will abide by the decision.

Habitat

A terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. The place or type of site where an organism or population naturally occurs.

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic ,or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Long-Term Water Treatment

Long-term water treatment is defined as any water treatment that requires active water treatment after mine closure. After mine closure long-term water treatment is assumed to be required until it can be empirically demonstrated that water treatment is no longer needed.

Metals Leaching

The release of metals by contact with solvents. Leaching may be natural or induced (e.g., related to mining operations). Mining commonly accelerates metal leaching. Metals leaching can also be referred to as "contaminant" leaching.

Mine-Influenced Water

Any water whose chemical composition has been affected by mining or mineral processing. Also referred to as mine-impacted waters. Mine-influenced waters can contain elevated metal concentrations and acidity that have leached from mined materials (e.g., waste rock, tailings, mine surfaces, or mineral surfaces in their pathways), but mine-influenced water also includes neutral mine drainage and saline drainage, as well as water affected by blasting, metallurgical process waters, industrial stormwater, and dewatering water.

REVISED. Previously Mining Impacted Waters. Previously focused on waters influenced by mine wastes. Now includes more examples of mine-influenced waters.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact.

Mitigation Hierarchy

The mitigation hierarchy is a set of prioritized steps to alleviate environmental (or social) harm as far as possible first through avoidance, then minimization (or reduction), followed by restoration of adverse impacts. Compensation/offsetting are only considered to address residual impacts after appropriate avoidance, minimization and restoration measures have been applied.

Mixing Zone

A volume of surface water or groundwater containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters or groundwaters has been afforded, and where water quality is allowed to exceed otherwise specified standards.

Natural Seep/Spring

A natural seep is a moist or wet place where water reaches the earth's surface from an underground aquifer. Seeps are usually not of sufficient volume to be flowing much beyond their above-ground location. A natural spring is a discharge of water formed when the side of a hill, a valley bottom or other excavation intersects a flowing body of groundwater at or below the local water table, below which the subsurface material is saturated with water. A natural spring is differentiated from a seep in that water flows at a greater rate from an aquifer to the earth's surface.

Offset

An activity undertaken to counterbalance a significant residual impact.

Pit Lake

Lake formed in a mine pit when mine dewatering pumpage ceases.

Point of Compliance

For IRMA purposes, is the physical location where water quality must meet IRMA used-based standards (See IRMA Water Quality By End-Use Tables 4.2.a – 4.2.h). The location will vary based on the following scenarios: *Surface water compliance points* are located where point source discharges enter surface waters. Points of compliance for non-point-source discharges are located downstream of but as close as practicable to known mine-related nonpoint sources.

Groundwater compliance points are located outside the groundwater capture zone (which extends from the land surface to the depth at which groundwater is not affected by mining activities) or area of hydrologic control for mine facilities or sources but as close as practicable to those sources.

Stormwater compliance locations in industrial stormwater collection impoundments when water is present. If a mixing zone is used, the point of compliance is at the downstream or downgradient edge of the mixing zone. The edge of the mixing zone is where the diluted plume meets background water quality. In no case shall minerelated contaminants extend beyond the mine boundary, unless a mixing zone authorized by a regulatory agency extends beyond the boundary.

If a mine is providing water to another entity for a designated use, the water must meet IRMA use-based standards, or legal documentation must be received from the entity verifying that they will be responsible for treating water to meet use-based standards.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring

to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Practicable

Practicable means giving equal weight to environmental, social, and economic benefits and costs. This is not a technical definition. It is the discussion between the affected parties on the balance between these interrelated costs and benefits that is important.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected or protected.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Stormwater

Industrial stormwater (also known as contact water) is rainfall, snow or snowmelt runoff that has contacted mined or mineral processing materials (e.g., waste rock, tailings, mine openings, open pits, mineral processing facilities and associated mining roads). Non-industrial stormwater (also known as non-contact water) is rainfall, snow or snowmelt runoff from land and impervious surface areas that do not contain and are not affected by mined or mineral processing materials.

REVISED. Now also references mineral processing.

Tailings

The waste stream resulting from milling and mineral concentration processes that are applied to ground ore (i.e., washing, concentration, and/or treatment). Tailings are typically sand to clay-sized materials that are considered too low in mineral values to be treated further. They are usually discharged in slurry form to a final storage area commonly referred to as a tailings storage facility (TSF) or tailings management facility (TMF).

Trigger Level

A concentration between baseline or background values and IRMA water or soil quality criteria or other applicable compliance limits that can warn of mining or mineral-processing-related effects to water or soil quality and trigger adaptive management or corrective actions to improve water or soil quality.

REVISED. Now also references soil quality and mineral processing.

Waste Rock

Barren or mineralized rock that has been mined but is of insufficient value to warrant treatment and, therefore, is removed ahead of the metallurgical processes and disposed of on site. The term is usually used for wastes that are larger than sand-sized material and can be up to large boulders in size; also referred to as waste rock dump or rock pile.

Water Balance

An accounting of the inflow to, outflow from, transfers and storage changes of water over a fixed period.

Water Quality Criteria

Numerical concentrations or a narrative statement recommended to support and maintain a designated water use. Criteria are based on scientific information about the effects of water pollutants on a specific water use.

Water Quantity

For IRMA purposes, water quantity refers generally to the amount of water present or passing a certain location in water bodies that exist on the earth's surface, such as lakes, ponds, rivers, streams, etc., (i.e., referred to as surface waters) and water bodies that exist underground (i.e., groundwaters). It also includes the amount of water that originates underground but expresses itself at the surface (e.g., natural springs or seeps). Water quantity measurements may be expressed as volumes, however, for IRMA's purposes measurements for rivers, streams and natural springs/seeps maybe expressed as a flow (in ft³/sec or m³/sec), while measurements for lakes and groundwater may be expressed as a level or elevation (e.g., feet or meters above a reference point such as sea level).

ANNEXES AND TABLES

IRMA Water Quality Criteria by End-Use Tables

Note on IRMA Water Quality Tables: We are in the process of reviewing updated water quality standards in different jurisdictions. Our intention is to update the IRMA Water Quality Criteria by End Use Tables, including adding in parameters that have relevance to lithium brine and mineral processing operations, as well as rare earth mining operations. When we have completed the review we will propose updates (as necessary) and we will release the tables for public review and comment.

The 2018 IRMA Water Quality Tables are available at: https://responsiblemining.net/wp-content/uploads/2018/08/IRMA WATER-QUALITY-TABLES 2018.pdf

CONSULTATION QUESTION 4.2-8: Are you interested in reviewing the updated water quality tables? If so, please contact IRMA (comments@responsiblemining.net) and we will make sure you receive a copy of proposed updates.

ANNEX 4.2-A: Water Monitoring and Reporting Guidance

Note on Annex 4.2-A: This guidance has been prepared to help sites and auditors understand what are best practices for water monitoring and reporting related to large-scale mining and mineral processing operations. Guidance in the Annex 4.2-A was sourced from the U.S. Geological Survey, the U.S. Environmental Protection Agency, the State of New Mexico and others. References are provided at the end of Annex A.

The guidance provided in Annex 4.2-A should be applied when collecting baseline water samples (4.2.1. Baseline/Background Water Quality and Quantity Assessment) and in requirement 4.2.5.1, the critical requirement in 4.2.5 Water Monitoring Program. Annex A contains guidance on locating and documenting water monitoring sites; creation of a sampling and analysis plan; water sample collection, handling, and transport protocols for surface water and groundwater quality; measurement of surface water and spring flows and groundwater levels; and reporting requirements. Taken together, these elements constitute a water monitoring program and field sampling and analysis plan (FSAP).

An example FSAP for surface water can be found at this link: <u>https://responsiblemining.net/wp-</u>content/uploads/2023/07/Chapter.4.2.ExampleFieldSamplingAnalysisPlan.pdf.

CONSULTATION QUESTION 4.2-9: Is there any content in the guidance that you do not believe is best practice? Are there other elements of water monitoring programs that should be included?

1. Locating and Documenting Water Monitoring Sites

Water monitoring sites are located in areas not affected by mining-related activity and releases (for baseline and background sites) and in areas potentially affected by mining-related activity and releases (for assessment sites). The conceptual site model in Section 4.2.2.5 will be used to identify appropriate baseline/background and assessment monitoring locations. A scaled map with a clear legend showing the location of all monitoring sites relative to potential sources (e.g., facilities) will be created as part of the monitoring plan. The location and flow directions in rivers, streams, springs and seeps; the groundwater flow directions; and the locations of major faults will be plotted and depicted on the map(s) and considered when siting monitoring locations.

1.1. Baseline and background monitoring locations

a. Baseline monitoring sites must be located upstream or upgradient of facilities and potential areas of impact, or, for background monitoring, in reference locations with similar hydrology, geology, and mineralization as the Project site.

1.2. Assessment monitoring locations

- a. Proximal groundwater and surface water assessment monitoring sites will be located as close as practicable around the perimeter and downgradient of each facility at the mine site. Each proximal site shall take into account surface topography, hydrogeologic conditions, geologic controls, infrastructure, engineering design plans, depth to groundwater, working distance, and safety.
- b. Additional monitoring sites will be located downgradient and downstream of the proximal sites to determine the potential spatial extent of project-influenced water.
- c. Groundwater monitoring sites will also be located at different depths to determine the potential vertical extent of project-influenced water.

1.3. Timing of installation and initial sampling of monitoring sites

- a. For a new project or new facility, the monitoring networks shall be installed at least 180 days before emplacement of any process water or waste materials to allow sampling prior to discharge.
- b. For expansion of existing project or the footprint of an existing facility, monitoring around and downgradient of the facility/facilities must begin before emplacement of waste material unless an existing monitoring network adequately monitors water quality and quantity/level in the area of the facility.
- c. Initial sampling of new monitoring sites shall be monthly or more frequent.

1.4. Monitoring location information

- a. The entity shall provide a table showing: the monitoring site identification code; type of monitoring site (surface water, seep/spring, groundwater); name of the stream or project area where the site is located; date of installation of the monitoring site; locations of the monitoring sites (latitude/longitude); for groundwater sites, the total depth, screened interval, well diameter, elevation of the ground surface and the measuring point (e.g., top of casing), lithologic log and construction information; and the monitoring purpose of each location (e.g., baseline/background, downgradient of tailings facilities).
- b. Monitoring location information shall be updated annually, or as often as new sites or modifications of existing sites occur.

2. Sampling and Analysis Plan

2.1. Use of competent professionals

a. The sampling and analysis plan must be created by competent professionals.

b. All sample collection, handling, preservation, and laboratory analysis must be conducted by competent professionals.

2.2. Elements of the sampling and analysis plan

- a. A general sampling and analysis plan for water will have the following sections. The information in the sections can be short and contained in tables, but each section should be included.
 - i. Objectives and overview (e.g., to determine the potential effects of the project on water quality, stream and spring flows, and groundwater elevations over the life of the project)
 - ii. Sampling and analysis schedule (frequency and approximate dates of field sampling and laboratory analysis)
 - iii. Types, numbers, and locations of samples to be collected (using a table that shows the sample type (e.g., total metals, anions, field/equipment blank, replicate), bottle size (mL), whether sample will be filtered and if so where (field or lab)
 - iv. Map showing sampling locations and identifiers, including streams, project facilities, highways, etc.
 - v. Sample identification and labeling to be used (labels for bottles conveying the sample identification code, sample date and time, sample matrix (water or sample type), preservative used (if relevant), filtered/unfiltered, analyses required.
 - vi. Field sampling protocols (sample site selection and marking, sample collection methods, field parameter measurement methods, sampling filtering methods (if applicable), preparation of field/equipment/trip blanks and replicates
 - vii. Field documentation (bound field sheets for each location or a dedicated field notebook with the following information: site and project name, samplers' names, data and time of sample collection, sample identification, stream or spring flow measurements and depth to groundwater, listing of samples collected at each location, results of field parameter measurements, deviations from field sampling plan and reasons, description of each photograph taken)
 - viii. Decontamination procedures (if not using disposable sampling equipment)
 - ix. Sample preservation, storage, shipping, and custody (sample preservation included in a table, e.g., 1% concentrated nitric acid added to metals samples; samples stored in coolers on ice until arriving at laboratory, if needed; shipping method to laboratory; chain-of-custody538 (sheets, often provided by the analytical laboratory, that include project name, identifier for each sample bottle and analyses requested, date and time of collection, name and signature of samplers, date and time of shipping, shipping mode)
 - x. Analytical measurements: a table showing the parameters to be determined, laboratory analytical methods to be used for each parameter and sample type, and detection limits for each parameter. Detection limits must be lower than relevant IRMA water quality criteria (according to IRMA requirement 4.2.5.1.a.v).

3. General Requirements for Water Quality and Quantity/Level Sampling

3.1. Sampling frequency

- a. Water quality and quantity sampling will take place often enough to account for seasonal fluctuations, storm events, and extreme events that may cause changes in water characteristics.
- b. Sampling will be informed by meteorologic events (e.g., storms, snowmelt) that control precipitation and stream and spring/seep flows and by changes in project water balance.

⁵³⁸ The documentation of a sample's history (from time of collection through sample analysis to final disposal) is referred to as "chain of custody." Much of the information on the chain of custody sheets is derived from the bottle labels and field sheets.

3.2. Surface water quality and flow sampling

- a. For collection of surface water quality samples from streams or surface waters with obvious flow, the following procedure will be used:
 - i. The sampler should wear waders and rubber or neoprene gloves.
 - ii. Depending on the safety of flow conditions, the sampler will enter the stream downstream of the sampling location and proceed upstream to the sampling point. If stream flows are unsafe, samples will be collected from the bank using a dipper or other device with an extended handle to allow safe collection of the sample.
 - iii. The sampling gloves should be rinsed in ambient water for 10 seconds.
 - iv. For bottles without added preservative (e.g., acid):
 - After uncapping the sample bottle, the sampler will face upstream and lower the inverted bottle into the stream so that a minimum of water enters the bottle. Samples will be collected from mid-depth or from as deep a depth as possible, given safety constraints.
 - When the bottle has been lowered, the sampler will rotate the bottle so that the open end faces upward, thus allowing water to fill bottle. Partially fill the bottle with water, then remove the bottle from the water and cap immediately. Shake the bottle to coat all surfaces with ambient water. Remove cap and pour out water. Repeat three times. Fill the bottle completely after rinsing with ambient water for the third time, remove from the water, and cap immediately.
 - The procedures in steps iv. and v. will be repeated as necessary for any replicate samples.
 - v. For bottles with added preservative or if the water depth is too shallow to immerse a sample bottle, a disposable beaker or 1-L pre-cleaned bottle will be used to transfer water from the stream to the sample bottle. The beaker or 1-L bottle will be rinsed three times in ambient water. Do not fill the sample bottle to overflowing.
 - vi. For samples collected from diversion pipes or spigots on tailraces, the sample bottles will be filled directly from the water stream without inverting the sample bottle and will be rinsed three times in ambient water. Rubber or neoprene gloves rinsed for 10 seconds in ambient water will be worn while collecting the sample.
- b. For measurement of stream flow:
 - i. Stream flows will be measured using standard U.S. Geological Survey (USGS) methods for gauging flow (http://water.usgs.gov/pubs/twri/). If possible, flow measurements will be made in the location that the water quality sample is collected. However, if more suitable section of stream is present within a few hundred feet, and no significant recharge or discharge to the stream is observed along the reach, the streamflow measurements may be taken slightly upstream of downstream of the location where the water quality sample is collected. All locations where flow measurements are made will be described using a hand-held GPS.
 - ii. Stream flow will be measured by one of the following methods at each location: velocity measurement using flow meters; velocity measurement using floats; or direct volume measurement.
 - **Velocity measurement using flow meters:** Discharge in stream reaches near sensitive stream areas (e.g., upstream of fish hatcheries) will be measured using a portable flow meter. The stream cross section will be segmented into vertical subsections, and the mean velocity will be estimated by making velocity measurements along the verticals. If the depth of the river is > 2.5 ft (0.76 m), velocities will be measured at 0.2 and 0.8 of the depth below the surface (Buchanan and Somers, 1969). For stream depths between 0.3 and 2.5 ft (0.09 and 0.76 m), velocity measurements will be made at the 0.6 depth, i.e., 60% of the total distance from the surface of the water to the streambed. Discharges will be computed using these measurements using standard methods (Buchanan and Somers, 1969; Church and Kellerhals, 1970). In general, the area and velocity for each vertical subsection are multiplied and then summed for each section:

 $Q_s = \Sigma (a_i v_i)$

where: $Q_s = stream$ flow

a_{i.} = cross-sectional area of vertical subsection i

v_i = average velocity measured for vertical subsection i.

Velocity measurement using floats: If the stream cannot be safely waded, an estimate of discharge will be made using a float. A suitable float will be placed in the river, and the surface velocity of the river estimated by timing the passage of the float along a reach. The stream cross section will be estimated using whatever measurements can be safely made with respect to stream width and depth. The stream flow will be calculated using standard equations (Buchanan and Somers, 1969; Church and Kellerhals, 1970). For a round float, stream flow is calculated by:

where: Qs = flow in the stream

A = cross-sectional area of the stream

V = measured surface velocity of the float.

Direct volume measurement: If flows are too low or too shallow to use a current meter, flows will be measured with a container of known volume and a stopwatch. Flow will be collected into the container, and the time to fill the container to a specific level will be measured.

3.3. Groundwater quality and level sampling

- a. Measure the depth to groundwater
 - i. Measure from the top of the well casing to the nearest 0.1 cm (0.01 ft) using an electronic water level indicator, pneumatically or by using a fiberglass or steel measuring tape using the chalk method, or other similar method.
- b. Purge monitoring well
 - i. Purge three well volumes of water using conventional methods before sample collection.
 - ii. Purge the monitoring well using low-flow purging methods until measurements of indicator parameters have stabilized. Use a low-flow pump and a low-stress approach, micro-purge method or minimal drawdown method. Measure indicator parameters periodically during purging. Record the results in a parameter stabilization log during each sampling event for each monitoring well and include: date; water quality indicator parameter measurements; time for all measurements; and the purge volume extracted.
 - iii. For low yield wells, purge the well of all available water.
- c. Measure and record the following field parameters: pH, specific conductance, temperature, and redox potential (if applicable).
- d. Collect the groundwater sample.
- e. Preserve, store, and transport the groundwater samples to an analytical laboratory for analysis.

References

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ANNEX 4.2-B: Best Practices to Manage Water Risks Associated with Various Facilities

NOTE FON ANNEX 4.2-B: The purpose of the annex is to create a resource of best practices to safeguard water. IRMA is proposing this Annex because many jurisdictions lack the regulatory requirements or guidelines and professional personnel to ensure facilities are designed and operated to protect water resources. Thus, without such guidance, it will be difficult for auditors, who cannot be experts on every type of facility associated with a mining or mineral processing, to confidently or consistently assess whether the mitigation measures being proposed and implemented by sites are consistent with best practices.

The current proposal is that entities could either demonstrate alignment with the best practices or provide auditors with a rationale as to why those practices are not appropriate for their situation or provide evidence that alternative approaches are as effective at protecting water (e.g., existing regulatory requirements may be sufficient, or there may be technical or other valid site- or facility-specific reasons to utilize alternatives).

The practices contained in this section were derived from the New Mexico Copper Rule: <u>https://www.srca.nm.gov/chapter-6-water-quality/</u>. The intent of the rule was to provide industry prescriptive requirements consistent with current best practice and technology to facilitate a more efficient and effective permitting application and approval process.

The rule was developed by the New Mexico Ground Water Quality Bureau in 2012 to supplement permitting requirements for Copper Mining Facilities. It was developed with input from industry, environmental and other stakeholders and is based in large part on existing guidance and regulations including Arizona's Best Available Demonstrated Control Technology (BADCT),⁵³⁹ Nevada, Alaska and other U.S. State water protection regulations, and the Global Acid Rock Drainage Guide.⁵⁴⁰

These practices offer a starting point for IRMA's guidance. We recognize that there may be other jurisdictions with guidance that may be as good or better than what we have proposed. Any input on the approach or the content in the Annex would be appreciated.

CONSULTATION QUESTION 4.2-2 (repeated from above): Do you agree with this approach to create guidance to guide auditor's assessments? If not, how do you suggest auditors determine whether or not the measures at a site are sufficient to safeguard water resources? Would you be interested in being part of a working group to help work on this guidance? If so, please contact IRMA (comments@responsiblemining.net) and we will be in touch as we move forward with this process.

⁵³⁹ Arizona Department of Environmental Quality. 2004. Arizona Mining Best Available Demonstrated Control Technology (BADCT) Guidance Manual. <u>https://static.azdeq.gov/wqd/badctmanual.pdf</u>

⁵⁴⁰ International Network for Acid Prevention. 2014. Global Acid Rock Drainage Guide. <u>http://www.gardguide.com/index.php?title=Main_Page</u>

Contents

- 1. Impoundments
- 2. Tailings Impoundments

3. Open Pits

- 4. Underground Mines
- 5. Waste Rock Piles
- 6. Crushing, Milling, Concentrator, Smelting and Refining
- 7. Leach Piles
- 8. Chemical Leaching and Processing
- 9. Pipelines and Tanks
- 10. Truck and Washing Units

1. IMPOUNDMENTS (other than tailings impoundments)

MATERIAL CHARACTE	ERIZATION	
	• See Chapter 4.1.	
IMPOUNDMENT ENG	SINEERING DESIGN	
Outside slopes	 Slope = a maximum of two (horizontal) to one (vertical) Minimum static factor of safety of 1.3 with water impounded to the maximum capacity design level, except where an impoundment is bounded by rock walls or is below the surrounding surface grade 	
IMPOUNDMENT LOC	ATION	
Separation between impoundments and ground water	 Impoundments that require a liner are not be constructed in a location where the vertical distance between the seasonal high groundwater level and the finished grade of the floor of the impoundment is less than or equal to four feet unless an engineering evaluation from a licensed professional engineer demonstrates that the impoundment design will not be affected by shallow ground water conditions. 	
IMPOUNDMENT CAPACITY		
Impoundments that contain leach solutions	 Any impoundment that collects leach solutions and is routinely at capacity is designed to maintain a minimum of two feet of freeboard during normal operating conditions while conveying the maximum design process flows Overflow capacity: Impoundment is designed for adequate overflow capacity for upset conditions such as power outages, pump or conveyance disruptions and significant precipitation events. The appropriate overflow capacity design considers system redundancies such as backup power systems and pumps. The overflow capacity is designed to contain the maximum design flows for the collection system for the maximum period of time that is required for maintenance activities or restoration to normal operating conditions while maintaining two feet of freeboard. If the collection system receives direct precipitation run-off with little or no flow attenuation in the upgradient source, the overflow capacity shall be sized to contain the runoff from a 200-year, 24-hour storm event in addition to the upset condition capacity. For process water impoundments located within an open pit surface drainage area, the open pit bottom may be utilized for a portion of the impoundment capacity. Impoundments constructed on a Facility such that any overflow would discharge to and be contained by the Facility containment system are not subject to this capacity requirement. 	

Impoundments that contain process water other than	 Designed to maintain a minimum of two feet of freeboard during normal operating conditions while conveying the maximum design process flows.
	Overflow capacity:
leach solutions ⁵⁴¹	 Designed for adequate overflow capacity for upset conditions such as power outages, pump or conveyance disruptions and significant precipitation events.
	 The appropriate overflow capacity design considers system redundancies such as backup power systems and pumps.
	 The overflow capacity is designed to contain the maximum design flows for the collection system for the maximum period of time that is required for maintenance activities or restoration to normal operating conditions while maintaining two feet of freeboard.
	• For process water impoundments located within the open pit surface drainage area, the open pit bottom may be utilized for a portion of the permitted impoundment capacity.
	• Impoundments intended to dispose of a combination of process water and impacted stormwater are designed to contain, at a minimum, the volume described above and the volume of stormwater runoff and direct precipitation generated from the receiving surface area resulting from a 200-year return interval storm event while preserving two feet of freeboard.
	Impoundments constructed on a facility such that any overflow would discharge to and be contained by the facility containment system are not subject to this capacity requirement.
Evaporative impacted stormwater impoundment ⁵⁴²	• Impoundments intended to manage or dispose of impacted stormwater by evaporation are designed to contain, at a minimum, the volume of stormwater runoff and direct precipitation generated from the receiving surface area resulting from a 200-year return interval storm event while preserving two feet of freeboard.
	• For impoundments located within the open pit surface drainage area, the open pit bottom may be utilized for a portion of the impoundment capacity.
Other impacted stormwater impoundment ⁵⁴³	 Designed to prevent overflow resulting from a 200-year return interval storm event while maintaining two feet of freeboard and may use interconnected impoundments, gravity flow conveyances and pumping systems designed to remove water from individual impoundments at rates to prevent overflow during the design storm event. Overflow capacity:
	 Design considers system redundancies such as backup power systems and pumps. For impacted stormwater impoundments located within the open pit surface drainage area, the open pit bottom may be utilized for a portion of the permitted impoundment capacity.
Stormwater conveyance structures	Open channel conveyance structures intended to transport stormwater to an impoundment are designed to convey, at a minimum, the peak flow from a 200- year return interval storm event while preserving adequate freeboard, but not less than six inches of freeboard.
	Conveyances are designed to minimize ponding and inflitration of stormwater.
IMPOUNDMENT LINE	ER AND LEAK COLLECTION SYSTEMS
Process water, and impacted stormwater impoundments that store impacted stormwater for	• Liner system. At a minimum, impoundments are designed and constructed as an engineered liner system consisting of a suitable subgrade and liner bedding overlain by a secondary synthetic liner which is overlain by a leak collection system overlain by a primary synthetic liner, unless an alternate design is justified. An alternative design would need to provide the same or greater level of containment as a double synthetically lined system with leak collection.
	• Liner system sub-grade and bedding. The liner system is placed upon a stable sub-grade that is free of sharp rocks, vegetation and stubble to a depth of at least six inches below the liner

⁵⁴¹ "Process water" means any water that is used to process ore using hydrometallurgical extraction techniques. It commonly contains process chemicals. Examples include: leachate collected from waste rock stockpiles, leach stockpiles, and tailings impoundments; tailings decant water; pit dewatering water; intercepted ground water, laboratory or other waste discharges containing water contaminants; raffinate; and domestic wastes mixed with process water.

⁵⁴² Impacted stormwater" means direct precipitation and runoff that comes into contact with water contaminants at an operation that causes the stormwater to exceed one or more IRMA water quality criteria. Includes overflow from a primary process solution impoundment or other collection system resulting from a precipitation event.

longer than thirty days ⁵⁴⁴	 are placed on a liner bedding of sand or fine soil. The surface in contact with the liner is smooth to allow for good contact between liner bedding. The liner bedding surface is sufficiently dry during liner installation such that free or excess water will not hinder the welding of seams. The liner installer provides the entity with a sub-grade and liner bedding acceptance certificate prior to installing the liner indicating acceptance of the earthwork. Liner type. The primary and secondary synthetic liners for the impoundment provide the same or greater level of containment, including permeability, as a 60 mil HDPE geomembrane liner system. The liner system's tensile strength, tear and puncture resistance and resistance to degradation by ultraviolet light are compatible with design loads, exposure and conditions. Leak collection system. A leak collection system is constructed between the primary and secondary synthetic liners for the purpose of collecting and rapidly removing fluids from leaks that may occur in the primary liner so that minimal hydraulic head is maintained on the secondary liner. The leak collection system consists of a drainage layer, fluid collection pipes and a fluid removal system to prevent hydraulic head transference from the primary liner to the secondary liner and shall meet the following requirements. The drainage layer is constructed of granular soil materials or geosynthetic drainage net (geonet) with a design slope of at least two percent. Drainage materials have a coefficient of permeability of 1x10-2 centimeters/second or greater. Perforated fluid collection pipes are installed to transmit fluid from the drainage layer to a fluid collection sump(s). Collection pipe material, diameter, wall thickness, and slot size and
	 distribution are sufficient to prevent deflection, buckling, collapse or other failure. Collection pipes are installed with slopes equivalent to the slope of the drainage layer. Collection pipe systems are designed to allow for cleaning of all collection pipes with standard pipe cleaning equipment. A fluid removal system is installed to remove fluid from the leak collection system. The fluid removal system consists of a sump(s), a dedicated pump(s), an automated pump activation system that activates the pump(s) when a specific fluid level is reached in a sump(s), a totalizing flow meter to measure to measure the volume of leachate pumped from the system, and an automated alarm system that provides warning of pump failure. Alternatively, a gravity drain system may be utilized where practicable.
Impacted stormwater impoundments that store impacted stormwater for less than 30 days Or Process water and impacted stormwater long-term impoundments located within an open pit surface drainage area Or Non-impacted stormwater impoundments located outside the open pit surface drainage area over contaminated areas where the water has	 Liner system. At a minimum, impoundments are constructed as an engineered liner system consisting of a compacted sub-base overlain by a synthetic liner. Alternate design would need to provide the same or greater level of containment as the liner system described below. Liner system subgrade and liner bedding. The liner system is prepared and placed upon a stable subgrade. The top surface of the subgrade is smooth and free of sharp rocks or any other material that could penetrate the overlying liner bedding or synthetic liner. Liner bedding is placed atop the subgrade and consists of a minimum of six inches of sand or fine soil to allow for good contact between liner and liner bedding. The liner bedding surface is sufficiently dry during liner installation such that free or excess water will not hinder the welding of seams. The liner installing the liner indicating acceptance of the earthwork. Liner type. Synthetic liners provide the same or greater level of containment, including permeability, as a 60 mil HDPE geomembrane liner system. The liner system's tensile strength, tear and puncture resistance and resistance to degradation by ultraviolet light are compatible with design loads, exposure and conditions. Wind protection. Liner systems are designed and constructed with a weighting system to secure the liner and liner damage during periods of extreme wind events when the impoundment is empty.

⁵⁴⁴ **EXCEPTION:** process water and impacted stormwater long-term impoundments located within an open pit surface drainage area of an existing operation may be designed and constructed in accordance with the requirements of 'Impacted stormwater impoundments that store impacted stormwater for less than 30 days'.

the potential to infiltrate and produce a leachate that may cause an exceedance of the applicable standards ⁵⁴⁵	
All	 Installed with sufficient slack in the liner material to accommodate expansion and contraction due to temperature changes. No folds in the completed liner except to the extent necessary to provide slack. Anchored in an anchor trench. The trench is of a size and setback distance sufficient for the size of the impoundment. Liner panels are oriented such that all sidewall seams are vertical Any opening in the liner through which a pipe or other fixture protrudes is sealed in accordance with the liner manufacturer's requirements. Liner penetrations are detailed in the construction plans and as-built drawings. Installed by an individual that has the necessary training and experience as required by the liner manufacturer. Manufacturer's installation and field seaming guidelines are followed. Liner seams are field tested by the installer and verification of the adequacy of the seams shall be provided along with the as-built drawings. If concrete slabs are installed on top of a liner for operational purposes, slabs are completed in accordance with manufacturer and installer recommendations to ensure liner integrity.
IMPOUNDMENT SPILLWAYS AND DIKES	
Spillways	 Impoundments have spillways to safely discharge the peak runoff of a 25-year, 24-hour precipitation event, or an event with a 90-percent chance of not being exceeded for the design life of the impoundment. Impoundments intended as primary containment for process water cannot have a spillway that empties onto the ground surface.
Dikes	Allow for access for maintenance unless justification can be provided otherwise.

2. TAILINGS IMPOUNDMENTS⁵⁴⁶

MATERIAL CHARACTERIZATION		
	• See Chapter 4.1.	
ENGINEERING DESIGN547		
Design plans	• Design plans are signed and sealed by a licensed professional engineer.	
Stormwater run-on	 Is diverted and/or contained to minimize contact between stormwater run-on and the tailing material. The design considers the amount, intensity, duration and frequency of precipitation; watershed characteristics including the area, topography, geomorphology, soils and vegetation of the watershed; and run-off characteristics of the watershed including the peak rate, volumes and time distribution of run-off events. 	

⁵⁴⁵ "Non-impacted stormwater" means stormwater run-off generated as a result of direct precipitation that does not exceed IRMA water quality standards.

⁵⁴⁶ IRMA is proposing that this table also applies to dry stack tailings.

⁵⁴⁷ If a critical facility, design criteria in proposed Chapter 4.X also apply (see 4.X.3. Initial Assessment, Siting and Design of Critical Facilities).

Seepage from the sides of a tailing impoundment	 The design of tailing seepage collection systems is based on consideration of site-specific conditions. Seepage is captured and contained through the construction of headwalls, impoundments and diversion structures as applicable.
Groundwater impacted by the tailing impoundment	 An aquifer evaluation is undertaken to determine the potential nature and extent of impacts on groundwater from the tailings impoundment based on the proposed tailings impoundment design. The aquifer evaluation includes a complete description of aquifer characteristics and hydrogeologic controls on movement of tailing drainage and ground water impacted by the tailings impoundment. If groundwater is predicted to be or is in excess of applicable standards it is captured and contained through the construction of interceptor systems designed to maximize capture of impacted ground water and minimize the extent of ground water impacted by the tailings impoundment. A design report for a proposed interceptor system for containment and capture of ground water impacted by the tailings impoundment includes, at a minimum: construction drawings and interceptor system performance information, recommended equipment including pumps and meters, recommended pump settings and pumping rates, demonstration that interceptor system design will capture ground water rights to operate the system as designed, demonstration that interceptor system design will capture ground water impacted by the tailings impoundment such that applicable standards will not be exceeded at specified monitoring well locations.
OPERATIONAL REQU	IREMENTS
	 The tailings impoundment remains within the area identified in the design. The perimeter of the tailings impoundment and any associated solution collection systems are inspected monthly. Any evidence of instability in the tailings impoundment that could potentially result in a dam failure and an unauthorized release is reported to the regulatory authorities as soon as possible, but no later than 24 hours after discovery. Any leaks or spills outside the tailings impoundment and any associated containment are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with IRMA Chapter 4.1. (4.1.7) and Chapter 4.2 (4.2.4) as relevant. If seeps occur, they are monitored on a monthly basis and an estimate of the seep flow rate is made. Monthly records of the seep inspections and flow rates are maintained and included in the site monitoring reports. The average daily rate monthly volume of tailings placed in the impoundment is recorded, maintained, and included in the site monitoring reports. The daily tailings deposition and associated solution system collection rate is determined using flow meters. The placement of tailings and effluent are done in accordance with an operating plan that describes the following: the sequencing of tailings deposition on an annual basis; measures to manage the surface impoundment area to maintain adequate freeboard; operation of seepage collection systems; operation of interceptor systems; operation of systems to return water to the concentrator or other locations as appropriate;

	0	any other water management features.
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3. OPEN PITS

MATERIAL CHARACTERIZATION	
	• See Chapter 4.1.
OPERATIONAL REQUIREMENTS	
Stormwater	• Stormwater is diverted outward and away from the perimeter of the open pit and, to the extent practicable, is not directed into the open pit.
Minimization of surface drainage area	 Facilities in and surrounding an open pit surface drainage area are designed and located to minimize the size of the open pit surface drainage area to the extent practicable.
Water Quality	• During operation of an open pit, the IRMA Water Quality Criteria do not apply within the area of open pit hydrologic containment.

4. UNDERGROUND MINES

MATERIAL CHARACTERIZATION	
	• See Chapter 4.1.
OPERATIONAL REQUI	REMENTS
Waste disposal	 Waste rock or tailings that may generate a leachate that may cause an exceedance of IRMA Water Quality Criteria are not disposed of underground
	 Deposition of any other wastes in an underground mine is only done if authorized by a regulatory authority. Records are kept of monthly volume of waste rock, tailings or waste placed in the mine.

5. WASTE ROCK STOCKPILES

MATERIAL CHARACTERIZATION		
	• See Chapter 4.1.	
WASTE ROCK ENGINEERING DESIGN548		
Stormwater run-on	 Is diverted or contained to minimize contact between stormwater run-on and stockpiled material. The design considers the amount, intensity, duration and frequency of precipitation; watershed characteristics including the area, topography, geomorphology, soils and vegetation of the watershed; and run-off characteristics of the watershed including the peak rate, volumes and time distribution of run off current. 	
	time distribution of run-off events.	
Seepage from the sides of a waste rock stockpile	• Is captured and contained through the construction of headwalls, impoundments and diversion structures as applicable.	
Groundwater impacted by waste rock stockpiles	• If in excess of applicable standards is captured and contained through the construction of interceptor systems as applicable.	
OPERATIONAL REQUIREMENTS		
New waste rock stockpiles	• An operating plan that describes the sequencing of waste rock deposition on an annual basis, operation of seepage collection systems, operation of interceptor systems, operation of systems to return water to the concentrator or other locations as appropriate, and any other water management features.	

⁵⁴⁸ The requirements are applicable for new engineered structures for waste rock stockpiles unless the entity can demonstrate that an alternative design will provide an equal or greater level of containment. An existing waste rock stockpile is not required to meet the design requirements unless groundwater monitoring of the stockpile pursuant to IRMA Chapter 4.2 indicates a need for corrective action.

• The placement of waste rock is in accordance with an operating plan, and the stockpile remains within the area identified in the design plan.
• The perimeter of the stockpile is inspected monthly.
 Any evidence of mass instability in the stockpile that could potentially result in a slope failure that may result in an unauthorized release is reported to regulatory authorities (if required) as soon as possible, but not later than 24 hours after discovery and a corrective action plan is developed and implemented to restore structural integrity.
• Any leaks or spills of leachate outside the waste rock stockpile and any associated containment system are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with IRMA Chapter 4.1. (4.1.7) and Chapter 4.2 (4.2.4) as relevant.
• If seeps occur, they are monitored on a monthly basis and an estimate of the seep flow rate is made. Monthly records of the seep inspections and flow rates shall be maintained and included in the site monitoring reports.
 If an interceptor system to maintain capture of ground water impacted by a waste rock stockpile exists, the entity monitors interceptor system collection using flow meters.

6. CRUSHING, MILLING, CONCENTRATOR, SMELTING AND REFINING FACILITIES

ENGINEERING DESIG	N ⁵⁴⁹
New crushing and milling units	• New crushing and milling units, including associated ore storage, except when located within the open pit surface drainage area, are designed to contain and manage all materials containing water contaminants that have the potential to migrate to ground water and cause an exceedance of applicable standards on concrete or low permeability surfaces.
New concentrator units.	 New concentrator units are designed to contain and manage in tank and pipeline systems all materials containing water contaminants that have the potential to migrate to ground water and cause an exceedance of applicable standards. Tailing and concentrate thickener tanks may be constructed with concrete or low permeability bottoms consisting of a minimum of 12 inches of soil that has a minimum re-compacted inplace coefficient of permeability of 1x10⁻⁶ cm/sec. The tank designs shall be based on plans and specifications signed and sealed by a licensed professional engineer. For low permeability bottoms, such plans and specifications shall describe how process rates, material density and settling rates were considered in the design to minimize infiltration such that water contaminants in the tank will not migrate to ground water and cause an exceedance of applicable standards.
New smelting and refining units.	• New smelting and refining units are designed to contain and manage on impermeable surfaces all materials, including associated slag and flue dust, containing water contaminants that have the potential to migrate to ground water and cause an exceedance of applicable standards.
OPERATIONAL REQUIREMENTS	
Crushing, milling and concentrating	 Operations remain within the area identified in an operating plan. All containment system structures are inspected monthly. Any leaks or spills of process water outside the containment system are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with IRMA Chapter 4.1. (4.1.7) and Chapter 4.2 (4.2.4) as relevant.
Smelting and refining units	 Operations remain within the area identified in an operating plan. Slag, flue dust and any other waste products generated as a result of smelting or refining activities are characterized, managed, and properly stored and disposed in a manner consistent with IRMA 4.1. Any leaks or spills outside the containment systems of the smelter unit are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with

⁵⁴⁹ The requirements are applicable in designing crushing, milling, concentrating, smelting and refining facilities unless the entity can demonstrate that an alternative design will provide an equal or greater level of containment.

7. LEACH PILES

ENGINEERING DESIGN ⁵⁵⁰	
ENGINEERING DESIGN	 Liner system. Leach piles are placed on an engineered liner system consisting of a subgrade and compacted earthen liner overlain by a synthetic liner which is overlain by a solution collection system designed to transmit process fluids out of the leach pile. The liner system is installed in accordance with a CQA/CQC plan. Liner system subgrade and earthen liner. A liner system earthen liner is prepared and placed upon a stable subgrade. The prepared earthen liner consists of a minimum of 12 inches of soil that has a minimum re-compacted in-place coefficient of permeability of 1x10⁻⁶ cm/sec. The top surface of the earthen liner is smooth and free of sharp rocks or any other material that could penetrate the overlying synthetic liner. Liner type. A synthetic liner for a leach stockpile provides the same or greater level of containment, including permeability, as a 60 mil HDPE geomembrane liner system. The liner system's tensile strength, tear and puncture resistance and resistance to degradation by ultraviolet light is compatible with design loads, exposures and conditions. A licensed professional engineer with experience in liner system construction and installation shall identify the basis for the geomembrane composition and specific liner based upon: the overliner protection and provisions for hydraulic relief within the liner system; the load and the means of applying the load on the liner system;
	 the compatibility of the liner material with process solutions applied to the leach stockpile and temperature extremes of the location at which it will be installed; and the liner's ability to remain functional for five years after the implementation of closure of the leach stockpile.
	• Solution collection system. A solution collection system is constructed in an overliner protection and drainage system. The solution collection system is designed to remain functional for five years after the operational life of the leach pile. The overliner protection is designed and constructed to protect the synthetic liner from damage during loading and minimize the potential for penetration of the synthetic liner. A sloped collection system is designed to transmit fluids out of the drainage layer of the leach pile. The collection system is designed to maintain a hydraulic head of less than the thickness of the drainage layer but the drainage layer shall not exceed five feet in thickness. Any penetration of the liner by the collection system through which a pipe or other fixture protrudes is constructed in accordance with the liner manufacturer's requirements. Liner penetrations are detailed in the construction plans and as-built drawings.
	• Solution containment systems. Pregnant leach solution (PLS) flows exiting the leach pile are collected, contained and conveyed to a process water impoundment(s) or tank(s) using pipelines or lined conveyance systems.
	• Alternative design. An entity may propose an alternative design for a leach pile located within an open pit surface drainage area provided that the stockpile and solution capture systems are designed to maximize leach solution capture considering the site-specific conditions of the open pit, underlying geology and hydrology, and leach solutions will not migrate outside of the open pit surface drainage area.
OPERATIONAL REQUIREMENTS	
	 A pile remains within the area identified in the operating plan and applicable discharge permits. The perimeter of the pile and the solution collection system are inspected monthly. Any evidence of instability in the stockpile that could potentially result in a slope failure or an unauthorized release is reported to an accountable executive as soon as possible, but not later than 24 hours after discovery, and corrective action plans are developed and implemented.

⁵⁵⁰ The requirements are applicable in designing leach pile (e.g., heap leach and acid leach piles) facilities unless the entity can demonstrate that an alternate design will provide an equal or greater level of containment.
• Any leaks or spills of PLS or leach solutions outside the leach pile or containment system are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with IRMA Chapter 4.1. (4.1.7) and Chapter 4.2 (4.2.4) as relevant.
• If seeps occur, they are monitored on a monthly basis and an estimate of the seep flow rate is made. Monthly records of the seep inspections and flow rates are maintained and included in the site monitoring reports.
• Leach solution application rates do not exceed the maximum rates in the plan of operations.
 The daily leach solution application and PLS collection rate is determined using flow meters. The daily rate and monthly volume of leach solution applied and PLS collected are recorded, maintained, and included in the site monitoring reports.

8. CHEMICAL LEACHING AND PROCESSING FACILITIES

ENGINEERING DESIGN	551		
Chemical leaching and processing facilities	 All chemical leaching and processing facilities are designed to contain all associated process fluids within impermeable vessels with secondary containment or process water impoundments meeting the requirements of this section. 		
	• All pipeline and tank systems associated with chemical leaching and processing facilities are designed in accordance with 8. New Pipelines and Tanks.		
OPERATIONAL REQUIREMENTS			
	• All solution management and extraction operations are contained within pipeline and tank systems designed and operated pursuant to Section 9. New Pipelines and Tanks or process water impoundments meeting the requirements in Section 1. Impoundments (see process water impoundments).		
	• Sludge, spent electrolyte or other waste products from the chemical leaching or processing are disposed in a manner consistent with IRMA 4.1.		

9. PIPELINES AND TANKS

ENGINEERING DESIGN552	
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New Pipelines	 Are constructed of impermeable materials that are compatible with the particular contents that are contained and carried in the pipeline and are resistant to degradation by ultraviolet light if they will be exposed to sunlight. For pipelines located outside of the open pit surface drainage area and outside an area authorized for discharge of process water, impacted stormwater or tailings, the entity:
	 incorporates a mechanism for monitoring the integrity of the pipeline system including visual inspections, pressure change sensors, or other appropriate means; and
	 incorporate a mechanism of secondary containment to contain and control leaks and spills including berms, placement within or drainage toward areas authorized for discharge of the conveyed fluids, and impoundments that are constructed consistent with the requirements of this section.
New Tanks	• Tanks are designed and constructed of steel, concrete or impermeable materials that are compatible with the particular contents that are contained within the tank and resistant to degradation by ultraviolet light where exposed to sunlight.
	• Tank systems have a constructed foundation consisting of a stable, level base free of rocks, debris, sharp edges or irregularities that could puncture, crack or indent the tank materials.
	• Tank systems are designed to prevent overflow and the collection of surface water run-on.
	• Above-ground tank systems are bermed to contain 110 percent of the volume of the largest tank within the system or the largest interconnected tanks.

⁵⁵¹ The requirements are applicable in designing chemical leaching and processing facilities (unless the entity can demonstrate that an alternate design will provide an equal or greater level of containment).

⁵⁵² The requirements are applicable in designing new pipeline and tanks systems (unless the entity can demonstrate that an alternate design will provide an equal or greater level of containment).

	• Below-grade tank systems are either be placed in such a manner that the side walls are open for visual inspection or the tank shall be designed with a secondary containment and leak detection system.
Existing pipeline or tank systems	 A pipeline or tank system already in existence is not required to meet the design requirements of this section provided that the operational requirements below are met. If an existing tank or pipeline system cannot maintain integrity it is replaced in accordance with the engineering requirements for new tanks and pipelines in this section.
OPERATIONAL REQU	IREMENTS
	• Pipelines and tanks remain within the area identified in the operations plan.
	• Pipelines, tanks and secondary containment systems are inspected on a monthly basis.
	• Below-grade tank(s) are maintained and operated to prevent overtopping of the tank(s).
	• Any leaks or spills of fluids, process water or tailings from a pipeline or tank system are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with IRMA Chapter 4.1. (4.1.7) and Chapter 4.2 (4.2.4) as relevant.
	• Existing pipelines that do not meet the engineering requirements above shall be evaluated for integrity at least once every five years.
	• Existing below-grade tanks that do not meet the engineering requirements of this section shall be emptied and visually inspected for integrity at least once every five years.
	• Existing tanks in contact with the ground surface and located outside an open pit surface drainage area are inspected and tested at least once every ten years for integrity.
	• A written record of all pipeline and tank system inspections and integrity testing is maintained by the entity for a period of at least five years.
	• Any wastes generated from the cleaning of pipeline or tank systems are disposed of in a manner consistent with IRMA Chapter 4.1.

10. TRUCK AND EQUIPMENT WASHING UNITS

ENGINEERING DESIGN553		
New and Existing Truck and Equipment Washing Units	 Truck and equipment washing is conducted on a concrete pad or a pad constructed of materials of equivalent or lower permeability designed to capture all wash water. Captured wash water freely drains from the containment pad and when necessary is conveyed to an oil water separator to remove oil and grease from the wash water. Wash water from the oil water separator is conveyed to a tank system designed (and constructed section 8, above), an impoundment meeting the requirements of Section 1. Impoundments, or may be directed to the mine process water circuit for use. 	
OPERATIONAL REQUIREMENTS		
	 A truck or equipment wash unit remains within the area identified in the operations plan. Wash water generated at the unit is contained within the designed containment pad, separator and tank system, or impoundment until treated to meet applicable standards for discharge or conveyed to the process water circuit. Any leaks or spills of wash water from the containment pad, separator, tank system or impoundment are recorded, reported to authorities (if required), and corrective action measures are taken in accordance with IRMA Chapter 4.1. (4.1.7) and Chapter 4.2 (4.2.4) as relevant. Any wastes generated from the oil water separator or the tank system shall be disposed in a manner consistent with IRMA 4.1. 	

⁵⁵³ The requirements are applicable in designing truck and equipment washing units (unless the entity can demonstrate that an alternate design will provide an equal or greater level of containment.

Chapter 4.X (NEW) Management of Physical Stability

NOTES ON THIS CHAPTER: This is a new chapter being proposed to clearly delineate requirements to manage physical stability risks associated with some facilities that are present at mines and mineral procession operations. In the 2018 Mining Standard, the chapter on Waste and Materials Management included the management of both physical and chemical stability risks.

A review of the 2018 Mining Standard requirements that were in place to manage physical stability risks revealed some gaps including: 1) how to determine which facilities may have a potential for catastrophic failure; 2) no explicit requirement outlining the process for determining a "failure consequence classification" (i.e., a rating of the severity of the human, environmental and economic consequences if a facility were to experience a catastrophic failure).

Additionally, in 2020 the <u>Global Industry Standard for Tailings Management (GISTM)</u> was released.⁵⁵⁴ The standard was the culmination of a two-year-long multi-stakeholder effort, which included discussions with IRMA. There is considerable overlap between the GISTM and the IRMA Standard, although because the GISTM focuses only on the management of tailings it is by nature much narrower in scope than the 26-chapter IRMA Standard.

IRMA held discussions with an Expert Working Group to receive input on whether or not IRMA should try to fully align its own waste-related requirements with the GISTM requirements, or possibly even remove its tailingsmanagement-related requirements and simply require that entities be audited against GISTM. There was unanimity that IRMA not attempt to fully align with or adopt GISTM at this point in time, as GISTM is still new in its implementation, and has yet to develop a consistently applied assurance process. There will, no doubt, be a lot to learn from the first companies that are in the process of trying to implement the GISTM Standard. As more information and learning is shared from those companies, IRMA will continue to consider how to move forward.

IRMA's working group did, however, recognize that there were some new best practice elements that should be considered for integration in the IRMA Standard, and so some of the changes proposed below reflect their suggestions.

The intent of this proposed chapter is not to duplicate the efforts of GISTM or other industry standards such as the Mining Association of Canada's Toward Sustainable Mining tailings protocol, but rather to align on important requirements and apply them in a manner that encompasses the needs of, and provides transparency to, all stakeholders. The intent is also to recognize that many mining and mineral processing facilities, not just tailings facilities, have inherent risks related to physical stability that can result in both catastrophic failures and less severe but still damaging stability failures, and that those inherent risks need to be recognized and addressed. Finally, it is also the intent of this chapter to provide more prescriptive standards and specificity, with provisions for exceptions, in order to provide more consistent expectations for all facilities.

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

⁵⁵⁴ Global Tailings Review. 2020. Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

BACKGROUND

Mining, mineral processing and chemical processes, and remediation of those activities, require facilities that, if mismanaged, create risks to human rights, human health and safety, and the environment.

Underground mines are subject to subsidence of the overlying surface due to voids created by mining. The subsidence can result in significant impacts on surface features and hydrology. Open pit and cast mines are subject to catastrophic failures and mass wasting as a result of pit highwalls and other features.

Most mined material will remain on the site as wastes in two general forms: soil and rock removed during mining that will not be processed for minerals (e.g., overburden, waste rock, sub-economic ore, etc.), and wastes from mineral, metallurgical and chemical processing (e.g., tailings, spent heap leach piles, process residue storage ponds, etc.). Mines may also require water storage facilities to supply fresh and process water storage requirements.

Proper storage of fluids and wastes is required primarily to ensure worker/employee safety. However, these facilities may also pose a risk to nearby communities, as the storage of large volumes of any material behind tailings or water dams and/or in constructed impoundments holds the potential for catastrophic failure.

There are existing and emerging technologies and practices for mining, mineral processing,

TERMS USED IN THIS CHAPTER.

■ Accountable Executive NEW ■ Affected Community ■ As Low As Reasonable Practicable (ALARP) NEW ■ Best Available/Applicable Practice (BAP) ■ Best Available Technology (BAT) ■ Breach Analysis NEW ■ Brine NEW ■ Closure ■ Collaboration Competent Professional Construction Versus Design Intent Verification **NEW** Contamination **NEW** Credible Failure Mode NEW ■ Credible Method NEW ■ Critical Facility **NEW** Critical Control Cultural Heritage Cumulative Impacts Design Basis Report NEW Ecosystem Engineer of Record (EOR) NEW ■ Entity NEW ■ Exploration NEW ■ Facility ■ Failure Consequence Classification **NEW** ■ Hazard **NEW** ■ Hazardous Waste NEW ■ Heap Leach ■ Host Country Law ■ Independent Dam Safety Review NEW Independent Review NEW Independent Review Board (IRB) NEW Independent Senior Technical Reviewer NEW ■ Livelihood ■ Mineral Processing NEW ■ Mining NEW ■ Mitigation ■ Multi-Criteria Alternatives Analysis ■ Non-Critical Facility NEW ■ Operation NEW ■ Pollution NEW ■ Post-Closure ■ Practicable ■ Process Water ■ Project NEW ■ Responsible Critical Facility Engineer (RCFE) NEW ■ Root Cause Analysis NEW ■ Risk Control ■ Scoping NEW ■ Site NEW ■ Stakeholder Tailings Trigger Action Response Plan (TARP) NEW ■ Unwanted Event NEW ■ Waste Rock ■ Water Balance ■ Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

and ancillary facilities that aim to prevent or greatly reduce the potential for physical stability related failures, including, importantly, catastrophic failures. This chapter incorporates those technologies and practices.

OBJECTIVES/INTENT OF THIS CHAPTER

To manage wastes, materials and facilities in a manner that minimizes their short- and long-term physical risks, and protects workers as well as the human rights, health and safety of communities and future land and water uses.

SCOPE OF APPLICATION

RELEVANCE: The first criterion in chapter (4.X.1 'Scoping of Facilities with Potential Physical Stability Risks) is applicable to all exploration, mining and mineral processing projects and operations.

Based on the outcome of scoping:

- For facilities with low or significant failure consequence classifications but no potential loss of life the requirements of criteria 4.X.1 and 4.X.2 are applicable, and criteria 4.X.3 through 4.X.6 are not applicable.
- For facilities with significant failure consequence classifications that include potential loss of life, and facilities with higher consequence classifications, the requirements of criteria 4.X.1, 4.X.2.1.a, and 4.X.3. through 4.X.6. are applicable.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS

A risk assessment has been done to evaluate physical risks associated with critical facilities (4.X.3.2).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Management of Physical Stability Requirements

4.X.1. Scoping of Facilities with Potential Physical Stability Risks

NOTE FOR 4.X.1: This is a new criterion. This section requires identification of all proposed and existing site facilities subject to potential physical instability. It also requires evaluation of the credible failure modes and consequences for each site facility in terms of impacts to human rights, health, safety, environment and communities (for existing facilities, robust supporting information is required in terms of geology, hydrology, and climate together with geotechnical and impacts assessments to ensure rigorous analysis of credible failure modes). This section also requires identification of facilities with low or significant potential consequences but no potential loss of life and also requires identification of "critical facilities" with significant or higher potential consequences including potential loss of life.

The requirements in 4.X.1 do not apply to all facilities on a mine site or mineral processing site. The facilities of potential concern are those that are created during mining (e.g., roads, open pits and underground mines) or used to store or dispose of relatively large volumes of fluids and/or solid materials or wastes such that, if there were to be a stability failure, could lead to the presence of unstable conditions that create safety issues and could result in the release of the contents in a manner that could affect workers, communities or the environment.

We are using the term scoping because it aligns with terminology in other chapters. The objective of scoping in this case is to determine of the highest failure consequence classification for each facility (considering all credible failure modes, defined below), and based on that, determine "non-critical facilities" and "critical facilities" in terms of physical stability risks (discussed below).

That classification must be completed for proposed facilities, and we are proposing that it also be revisited after each facility is constructed, and during operations, when real-world data (e.g., geotechnical characteristics at the final location, the actual materials used in construction, data on tailings properties that could affect runout estimates, etc.) will enable more accurate determination of the level of risk for each facility.

4.X.1.1. The <u>entity</u> identifies each proposed and existing <u>facility</u> that may have physical stability risks that could impact the health, safety or human rights of <u>workers</u> and communities, or the environment, including, but not limited to:

- a. Access roads;
- b. Surface mines including pit highwalls and other associated features;
- c. Underground mines;
- d. Fluid extraction areas or facilities (e.g., for brine or groundwater pumping/dewatering);
- e. Storage or disposal facilities for wastes from underground and surface mines (e.g., <u>waste rock</u>, overburden, rejects material, soil, and other stockpiles);
- f. Storage or disposal facilities for wastes from mineral processing, chemical processing (e.g., tailings, sludges and residues, and above-ground-level process water);
- g. Hazardous and remediated waste storage facilities;
- h. Storage facilities for extracted fluids (e.g., brine) or ore; and
- i. Water reservoirs.

4.X.1.2. Each proposed and existing <u>facility</u> is characterized to inform an analysis of physical stability risks as follows:

- a. The proposed dimensions, proposed location, preliminary design, operational lifespan, and closure objectives are documented for each facility, and if relevant, the storage or disposal capacity, existing and planned future contents and their chemical characteristics (as identified in Chapter 4.1); ⁵⁵⁵
- b. The following environmental factors that may influence the physical stability of proposed facilities are documented by <u>competent professionals</u>, including documentation of any uncertainties due to climate change:
 - i. Soil characteristics: soil type, particle sizes, pore water pressure, hydraulic conductivity soils at the site;
 - Geology: seismicity, geologic and lithic subsurface conditions beneath the site and within 2 km of the site, including the thickness of each geologic unit and identification of which geologic units are water bearing;
 - iii. Hydrology: subsurface conditions for all water bearing zones beneath the site including maximum and minimum depths to ground water, direction of groundwater flow, hydrologic gradients, transmissivity and storativity; and surface waters including average and seasonal levels and flow rates, gradients, and storage features within 2 km of the site; and
 - iv. Climate: mean annual temperature, precipitation, evaporation, maximum precipitation events, predicted probable maximum precipitation events (e.g., 24-hour, annual, 10-year, 100-year, 500-year), trends in past events and predicted trends in future events; and
- c. The location of all facilities with physical stability risks are mapped in relation to:
 - i. Topographical contours;
 - ii. Geological data;
 - iii. Watercourses and other surface water features;
 - iv. The most recent 100-yr and 500-yr flood zones; and
 - v. Residential populations, individual households, and public and private infrastructure (including bridges, irrigation systems, and water supplies) within a 5 km radius and 100 km downstream of the site.

⁵⁵⁵ Information on storage or disposal capacity and contents would only be relevant for those facilities storing or disposing of fluid- and/or solid materials or wastes.

The chemical characteristics of the fluids and wastes are required to be determined in Chapter 4.1, criterion 4.1.1. These characteristics, such as the presence of contaminants of potential concern, will feed into the failure consequence classification evaluation in 4.X.1.7.

NOTE FOR 4.X.1.2: This requirement outlines the minimum information that should be gathered to inform the credible failure modes assessment, tailings breach analysis (if necessary), and ultimately the failure consequence classification.

4.X.1.3. Additionally, for each existing <u>facility</u> the following characterizations further inform physical stability risks:

- a. A detailed description of the facility location that includes site-specific data on geomorphology, geology, seismicity, including potential or actual faults, hydrogeology and hydrology, and climate, including documentation of any uncertainties due to climate change;
- b. As relevant, a characterization of physical properties of the facility foundation materials, stored materials and wastes, and borrow or other materials used in construction of embankments or other features intended to provide physical stability of internally stored materials and wastes;
- c. If relevant, actual volumes and updated estimates of future volumes of materials or wastes (solids and liquids), and the placement and/or fill plans and schedules (short and long-term) for the facility life cycle;⁵⁵⁶ and
- d. More detailed geotechnical investigations, as applicable, including:
 - i. Geohazard assessment;
 - ii. Seepage analysis;
 - iii. Stability assessment;
 - iv. Seismic assessment;
 - v. Sensitivity analysis;
 - vi. Water balance; and
 - vii. Flooding assessment.

NOTE FOR 4.X.1.3: At existing operations where facilities already exist, a more detailed characterization of the facility is possible, and will provide a more reliable basis to inform the credible failure modes assessment in 4.X.1.4. If new credible failure modes are found once a facility is constructed and operational, then the failure consequence classification would need to be updated.

4.X.1.4. A multi-disciplinary team of <u>competent professionals</u> identifies all <u>credible failure modes</u> for each proposed and existing <u>facility</u>, taking into consideration the information in 4.X.1.1, 4.X.1.2 and, if relevant, 4.X.1.3. Depending on the facility, credible failure modes may include, but are not limited to:

- a. Shallow and deep failures within the facility;
- b. Foundation failures;
- c. Internal erosion failure (e.g., piping);
- d. Ground-subsidence-related failures;
- e. Slope failures;
- f. Pit highwall or slope failures;
- g. Failures due to storm events;
- h. Construction- and operations-related failures;
- i. Upstream/upgradient off-site failures that may affect a facility (e.g., upstream dam or landslide); and
- j. Cascading failures (e.g., if there are upstream and/or downstream facilities or structures).

NOTE FOR 4.X.1.4: NEW. In the 2018 Mining Standard, there was no explicit mention of credible failure modes, although IRMA guidance for Chapter 4.1 did mention the need to develop critical controls for credible failure modes.

⁵⁵⁶ Note that initial volume estimates should have been done in 4.X.1.2 to inform the potential consequence evaluation. This information would be updated once the final design is selected.

This requirement assumes that the determination of credible failure modes will occur for proposed facilities, but also again, after a facility is constructed and more information is available about the actual materials used in construction of foundations, more geotechnical investigations have taken place, characterizations of actual wastes and slurries can take place, etc., so there is more empirical data to inform a more accurate assessment of credible failure modes.

We are proposing to adopt the GISTM definition of **credible failure modes**:

Refers to technically feasible failure mechanisms given the materials present in the structure and its foundation, the properties of these materials, the configuration of the structure, drainage conditions and surface water control at the facility, throughout its life cycle. Credible failure modes can and do typically vary during the life cycle of the facility as the conditions vary. A facility that is appropriately designed and operated considers all of these credible failure modes and includes sufficient resilience against each. Different failure modes will result in different failure scenarios. Credible catastrophic failure modes do not exist for all tailings facilities. The term 'credible failure mode' is not associated with a probability of this event occurring and having credible failure modes is not a reflection of facility safety.

4.X.1.5. For <u>tailings facilities</u>, water dams and any other facilities with the potential for runout of the facility contents, <u>competent professionals</u> complete a facility <u>breach analysis</u> and runout or inundation analyses for the loss of all tailings and/or fluids. Analyses are conducted for the worst-case "sunny day" and worst-case storm-event scenarios, and for the worst-case <u>credible failure mode</u> scenarios in terms of rate and volume of <u>discharge</u> from the facility. For each case, the analysis determines:

- a. The estimated physical area that may be impacted;
- b. Flow arrival times, velocities, and depth of material deposition;
- c. Estimated potential and likely consequences in terms of loss of human life, impacts to public and private infrastructure and vital services, environmental impacts, and economic cost.

NOTE FOR 4.X.1.5: REVISED. Both IRMA's 2018 Mining Standard (requirement 4.1.3.3.j) and GISTM require tailings breach analyses. These analyses inform failure consequence classification in 4.X.1.5. This requirement adds more detail than what was in the 2018 Mining Standard.

We are proposing to adopt the GISTM definition of **breach analysis**:

A study that assumes a failure of the tailings facility and estimates its impact. Breach analyses must be based on credible failure modes. The results should determine the physical area impacted by a potential failure, flow arrival times, depth and velocities, duration of flooding, and depth of material deposition. The breach analysis is based on scenarios which are not connected to probability of occurrence. It is primarily used to inform emergency preparedness and response planning and the consequence of failure classification. The classification is then used to inform the external loading component of the design criteria.

4.X.1.6. The <u>entity</u> shares information with <u>affected communities</u> and other relevant <u>stakeholders</u> on the factors that may affect the physical stability of proposed and existing facilities, including <u>credible failure modes</u> and, if relevant, the facility <u>breach analysis</u>, and <u>consults</u> with them to establish and document:⁵⁵⁷

a. The local social, economic, environmental context of areas, including any uncertainties due to climate change; and

⁵⁵⁷ These discussions may have been done during the environmental and social impact assessment process. See Chapter 2.1 (Environmental and Social Impact Assessment and Management), requirement 2.1.3.2.

Other relevant stakeholder might include government officials, academics or expert who are not from the affected communities but have information or expertise to aid in the understanding of the local, social, environmental context and resources that may be affected.

b. The social (e.g., human rights, <u>ecosystem services</u>, commercial and residential property, businesses, etc.), <u>cultural heritage</u>, and environmental resources that may be negatively impacted by a physical stability failure at any of the identified facilities.⁵⁵⁸

NOTE FOR 4.X.1.6: NEW. The concepts in this requirement are aligned with GISTM [2.1 and 1.3], which require identifying the local social, economic, and environmental context, and that project-affected people are meaningfully engaged in building the knowledge base.

4.X.1.7. For each <u>facility</u> determined to have <u>credible failure modes</u>, a multi-disciplinary team of <u>competent</u> professionals carries out an evaluation of the consequences of a facility failure (hereafter referred to as "<u>failure</u> consequence classification") that includes:⁵⁵⁹

- a. Estimation of incremental impacts/losses related to each credible failure mode, including:
 - i. Potential population at risk;
 - ii. Potential loss of life;
 - iii. Potential impacts on the environment;
 - iv. Potential impacts on health, social and cultural resources; and
 - v. Potential impacts on infrastructure and economics;
- b. The estimation of impacts includes consideration the chemical characterization of the contents that would be released upon facility failure (as identified in Chapter 4.1), and potential for short- and long-term contamination or pollution of water, soils, and ecosystems, and effects on human health and livelihoods;⁵⁶⁰
- c. Determination of the facility's failure consequence classification (e.g., low, significant, high, very high or extreme) based on the matrix provided in <u>Table 4.X-1</u>. All categories of incremental impact/loss (e.g., population at risk, environment, economics, etc.) are considered equally important, and the failure consequence classification aligns with category with the worst potential consequences.⁵⁶¹

NOTE ON 4.X.1.7: REVISED. Requirement 4.1.3.3 in the 2018 Mining Standard included a requirement for facility classification based on risk level or consequence of failure. This proposed requirement adds more detail on the method used to determine the failure consequence classification (and does not base it on risk, which incorporates the probability a failure). The probability of failure is not taken into account in the failure consequence classification.

We are proposing a definition of a failure consequence classification as:⁵⁶²

A rating or ranking (e.g., low, significant, high, very high, extreme) based on losses, damages or impacts on downstream populations, the environment, the economy, cultural values, property and infrastructure if there were to be a loss of stability or integrity in a facility or its appurtenances that leads to an uncontrolled release of all or part of its contents. Failure consequence classifications are carried out for all credible failure modes.

4.X.1.8. Each facility's failure consequence classification is reviewed and, if necessary, updated. Reviews take place every five years or sooner, for example, when:

⁵⁵⁸ This information should feed into assessments of risks in other chapters. See the table called Cross-References to Other Chapters at the end of this chapter.

⁵⁵⁹ This exercise is informed by information from 4.X.1.1, 4.X.1.2, 4.X.1.3, 4.X.1.4, 4.X.1.5 and 4.X.1.6.

⁵⁶⁰ The chemical characterization in Chapter 4.1, criterion 4.1.1, determines whether or not there are hazardous properties to the fluids or wastes, and particular contaminants of potential concern. If contents may cause harm to people or the environment, that information must be taken into consideration when determining the risks to human health, potential impacts on the environment, potential impacts on local economies, etc.

⁵⁶¹ For example, if a particular facility presents a LOW risk to human life, but could result in incremental environmental losses that are considered to be HIGH, the consequence classification would be HIGH." (Source: British Columbia Ministry of Forests, Lands and Natural Resource Operations. 2017. "Downstream Consequence of Failure Classification Interpretation Guideline." p. 2. https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/dam-safety/con_class_guidelines_for_owners-2017.pdf)

⁵⁶² See source in previous footnote.

- a. There are proposed changes to the facility, including changes in the operational parameters of the facility;
- b. New or more accurate data relating to risks to the stability of the facility (e.g., geological, hydrological, climate change, newly identified <u>credible failure modes</u>) become available;
- c. Changes in the social or environmental context have the potential to change the nature or scale of potential impacts associated with a facility.

NOTE ON 4.X.1.8: This requirement aligns with 4.1.3.4 and 4.1.4.1.c in the 2018 Mining Standard. The five-year (or sooner) review also aligns with GISTM [4.2.C].

4.X.2. Management of Physical Stability at Non-Critical Facilities

NOTE FOR 4.X.2: In the 2018 Mining Standard, all mine waste facilities needed to undergo risk assessment to determine the risks to human health, safety or environment, and the risks needed to be managed. This section generally deals with the management of risks related to physical stability of facilities that are not considered to be 'critical facilities.' As with other IRMA chapters, it includes a management plan and monitoring requirements.

We are proposing the following definition of **non-critical facility**:

A facility that, if a physical stability failure of the facility were to occur, would not lead to the loss of life, and would have only low or significant impacts that could be mitigated within a short period of time (e.g., 1-5 years) at a reasonable cost (e.g., <10 Million \$US).

And a proposed definition of **critical facility**:

A facility that has a high, very high or extreme failure consequence classification, or a significant consequence classification that includes potential loss of life.

Note that Chapter 4.1 addresses the risks related to potential contamination from all facilities.

4.X.2.1. Any proposed or existing facility that has a failure consequence classification of low or significant with no potential loss of life (as identified in 4.X.1.7) is considered a "non-critical facility." For each non-critical facility that has one or more credible failure modes:

- a. The use of best available/applicable practices and best available technology (see <u>Annex 4.X-A</u>) are incorporated in the design and operation of each facility; and
- b. For proposed facilities that have one or more credible failure modes:
 - i. At least one qualified independent reviewer reviews the proposed design report to identify deficiencies, and any deficiencies are corrected prior to design finalization;⁵⁶³ and
 - ii. Quality assurance/quality control (QA/QC) and independent oversight occurs during the construction phase to ensure proper incorporation of planned engineering measures.

NOTE ON 4.X.2.1: REVISED. The requirement to use best practices and technologies aligns with requirements 4.1.5.1 in the 2018 Mining Standard. We have started to develop some guidance (see <u>Annex 4.X-A</u>) for entities, auditors and stakeholders on current best practices and technologies to ensure that non-critical facilities with a credible failure mode are designed, constructed, operated and closed in a manner that protect short-term and long-term physical stability.

Note that the best practices in <u>Annex 4.X-A</u> are meant to be applicable for <u>critical facilities</u> also (see 4.X.4.2.a.ii).

CONSULTATION QUESTION 4.X-1: Do you agree with the proposal to create guidance to better inform auditors' assessments? If not, how do you suggest auditors determine whether or not the measures at a site are sufficient to prevent or mitigate physical instability?

⁵⁶³ Qualified independent reviewers are objective, third-party, competent professionals with at least 15 years of experience in the specific area of review in this case, facility design. (This aligns with requirement 4.X.5.4)

If you agree with the approach, please indicate if you agree with any of the proposed best practices and technologies in <u>Annex 4.X-A</u>, and/or suggest alternative practices and technologies, including for facilities not identified in the draft Annex.

Would you be interested in being part of a working group to help work on this guidance? If so, please contact IRMA (comments@responsiblemining.net) and we will be in touch as we move forward with this process.

4.X.2.2. A management plan (or equivalent) is developed and implemented by <u>competent professionals</u> that includes:

- a. Key operational actions to be taken to mitigate risks to physical stability;
- b. Key parameters to monitor to detect potential physical stability issues; and
- c. Maintenance measures to protect the integrity of engineering and other mitigation measures;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁵⁶⁴
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

4.X.2.3. At least once a year monitoring data are reviewed to determine the effectiveness of <u>mitigation</u> measures. If deviations in expected performance are observed:

- a. The deviations are documented; and
- b. Remedial measures are developed and incorporated into an updated management plan.

4.X.3. Initial Assessment, Siting and Design of Critical Facilities

NOTE FOR 4.X.3: This section provides comprehensive requirements for all existing and/or proposed "critical facilities" with significant or higher potential consequences including potential loss of life. The section requires that a multi-criteria alternatives analysis and a risk assessment be conducted to inform the siting and design of critical facilities and the selection of facility management practices. Prescriptive design criteria are also required for new and existing critical facilities, including the use of conservative geotechnical factors of safety, and seismic and storm event criteria. Existing critical facilities that don't current meet best practice design must have a remedial plan in place to immediately address and within a reasonable period upgrade to best practice criteria.

4.X.3.1. For <u>facilities</u> where the <u>failure consequence classification</u> significant and there is potential loss of life, or the classification is high, very high or extreme (as identified in 4.X.1.4), hereafter referred to as "<u>critical</u> <u>facilities</u>," a <u>multi-criteria alternatives analysis</u>⁵⁶⁵ (MCAA) or similar process is conducted and documented as follows:

- a. For proposed critical facilities, MCAA is used to inform the siting, design, and the selection of management practices, while for existing critical facilities, MCAA is used to inform management practices, at minimum, when there are proposed major changes to facilities such as expansions, that may require a change in design or management practices; and
- b. All MCAA:
 - i. Are carried out by a multi-disciplinary team of competent professionals;

⁵⁶⁴ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

⁵⁶⁵ Alternatives assessment is a process to identify and objectively and rigorously assess the potential impacts and benefits (including environmental, technical and socio-economic aspects) of different options so that an informed decision can be made.

For more on alternatives assessment see: Environment Canada. 2016. Guidelines for the Assessment of Alternatives for Mine Waste Disposal. <u>https://www.canada.ca/en/environment-climate-change/services/managing-pollution/publications/guidelines-alternatives-mine-waste-disposal/chapter-2.html</u>; and Mining Association of Canada. 2017. Guide to the Management of Tailings Facilities, p. 46. <u>http://mining.ca/sites/default/files/documents/MAC-Guide-to-the-Management-of-Tailings-Facilities-2017.pdf</u>

- ii. Have the objective of selecting an alternative that minimizes risks to people and the environment throughout the facility life cycle, and minimizes the volume of fluids and/or wastes placed in critical facilities.
- iii. Identify minimum specifications and performance objectives for each facility throughout the facility life cycle (including closure objectives and post-closure land and water uses);
- iv. Identify possible alternatives for initial siting, design and management of <u>critical facilities</u> to prevent, and if that is not possible, minimize risks from all <u>credible failure modes</u> and for all phases of each facility's life cycle, avoiding *a priori* judgements about the alternatives;
- v. Include a screening or "fatal flaw" analysis to eliminate alternatives that fail to meet minimum specifications;
- vi. Assess remaining alternatives using a rigorous, transparent decision-making tool, such as Multiple Accounts Analysis or its equivalent, that takes into account environmental, technical, socio-economic and project economics considerations, inclusive of risk levels and <u>hazard</u> evaluations, associated with each alternative; and
- vii. Include a sensitivity analysis to reduce potential that biases will influence the selection of final site locations, design specifications and facility management practices.

NOTE FOR 4.X.3.1: REVISED. This was 4.1.4.2 in the 2018 Mining Standard. It has been restructured to make it clear that MCAA are required for proposed facilities, but for existing facilities they only need to be done if there is a major change that would result in a change in the design or management practices.

Previously, we referred to these assessments as "alternatives assessment," but we are proposing to use the term "multi-criteria alternatives analysis" to align with the language used in GISTM [3.2].

4.X.3.2. (Critical Requirement)

For each <u>critical facility</u>, a risk assessment is carried out to evaluate the risks to human rights and the health and safety of communities and the environment from all <u>credible failure modes</u> identified in 4.X.1.4. Risk assessments:

- a. Are carried out and documented by a multi-disciplinary team using a credible methodology;
- b. Identify credible failure modes for which design elements and critical controls must be prioritized, and a rationale is documented; and
- c. Are updated every three years or sooner (e.g., if there proposed changes in the design or operation of facilities, or changes in operational, social, environmental, or local context that have the potential to increase the probability or severity of consequences of any identified risk).

NOTE FOR 4.X.3.2: REVISED. Requirement 4.1.4.1 in the 2018 Mining Standard included a risk assessment to evaluate risks to health, safety and the environment related to physical and chemical risks at facilities, and it was a critical requirement (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

GISTM [10.1] includes a requirement for risk assessment. This proposed revised requirement combines elements of the two requirements, and some additional detail.

4.X.3.3. A summary of risks assessment findings for <u>critical facilities</u> is made public, and <u>stakeholders</u> are provided with the opportunity to provide input on the findings.

NOTE FOR 4.X.3.3: NEW. We have added this based on GISTM [15.1], which includes a requirement to make the risk assessment summary public. We are proposing that stakeholders also have the opportunity to provide input to the entity on the risk assessment findings to promote continued dialogue.

4.X.3.4. Initial facility designs and the refinement of the designs of critical facilities:

- a. Are informed by the outcome of the multi-criteria alternatives analysis and the risk assessment;
 - i. Use design criteria that are appropriate to minimize risk to as low as reasonably practicable for:

- ii. All credible failure modes;566 and
- b. All phases of construction over the facility life cycle (e.g., start-up, partial raises, interim configurations, final raise, and all closures stages);
- c. Proposed and existing facilities use the flood, seismic and slope stability design criteria (see <u>Tables 4.X-2</u> <u>through 4.X-5</u>) that are consistent with the facility's <u>failure consequence classification</u>, or, if not originally applied at existing facilities entities demonstrate that a plan to meet the applicable criteria has been developed, has undergone independent review and is being implemented; and
- d. The designs and design criteria are publicly available.

NOTE FOR 4.X.3.4: NEW. Sub-requirements 4.X.3.2.a, b and e align with GISTM [5.1, 5.4 and 15.1].

We are proposing to use the GISTM's definition of As Low As Reasonably Practicable

All reasonable measures are taken with respect to 'tolerable' or acceptable risks to reduce them even further until the cost and other impacts of additional risk reduction are grossly disproportionate to the benefit.

CONSULTATION QUESTIONS 4.X-2

Background: In 4.X.3.2.c, we are proposing design criteria (our <u>Tables 4.2, 4.3, 4.4 and 4.5</u>) that are not fully in alignment with GISTM. The criteria in our proposed tables are from the Canadian Dam Association (2014). It is not clear where GISTM values (in Tables 2 and 3 in that standard) were drawn from, and there are no slope stability factors of safety included in GISTM.

Question: Do you agree that IRMA's best practice design criteria follow the well-established Canada Dam Association criteria? If not, why not? Or are there other design criteria that have emerged as best practice criteria? Do you agree with the inclusion of slope stability criteria? If not, why not?

CONSULTATION QUESTIONS 4.X-3

Background: We are proposing that design specifications related to flood, seismic and slope stability need to be met at all proposed and existing critical facilities because of the potential loss of life if these facilities were to fail. However, for existing facilities that did not originally use the design criteria, we are allowing time for an upgrade plan to be developed, undergo independent review, and time for implementation.

This is a slightly different approach than GISTM, which allows that new facilities can, over time, upgrade to meet criteria for higher consequence classifications [4.2.C]. Existing facilities are expected to apply appropriate design criteria except for aspects where "the Engineer of Record (EOR), with review by the ITRB or a senior independent technical reviewer, determines that the upgrade of an existing tailings facility is not viable or cannot be retroactively applied. In this case, the Accountable Executive shall approve and document the implementation of measures to reduce both the probability and the consequences of a tailings facility failure in order to reduce the risk to a level as low as reasonably practicable (ALARP)." [GISTM 4.7]

Question: As with GISTM, should IRMA make additional allowances for existing facilities if they can demonstrate that upgrade to the best practice design criteria is not viable or cannot be retroactively applied? If so, then like GISTM, should IRMA require demonstration that upgrades still take place to minimize risk to as low as reasonably practicable (ALARP) at those sites?

Perhaps if sites do not meet all of the design criteria but can demonstrate that risks have been reduced to ALARP, IRMA could cap a site's rating for this requirement at substantially meets (i.e., they would never be able to fully meet the requirement), so that the sites that have implemented best design practices are able to distinguish themselves. Is that an approach that you would support?

⁵⁶⁶ Credible failure modes may relate to the facility structure, its foundation, abutments, reservoir (tailings deposit and pond), reservoir rim and appurtenant structures.

4.X.4. Management of Physical Stability Risks at Critical Facilities

NOTE FOR 4.X.4: This section requires governance and management accountability structures that ensures responsibility begins at the site level for decisions with regard to existing and/or proposed critical facilities but it ultimately lies with the highest levels of the company. It also requires that for each existing and/or proposed critical facility, the entity develop and implement an Operation, Maintenance and Surveillance (OMS) manual (or its equivalent) to ensure best practices are maintained during the operational phase of critical facilities.

4.X.4.1. For sites that have one or more critical facilities, a system of accountability, responsibility and personnel management is in place that:

- a. Clearly defines and documents the <u>entity</u> personnel, executives, and members of the entity's Board of Directors that are accountable for decisions and actions related to the management and safety of critical facilities, and clearly defines and documents the roles, responsibilities, and lines of communication between those involved in the management of those facilities. This information is shared with all personnel who have a role in the facility's management, and if requested, shared publicly;
- Identifies one or more accountable executive(s) to be accountable for implementation of system to manage critical facilities in a manner that minimizes risks to human rights and the health and safety of the environment and communities;
- c. Identifies appropriate qualifications and experience requirements for all personnel with safety-critical roles in the design, operation, and management of critical facilities, and ensures that incumbents of these roles have the identified qualifications and experience;
- d. Has succession plans in place for key personnel such as the Engineer of Record (EOR) and the Responsible Critical Facility Engineer (RCFE) or equivalent;
- e. Provides mechanisms to receive and incorporate workers' experience-based knowledge into planning, design, and operations for all phases of the critical facility life cycle;
- f. Recognizes, rewards, and protects from retaliation, workers, employees, and <u>contractors</u> who report problems or identify opportunities for improving <u>critical facility</u> safety or management, provides a timely response to <u>whistleblower</u> complaints, and communicates actions taken and their outcomes to the accountable executive;⁵⁶⁷ and
- g. Includes mechanisms such that incentive payments or performance reviews for personnel with some level of responsibility for the safety or management of the critical facility, that are based, at least in part, on public safety and the integrity of the facility.

NOTE FOR 4.X.4.1: NEW. IRMA's Expert Working Group on waste management recommended that we add more requirements relating to accountability, so we are proposing these, which have been adapted from GISTM [various requirements].

The definition for Responsible Critical Facility Engineer (RCFE) in 4.X.4.1 has been adapted from GISTM's definition of 'Responsible Tailings Facility Engineer' to make it applicable to the engineer responsible for any critical facility.

The proposed **RCFE** definition is:

An engineer appointed by the entity to be responsible for the critical facility. The RCFE must be available at all times during construction, operations and closure. The RCFE has clearly defined, delegated responsibility for management of the critical facility and has appropriate qualifications and experience compatible with the level of complexity of the critical facility. The RCFE is responsible for the scope of work and budget requirements for the critical facility, including risk management. The RCFE may delegate specific tasks and responsibilities for aspects of critical facility management to qualified personnel but not accountability.

⁵⁶⁷ Chapter 3.1, requirement 3.1.5.2, also requires that workers have whistleblower protection (i.e., non-retaliation for reporting issues such as an employee that is willfully ignoring safety standards). But that requirement does not address rewards or recognition for such reporting.

4.X.4.2. For each critical facility, an operations, maintenance, and surveillance (OMS) manual (or equivalent) is developed, documented and implemented by competent professionals that includes:

- a. A risk management plan (or its equivalent) that:568
 - i. Outlines <u>critical controls</u> to minimize the probability and potential consequences of a facility failure to as low as reasonably practicable (ALARP);
 - ii. Includes other <u>risk controls</u> and actions necessary for safe operation of facilities, including use of <u>best</u> available/applicable practices and best available technologies (see <u>Annex 4.X-A</u>);
 - iii. Documents specific and measurable performance objectives, indicators, criteria, and performance parameters for critical controls and risk controls;
 - iv. Includes a trigger action response plan (TARP), or its equivalent, that describes pre-defined trigger levels for performance criteria, and actions to be taken if trigger levels are exceeded, i.e., if performance is outside of expected range;
 - v. Assigns implementation of <u>controls</u> and actions, or oversight of implementation, to responsible staff;⁵⁶⁹
 - vi. Includes an implementation schedule; and
 - vii. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan;
- b. A maintenance program that includes routine, predictive and event-driven maintenance to ensure that all relevant parameters (e.g., all civil, mechanical, electrical and instrumentation components of critical facilities) are maintained in accordance with performance criteria, <u>host country law</u> and sound operating practices;
- c. A comprehensive and integrated performance surveillance/monitoring program that:
 - i. Includes a procedure for regular inspections of facilities that includes monitoring of performance objectives, indicators, criteria, and performance parameters (see 4.X.4.1.a.iii), and recording and evaluating the data at appropriate frequencies to confirm that existing controls and strategies remain effective to manage risk throughout the facility life cycle;
 - ii. Includes a procedure for a comprehensive and integrated engineering monitoring system that is appropriate for verifying design assumptions and for monitoring potential failure modes, including full implementation of the observational method for non-brittle failure modes;
 - iii. Includes a procedure for analysis of technical monitoring data at the frequency recommended by the <u>EOR</u>, and assessment of the performance of the facility, clearly identifying evidence on any deviations from the expected performance and any deterioration of the performance over time. The procedure shall also include promptly submitting evidence on deviations to the EOR for review, promptly addressing performance outside the expected ranges through TARPs or critical controls, and updating the risk assessment and design, if required; and
 - iv. Includes a procedure for review and approval of technical monitoring reports by the EOR and responsible critical facility engineer (RCFE), and reporting of the surveillance program results to the entity annually.

NOTE FOR 4.X.4.2: REVISED. An operations, maintenance, and surveillance manual was required in 4.1.5.5 in the 2018 Mining Standard.

Although a specific requirement for risk management plan was not explicit in the 2018 Mining Standard, requirement 4.1.5.5 did require risk management strategies, critical controls and risk controls, and TARP-like expectations. The additional risk management plan expectations in 4.X.4.2.a are consistent with other IRMA chapters that have management plans.

⁵⁶⁸ This may be integrated with the OMS manual in 4.1.4.3.

⁵⁶⁹ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

More detail has been added to the surveillance/monitoring expectations in 4.X.4.2.c based on similar expectation in GISTM [7.2, 7.4, 7.5].

4.X.4.3. Personnel involved in the operations of each critical facility:

- a. Have access to the OMS manual; and
- b. Receive training on the OMS manual.

NOTE FOR 4.X.4.3: NEW. This requirement aligns with GISTM [6.4], although we have not specified who trains the personnel (in GISTM it is the Responsible Tailings Facility Engineer).

4.X.4.4. The OMS manual is reviewed annually, and <u>critical controls</u>, <u>risk controls</u> and OMS programs are updated as necessary, e.g., if monitoring/surveillance (see 4.X.4.2.c) reveals that performance criteria are not being met, or other information reveals that <u>critical facilities</u> are not being effectively operated or maintained in a manner that protects human health and safety and prevents or otherwise minimizes harm to the environment and communities.

NOTE FOR 4.X.4.4: REVISED. This was requirement 4.1.5.7 in the 2018 Mining Standard but referred only to the OMS. We have added that the risk management plan also be reviewed and updated if management measures are not being effective. This aligns with expectations in many other IRMA chapters.

4.X.4.5. The entity implements a change management process that includes:

- a. A system to track and document changes in the design, construction, operation or monitoring of critical facilities over their life cycles;
- b. Periodic review and assessment by the <u>EOR</u> of the <u>cumulative impact</u> of changes on the risk level of asconstructed <u>critical facilities</u>, and, if necessary, recommended measures to reduce the level of risk to <u>ALARP</u> and updates to the design, OMS manual and technical monitoring program; and
- c. Review of the EOR's assessment and recommendations by the <u>accountable executive</u>, and documentation of a rationale for why any EOR recommendations will not be implemented.

NOTE FOR 4.X.4.5: NEW. This change management requirement is based on GISTM [6.5]. We are proposing to add it to highlight the importance of documenting, evaluating and responding appropriately to changes and deviations from planned designs and actions.

4.X.5. Critical Facility Oversight and Review Processes

NOTE FOR 4.X.5: This is a new criterion, specifically developed to consolidate all oversight, quality control, and review requirements in one place (other than those contained in the surveillance requirements in 4.1.5.1.d).

It includes oversight by the Engineer of Record and through the use of competent independent reviewers throughout the facility life-cycle. There are also internal review and reporting requirements.

4.X.5.1. The entity implements a program to oversee the quality of engineering work for all critical facilities, including:

- a. Review and sign-off on construction records reports by the EOR and the RCFE; and
- b. Quality control, quality assurance and <u>construction versus design intent verification</u>, to ensure that the design intent has been implemented and is still being met if the site conditions vary from the design assumptions.

NOTE FOR 4.X.5.1: NEW. Requirement 4.X.5.1, and has been included to highlight the importance of oversight of engineering and construction as a means of improving the safety of critical facilities. It aligns with GISTM [6.2 and 6.3].

4 X.5.2. Independent reviews take place for all critical facilities as follows:

- a. For critical facilities with a failure consequence classification of very high or extreme, the entity appoints an independent review board (IRB) consisting of three or more members, and for all other critical facilities an IRB or a senior independent technical reviewer carries out the reviews;
- b. Independent reviews occur throughout the project/operation life cycle (e.g., during planning, siting, design, construction, operation, maintenance, management and monitoring, closure, and post-closure), and include review of:
 - i. <u>Credible failure mode</u> assessments, <u>breach analyses</u>, evaluations to determine <u>failure consequence</u> <u>classifications</u>, and geotechnical assessments;
 - ii. Risk assessments and identification of risks requiring critical controls (see 4.X.3.2);
 - iii. Performance reviews of facility construction, annually, or more frequently, if required;
 - iv. Proposed facility sites and designs to ensure that the proposed sites and designs incorporate the outcomes of the <u>multi-criteria alternatives analysis</u> (see 4.X.3.1);
 - v. Design basis reports and construction record reports;
 - vi. Proposed updates to facility designs;
 - vii. Facility water balances and mass balances;
 - viii. Surveillance/monitoring reports; and
 - ix. Documentation related to facility performance and risk management.
- c. IRBs and/or the senior independent technical reviewers report to the operation's general manager and an accountable executive; and
- d. The entity reviews commentary, advice and/or recommendations from all independent reviews and: ⁵⁷⁰
 - i. Develops an action plan with a schedule to implement improvements based on the advice and recommendations;
 - ii. Documents a rationale for any advice or recommendations that will not be implemented;
 - iii. Tracks progress of the action plan's implementation; and
 - iv. Shares this information with the accountable executive.

NOTE FOR 4.X.5.2: Requirement 4.X.5.2.a was 4.1.6.2 in the 2018 Mining Standard; 4.X.5.2.b aligns with 4.1.6.1, 4.X.5.2.c aligns with 4.1.6.4, and 4.X.5.2.d aligns with 4.1.6.5.

4.X.5.3. An independent dam safety review (DSR) or equivalent safety review of technical, operational and governance aspects of critical facilities is conducted as follows:

- a. Reviews take place at least every five years for critical facilities with very high or extreme <u>failure</u> consequence classifications, more frequently if recommended by the <u>IRB</u>, and at least every 10 years for all other <u>critical facilities</u>;
- b. Reviews draw attention to any deficiencies or non-conformities in information (e.g., identification of <u>hazards</u>, failure modes, geotechnical and hydrotechnical assessments, or the inputs or outcomes of failure consequence classifications), in facility construction, operation, maintenance, surveillance, emergency preparedness and response plans, responses to incidents, and governance (e.g., roles, responsibilities, authorities and activities are clearly assigned, peresonnel are competent and trained);
- c. Every review of a particular facility is carried out by a different independent contractor; and
- d. Commentary, advice, and recommendations from the DSR review are shared with the accountable executive.

⁵⁷⁰ All of this information, as well as the independent review reports, shall be made available to IRMA auditors. Non-disclosure agreements will be signed by IRMA auditors, but even so, confidential business information may be withheld as long as the company provides to auditors a description of the confidential information or materials that are being withheld and an explanation of the reasons for classifying the information as confidential; and if a part of a document is confidential, only that confidential part shall be redacted, allowing for the release of non-confidential information. (See Chapter 1.1 (Legal Compliance), requirement 1.1.4.1).

NOTE FOR 4.X.5.3: REVISED. 4.1.3.3.h in the 2018 Mining Standard required an annual dam safety inspection report. This requirement adds more detail based on GISTM [10.5], and the elements in 4.X.5.2.b are drawn from a review of dam safety checklists.⁵⁷¹

We are proposing to define independent dam safety review as:

Independent review of the safety of a critical facility covering technical, operational and governance aspects, conducted by an independent technical specialist according to established best practices. It is conducted at intervals based on the failure consequence classification and the complexity of its condition or performance. It is regulatory requirement in many jurisdictions. (Adapted from GISTM)

4.X.5.4. All IRB members, senior independent technical reviewers, and DSR contractors:

- a. Are objective, third-party, <u>competent professionals</u> with at least 15 years of experience in the specific area of review (e.g., facility design, operations, closure, environmental or social aspects or other specific topic of concern); and
- b. Have attested in writing that they follow best practices to avoid conflicts of interest.

NOTE FOR 4.X.5.4: REVISED. Requirement 4.X.5.4.a is aligned with 4.1.6.5 in the 2018 Mining Standard, but we have added that competent professionals must have at least 15 years of experience in the topics of concern, which aligns with GISTM; and 4.X.5.4.b aligns with GISTM [8.7 and 10.5].

4.X.5.5. The entity implements and documents an annual management review process to facilitate continual improvement in the management of <u>critical facilities</u>. The process includes:

- a. Review of:
 - i. The status of continual improvement actions identified in the previous review, if any;
 - ii. The current effectiveness of critical control and risk control measures in 4.X.4.2.a;
 - iii. Maintenance and surveillance/monitoring data, and the current effectiveness of OMS manual and surveillance/monitoring procedures in 4.X.4.2);
 - iv. Any regulatory non-compliance issues, <u>unwanted events</u>, <u>root cause analyses</u>, and corrective actions since the previous review;
 - Any commentary, advice, and recommendations from the <u>EOR</u>, <u>IRB</u>, <u>senior independent technical</u> <u>reviewer</u> or <u>DSR</u> contractor since the previous management review, and responses taken by the entity;
 - vi. Whether or not critical facilities continue to meet their design intent, including any deviations from the design or expected conditions since the previous management review;
 - vii. Any changes in facility operating conditions (e.g., production rates), social, environmental, or local economic context, legal requirements, industry best practice or emerging technologies, that may have a bearing on the critical facilities;
- b. A documented summary of significant issues related to the overall performance of the critical facilities based on the information reviewed and discussed, and recommended actions for improvement;
- c. Reporting of results to an accountable executive.

NOTE FOR 4.X.5.5: REVISED. This was 4.1.5.8. in the 2018 Mining Standard.

Previously, this requirement referred to aligning "with the steps outlined in the Mining Association of Canada's Tailings Management Protocol or a similar framework." We have revised it to include more detail, so that it can be audited in a consistent manner.

⁵⁷¹ For example, see: Government of British Columbia. 2015. "Dam Safety Review Check Sheet." <u>https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/dam-safety/dsr_check_sheet_-_september_2015.pdf</u>

Banque Ouest Africaine de Développement. 2014. Dam Safety Reviews manual. <u>https://www.boad.org/wp-content/uploads/2016/12/boad_dam_safety_reviews_manual.pdf</u>

4.X.6. Reporting and Disclosure

NOTE FOR 4.X.6: This section address reporting to stakeholders on the management of physical stability, and disclosure requirements.

4.X.6.1. The entity publishes and updates plain language summaries for the following information on critical facilities, ⁵⁷² and any exclusion of information is documented and approved by the accountable executive:

- a. An up-to-date description of all critical facilities, their failure consequence classifications and the entity's rationale for the classification;
- b. The rationale for the basis of the facility design and site selection;
- c. Risk assessments;
- d. Planned and implemented mitigation measures; and
- e. Results of surveillance/monitoring program.

NOTE FOR 4.X.6.1: NEW. This requirement partially aligns with GISTM [15.1].

4.X.6.2. At least once a year, the entity meets with relevant stakeholders to:573

- a. Report on critical facility management, surveillance/monitoring and findings from independent reviews;⁵⁷⁴ and
- b. Seek feedback on the entity's management approach to critical facilities.

NOTE FOR 4.X.6.2: REVISED. Some of this content (i.e., feedback on management approaches) was included in requirement 4.1.7.1 and 4.1.7.4 in the 2018 Mining Standard. It has been revised to include ongoing engagement throughout the facility life cycle as per GISTM [1.3].

4.X.6.3. To facilitate effective <u>stakeholder</u> engagement, the <u>entity</u> offers to provide assistance to stakeholders from <u>affected communities</u> to select and hire independent experts to advise them on physical stability risks and the management of <u>critical facilities</u>.

NOTE FOR 4.X.6.3: NEW. This proposed requirement came out of discussions in IRMA's expert working group on mine waste management. The management of physical stability risks related to wastes and materials such as tailings, waste rock or brines involve many technical issues and jargon that most community members cannot immediately understand. Communities often lack funds to hire independent experts to advise them on issues such as risks related to tailings dams and other complex technical topics, which prevents their meaningful engagement on tailings and waste issues, which are often the primary mine-related concern for these communities.

The IRMA Standard has similar requirements in other chapters where legal or technical advice are critical for ensuring that communities' rights and interests can be upheld (e.g., see Chapter 2.4 on resettlement, or Chapter 2.2 on FPIC, Chapter 4.2 on water), and aligns with requirement 1.2.3.1 in Chapter 1.2 related to strengthening stakeholders' capacity to engage. We are proposing that access to independent experts is the most reasonable means of ensuring meaningful and effective stakeholder engagement on the physical stability issues (rather than, for example, trainings or other types of capacity building).

This requirement also aligns with GISTM requirement [1.3] to "Demonstrate that project-affected people are meaningfully engaged throughout the tailings facility life cycle in building the knowledge base and in decisions that may have a bearing on public safety and the integrity of the tailings facility."

GISTM's definition of meaningful engagement includes that, "Meaningful engagement involves measures to overcome structural and practical barriers to the participation of diverse and vulnerable groups of people.

⁵⁷² Including proposed facilities for which the regulatory authorization process has commenced, and operating facilities.

⁵⁷³ Relevant stakeholders would include, at minimum, stakeholders who may be affected by a physical stability failure at a critical facility.

⁵⁷⁴ E.g., reviews carried out by IRB and/or independent senior technical reviewers, as well as independent dam safety reviews.

Strategies for addressing barriers must be appropriate to the context and the stakeholders involved, and may include, for example, logistics and other support to enable participation."

NOTES

This revised chapter has incorporated elements from the Global Industry Standard for Tailings Management (GISTM),⁵⁷⁵ as well as elements of the Mining Association of Canada's (MAC) 2017 Tailings Management Protocol and Guide to the Management of Tailings Facilities (Tailings Guide).⁵⁷⁶ The IRMA Standard, however, goes beyond both of those resources, as its requirements apply to tailings facilities and other large mine waste facilities such as waste rock dumps or heap leach facilities (which are used to protect human health, safety, the environment and communities in the short- and long-term.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Accountable Executive

One or more executive (s) who is/are directly answerable to the CEO on matters related to this chapter, communicates with the Board of Directors, and who is accountable for the safety of critical facilities and for minimizing the social and environmental consequences of a potential critical facility failure. Accountable executive(s) may delegate responsibilities but not accountability.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

As Low As Reasonably Practicable (ALARP)

All reasonable measures are taken with respect to 'tolerable' or acceptable risks to reduce them even further until the cost and other impacts of additional risk reduction are grossly disproportionate to the benefit.

Source: Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Breach Analysis

A study that assumes a failure of a critical facility and estimates its impact. Breach analyses must be based on credible failure modes. The results should determine the physical area impacted by a potential failure, flow arrival times, depth and velocities, duration of flooding, and depth of material deposition. The breach analysis is based on scenarios which are not connected to probability of occurrence. It is primarily used to inform emergency preparedness and response planning and the consequence of failure classification. The classification is then used to inform the external loading component of the design criteria.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

⁵⁷⁵ Global Tailings Review. 2020. Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-</u>content/uploads/2020/08/global-industry-standard_EN.pdf

⁵⁷⁶ Mining Association of Canada. 2017. Toward Sustainable Mining (TSM) Tailings Management Protocol. <u>http://mining.ca/towards-sustainable-mining/protocols-frameworks/tailings-management-protocol</u>; and Mining Association of Canada. 2017. A Guide to the Management of Tailings Facilities (Third Ed). <u>http://mining.ca/documents/guide-management-tailings-facilities-third-edition</u>

Brine

Groundwater, surface water or sea water that contains valuable dissolved minerals at sufficient concentrations to be economically extractable.

Construction Versus Design Intent Verification

Intended to ensure the design intent is implemented and still being met if the site conditions vary from the design assumptions. The CDIV identifies any discrepancies between the field conditions and the design assumptions, such that the design can be adjusted to account for the actual field conditions.

Source: Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Contamination

The presence of a substance where it should not be or at concentrations above background, but not necessarily high enough to have an adverse impact on ecosystem and/or human health. See also 'Pollution'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Credible Failure Mode

Refers to technically feasible failure mechanisms given the materials present in a facility's structure and its foundation, the properties of these materials, the configuration of the structure, drainage conditions and surface water control at the facility, throughout its life cycle. Credible failure modes can and do typically vary during the life cycle of a facility as the conditions vary. A facility that is appropriately designed and operated considers all of these credible failure modes and includes sufficient resilience against each. Different failure modes will result in different failure scenarios. Credible catastrophic failure modes do not exist for all facilities. The term 'credible failure mode' is not associated with a probability of this event occurring and having credible failure modes is not a reflection of facility safety.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Critical Facility

A facility that has a high, very high, or extreme failure consequence classification, or a significant consequence classification that includes potential loss of life. See also 'Non-Critical Facility'.

Cultural Heritage

Refers to (i) tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles. Source: Adapted from IFC Performance Standard 8.

Design Basis Report

Provides the basis for the design, operation, construction, monitoring and risk management of a critical facility.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Discharge

A permitted release of treated mine-influenced water or compliant water to surface water, groundwater, or the land. See also 'Release'.

Engineer of Record (EOR)

The qualified engineer responsible for confirming that a facility is designed, constructed, and decommissioned with appropriate concern for integrity of the facility, and that it aligns with and meets applicable regulations, statutes, guidelines, codes, and standards. The engineer of record may delegate responsibility but not accountability.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Failure Consequence Classification

A rating or ranking (e.g., low, significant, high, very high, extreme) based on losses, damages or impacts on downstream populations, the environment, the economy, cultural values, property and infrastructure if there were to be a loss of stability or integrity in a facility or its appurtenances that leads to an uncontrolled release of all or part of its contents. Failure consequence classifications are carried out for all credible failure modes.

Source: Adapted from various, including British Columbia Government. 2017. Downstream Consequence of Failure Classification Interpretation Guideline. <u>https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/dam-safety/con_class_guidelines_for_owners-2017.pdf</u> and Global Industry Standard on Tailings Management. https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf

Hazard

A potentially dangerous phenomenon, substance, human activity or condition. It may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Source: International Federation of Red Cross and Red Crescent Societies. https://www.ifrc.org/document/hazard-definitions

Independent Dam Safety Review (DSR)

Independent review of the safety of a critical facility covering technical, operational and governance aspects, conducted by an independent technical specialist according to established best practices. It is conducted at intervals based on the failure consequence classification and the complexity of its condition or performance. It is regulatory requirement in many jurisdictions.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Independent Review

Independent, objective, expert commentary, advice, and, potentially, recommendations to assist in identifying, understanding, and managing risks associated with critical facilities.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Independent Review Board (IRB)

A board of at least three members that provides independent technical review of the design, construction, operation, closure and management of critical facilities. The independent reviewers are third-parties who are not, and have not been directly involved with the design or operation of the particular critical facility. The expertise of the ITB members reflects the range of issues relevant to the facility and its context and the complexity of these issues.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Independent Senior Technical Reviewer

A professional who is either an in-house employee or an external party with in-depth knowledge and at least 15 years' experience in the specific area of the review requirements, e.g., tailings design, operations and closure, environmental and social aspects or any other specific topic of concern.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Non-Critical Facility

A facility that, if a physical stability failure of the facility were to occur, would not lead to the loss of life, and would have only low or significant impacts that could be mitigated within a short period of time (e.g., 1 - 5 years), at a reasonable cost (e.g., <10 Million \$US). See also 'Critical Facility'.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Preliminary Design

A design performed to a level of detail sufficient to determine the differences between viable designs that adopt different external loading design criteria in terms of required footprints, volumes and drainage requirements.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Release

An unintentional, unpermitted emission of mine-influenced water to the environment. See also 'Discharge'.

Responsible Critical Facility Engineer (RCFE)

An engineer appointed by the entity to be responsible for the critical facility. The RCFE must be available at all times during construction, operations and closure. The RCFE has clearly defined, delegated responsibility for management of the critical facility and has appropriate qualifications and experience compatible with the level of complexity of the critical facility. The RCFE is responsible for the scope of work and budget requirements for the critical facility, including risk management. The RCFE may delegate specific tasks and responsibilities for aspects of critical facility management to qualified personnel but not accountability.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Root Cause Analysis

Root cause analysis seeks to identify the primary cause of a problem that allowed a NC to occur. By identifying the root cause, a NC can be effectively addressed and recurrence can be avoided.

Source: Adapted from Aluminum Stewardship Initiative Glossary. <u>https://aluminium-stewardship.org/wp-content/uploads/2022/05/ASI-Glossary-V1-May2022.pdf</u>

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Trigger Action Response Plan (TARP)

A tool to manage risk controls, including critical controls. TARPs provide pre-defined trigger levels for performance criteria that are based on the risk controls and critical controls of the critical facility. The trigger levels are developed based on the performance objectives and risk management plan for the critical facility. TARPs describe actions to be taken if trigger levels are exceeded (performance is outside the normal range), to prevent a loss of control. A range of actions is predefined, based on the magnitude of the exceedance of the trigger level.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

Unwanted Event

A situation or condition where there may be or is a loss of control of a hazard that leads to harm.

Source: Adapted from the Government of Western Australia, Department of Mines, Industry Regulation and Safety. https://www.dmp.wa.gov.au/Safety/What-is-a-hazard-and-what-is-4721.aspx

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Best Available Technology (BAT)

Site-specific combination of technologies and techniques that are economically achievable and that most effectively reduce risks (e.g., physical, geochemical, ecological, social, financial, and reputational) to an acceptable level during all stages of operation and closure, and support an environmentally and economically viable mining operation.

Source: Adapted from Mining Association of Canada. 2017. A Guide to the Management of Tailings Facilities (3rd Ed). http://mining.ca/documents/guide-management-tailings-facilities-third-edition

Best Available/Applicable Practice (BAP)

Encompasses management systems, operational procedures, techniques and methodologies that, through experience and demonstrated application, have proven to reliably manage risk and achieve performance objectives in a technically sound and economically efficient manner. BAP is an operating philosophy that embraces continual improvement and operational excellence, and which is applied consistently throughout the life of a facility, including the post-closure period.

Source: Adapted from Mining Association of Canada. 2017. A Guide to the Management of Tailings Facilities (3rd Ed). <u>http://mining.ca/documents/guide-management-tailings-facilities-third-edition</u>

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Source: Adapted from South Africa Dept. of Env. Affairs and Tourism. Stakeholder Engagement.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Source: Adapted from South Africa Department of Environmental Affairs and Tourism. Stakeholder Engagement.

Control

An act, object (engineered), or system (combination of act and object) intended to prevent or mitigate an unwanted event.

Source: ICMM. 2015. Health and Safety Critical Control Management: Good Practice Guide.

Critical Control

An action, object (engineered) or system (combination of action and object) put in place to prevent or reduce the likelihood of an unwanted event, or to minimize or mitigate the negative consequences if an unwanted event occurs, in particular for high-consequence risks.

Sources: Adapted from ICMM. 2015. *Health and Safety Critical Control Management: Good Practice Guide, and Mining Association of Canada*. 2017. A Guide to the Management of Tailings Facilities (3rd Ed).

Cumulative Impacts

Additive, synergistic, interactive or nonlinear outcomes of multiple development or disturbance events that aggregate over time and space. Examples of cumulative impacts (or effects) may include reduction of water flows in a watershed due to multiple withdrawals; increases in sediment loads to a watershed over time; interference with migratory routes or wildlife movement; or more traffic congestion and accidents due to increases in vehicular traffic on community roadways.

Source: Adapted from International Association for Impact Assessment. 2005. *Biodiversity Impact Assessment*. Special Publication Series No. 3, with examples from IFC. 2012. *Performance Standard 1*, page 4, footnote 16.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Source: United Nations Environment Programme, Convention on Biological Diversity 1992, Art. 2. Available at https://www.cbd.int/convention/

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Heap Leach/Heap Leaching

An industrial mining process to extract precious metals, copper, and other compounds from ore. Typically, mined ore is crushed and heaped on an impermeable leach pad, and chemicals (reagents) are applied that percolate through the ore and absorb specific minerals and metals. The solution is collected and target metals are recovered from the solution.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact.

Multi-Criteria Alternatives Analysis

Generally, a process to identify and objectively and rigorously assess the potential impacts and benefits (including environmental, technical and socio-economic aspects) of different options so that an informed decision regarding a final option can be made. For IRMA purposes, it refers to a process to assess options for locating tailings or other waste facilities, and for selecting the site-specific best available technologies and practices for managing wastes throughout the life cycle. Technologies and practices may need to be reassessed during different stages of the life cycle, for example if there is a proposed expansion that requires additional waste storage and processing.

Sources: Adapted from: Environment Canada, 2016. *Guidelines for the Assessment of Alternatives for Mine Waste Disposal*, Chapter 2; and Mining Association of Canada. 2017. *Guide to the Management of Tailings Facilities*.

REVISED. Changed term from 'Alternatives Assessment' to 'Multi-Criteria Alternatives Analysis' to align with the Global Industry Standard for Tailings Management.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Practicable

Practicable means giving equal weight to environmental, social, and economic benefits and costs. This is not a technical definition. It is the discussion between the affected parties on the balance between these interrelated costs and benefits that is important.

Process Water

Water that is used to process ore using hydrometallurgical extraction techniques. It commonly contains process chemicals.

Risk Control

An action, object (engineered), or system (combination of action and object) put in place to prevent or reduce the likelihood of an unwanted event, or to minimize or mitigate the negative consequences if an unwanted event occurs.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Tailings

The waste stream resulting from milling and mineral concentration processes that are applied to ground ore (i.e., washing, concentration, and/or treatment). Tailings are typically sand to clay-sized materials that are considered too low in mineral values to be treated further. They are usually discharged in slurry form to a final storage area commonly referred to as a tailings storage facility (TSF) or tailings management facility (TMF).

Waste Rock

Barren or mineralized rock that has been mined but is of insufficient value to warrant treatment and, therefore, is removed ahead of the metallurgical processes and disposed of on site. The term is usually used for wastes that are larger than sand-sized material and can be up to large boulders in size; also referred to as waste rock dump or rock pile.

Water Balance

An accounting of the inflow to, outflow from, transfers and storage changes of water over a fixed period. Source: Adapted from *Global Acid Rock Drainage Guide* Glossary.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

ANNEXES AND TABLES

ANNEX 4.X-A: Best Practices for the Management of Physical Stability

NOTE FON ANNEX 4.X-A: The purpose of this proposed annex is to create a resource of best practices that will help to ensure physical stability of facilities at mines and mineral processing operations. IRMA is proposing the addition of such an annex because many jurisdictions lack the regulatory requirements or guidelines and professional personnel to ensure the stability of facilities. Thus, without such guidance, it will be difficult for auditors, who cannot be experts on every type of facility associated with a mining or mineral processing, to confidently or consistently assess whether the mitigation measures being proposed and implemented by sites are consistent with best practices.

The intention is that auditors will review information from sites as per requirement <u>4.X.2.1.a</u> and that entities could either demonstrate alignment with the best practices in this annex or provide auditors with a rationale as to why those practices are not appropriate for their situation or provide evidence that alternative approaches are as effective at managing physical stability (e.g., existing regulatory requirements may be sufficient, or there may be technical or other valid site- or facility-specific reasons to utilize alternatives).

In Annex 4.X-A, Sections 1 and 2 ('Stability analysis' and 'Permanent stormwater conveyances, ditches, channels and diversions') are intended to be relevant for all applicable facilities. Other sections of 4.X Annex 1 are facility specific.

The practices contained in the sections below were derived from preliminary research, but as you will see much more research needs to occur to identify current best practices for all facilities. We recognize that some guidance is old, and there may be other jurisdictions with more recent guidance that may be better than what we have proposed, and encourage interested stakeholders with technical expertise to participate in this review and provide input into the development of this annex.

CONSULTATION QUESTION 4.X-3 (repeated from above): Do you agree with the proposal to create guidance to better inform auditors' assessments? If not, how do you suggest auditors determine whether or not the measures at a site are sufficient to prevent or mitigate physical instability?

If you agree with the approach, please indicate if you agree with the proposed best practices and technologies, and/or suggest alternative practices and technologies, including for facilities not identified in the draft Annex.

Would you be interested in being part of a working group to help work on this guidance? If so, please contact IRMA (<u>comments@responsiblemining.net</u>) and we will be in touch as we move forward with this process.

Contents

- 1. Stability Analysis
- 2. Permanent stormwater conveyances, ditches, channels and diversions
- 3. Access roads and other project site and/or ancillary features
- 4. Surface mines including pit highwalls and other associated features
- 5. Underground mine subsidence
- 6. Subsidence from underground fluid extraction
- 7. Facilities storing/stockpiling wastes from underground and surface mines
- 8. Waste storage facilities associated with mineral processing, chemical processing and waste remediation

9. Water reservoirs

1. Stability analysis

Stability analysis is conducted for all relevant facilities and includes evaluation for static and seismic induced liquefaction.

- Facilities are designed for an operational factor of safety of 1.1 or greater and long-term static factor of safety of 1.3 or greater. Facilities are also designed for a factor of safety of 1.1 or greater under pseudostatic analysis.⁵⁷⁷
- A minimum static factor of safety of 1.3 for impoundments embankments will be maintained. 578

2. Permanent stormwater conveyances, ditches, channels and diversions

To prevent stability failures:

- Design to convey the peak flow generated by the 200-year return interval storm event.⁵⁷⁹
- The appropriate design storm duration is selected based on the maximum peak flow generated using generally accepted flood routing methods. This methodology requires access to accurate and site-analogous storm event hydrographs which are not available in some regions. However, given the increasing intensity of

⁵⁷⁷ A Global Standard for stability analysis of mine facilities such as waste rock piles, heap leach facilities and other similar facilities has not been identified. However, regionally various requirements for minimum design factor of safety have been proposed for these types of mine facilities since at least 1991 [1] and continue to be a part of many regulatory frameworks [2].

^[1] See: Mined Rock and Overburden Piles, Investigation and Design Manual, Interim Guidelines, British Columbia Mine Waste Rock Pile Research Committee, May 1991 Table 6.4, p. 100. <u>http://mssi.nrs.gov.bc.ca/Geotechnical/minedrockoverburdenpile_investigationdesignmanual.pdf</u>

^[2] See Stability Requirements for Heap Leach Pads, Bureau of Mining Regulation and Reclamation, Nevada Division of Environmental Protection, 2021, https://ndep.nv.gov/uploads/land-mining-regs-guidance-docs/20210308_StabilityReg_HLPs_ADA.pdf

⁵⁷⁸ This practice is intended to apply specifically to process water and chemical solution ponds and similar facilities with constructed embankments that are not determined to be critical facilities.

⁵⁷⁹ The general standard or approach has been to apply a 100-year return interval storm event to mine stormwater conveyance designs. In response to climate change mines in British Columbia, Canada and other jurisdictions have been required to apply a 200-year event (see Legislated Flood Assessments in a Changing Climate in BC, Engineers & Scientists British Columbia, version 2.1, August 28, 2018. https://www.egbc.ca/getmedia/f5c2d7e9-26ad-4cb3-b528-940b3aaa9069/Legislated-Flood-Assessments-in-BC.pdf.aspx)

storm events due to anthropogenic climate change and the need to size flood routing for peak flow this is considered an important best practice.⁵⁸⁰

3. Access roads and other project site and/or ancillary features

Identify all reasonable potential physical/geotechnical stability failure modes including but not limited to surficial and deep slope and foundation failures due to undercutting and over-filling and failures due to storm events.

- Use bests practice to prevent or mitigate all reasonable potential physical stability failure modes. For mine roads best practice could include regulatory specifications for design and construction of mine roads. Examples could be drawn from:
 - Mines Safety and Health, Department of Natural Resources, Mines and Energy, State of Queensland.
 2019. Recognized Standard 19, Design and Construction of Mine Roads.
 https://www.resources.qld.gov.au/ data/assets/pdf file/0008/1453175/recognised-standard-19-mine-roads.pdf
 - Tannant, D., Regensburg, B., Guidelines for Mine Haul Road Design, 2001. https://open.library.ubc.ca/media/download/pdf/52383/1.0102562/1
 - United States Department of Agriculture, Forest Service. August 1996. Forest Service Specifications for Construction of Roads & Bridges. <u>https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5360208.pdf</u>

4. Surface mines including pit highwalls and other associated features

Identify and address all reasonable potential physical/geotechnical stability failure modes including but not limited to: highwall and/or slope failures; long-term stability over the entire facility life-cycle including post-closure.

- Mining methods maintain wall, bank, and slope stability in places where work or travel in performing their assigned tasks. When benching is necessary, the width and height is based on the type of equipment used for cleaning of benches or for scaling of walls, banks, and slopes.⁵⁸¹
- The following measures are taken in relation to ground control— (a) adequate consideration is given to local geological structure and its influence on wall stability; and (b) adequate consideration is given to shear strength; (c) a proper analysis is carried out of rain water inflow, surface drainage pattern, groundwater regime and mine de-watering procedures and their influence on wall stability over time; (d) where necessary, appropriate designs of rock reinforcement are applied and used, and the quality of installation is verified; (e) analysis is carried out of open pit wall stability for the projected geometry of the pit; (f) appropriate drilling and blasting procedures are used to develop final walls; and (g) appropriate methods of open pit wall monitoring are used over a period of time to determine wall stability conditions. ⁵⁸²

⁵⁸⁰ See Chapter 4, Storm Rainfall Depth and Distribution, Part 630 Hydrology National Engineering Handbook, US Department of Agriculture, Title 210 – National Engineering Handbook 210-630-H, Amend. 88, Aug 2019.

https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=43924.wba

⁵⁸¹ See Title 30, Chapter I, Subchapter K, Part 56, Subpart B, Mining Methods, US Code of Federal Regulations. <u>https://ecfr.gov/current/title-30/section-56.3130</u>

⁵⁸² Mines Safety and Inspection Regulations, Western Australia, Version 06-dO-03 January 2017. https://faolex.fao.org/docs/pdf/wa130385.pdf

5. Underground mine subsidence

Identify and address all reasonable potential for underground mine subsidence and related physical/geotechnical stability failures affecting hydrology, surface features and infrastructure over the entire facility life-cycle including post-closure.⁵⁸³

- Apply best practice consistent with regional regulations, guidelines or equivalent. There is limited information pertaining to best practice to address subsidence from other than coal mining, however, the same concerns and best practices are applicable to all underground mines on a site-specific basis. Examples may be drawn from:
 - o Subsidence Advisory NSW, NSW Government Australia. https://www.nsw.gov.au/subsidence-advisory
 - Lee, F.T., Abel, J. 1983. Subsidence from Underground Mining Environmental Analysis and Planning Considerations, U.S. Geological Survey Circular 876. <u>https://pubs.usgs.gov/circ/1983/0876/report.pdf</u>

6. Subsidence from underground fluid extraction

Identify and address all reasonable potential for brine or other types of groundwater depletion including project dewatering and off-site groundwater sources to cause ground subsidence and related physical/geotechnical stability failures affecting hydrology, surface features and infrastructure over the entire facility life-cycle including post-closure.⁵⁸⁴

- Subsidence Control Underground and in situ solution mining activities are planned and conducted, to the
 extent technologically and economically feasible, to prevent subsidence which may cause material damage to
 structures or property not owned by the entity.⁵⁸⁵
 - Underground and in situ solution mining activities near any aquifer that serves as a significant source of water supply to a public water system shall be conducted so as to avoid disruption of the aquifer and consequent exchange of ground water between the aquifer and other strata.
 - Underground and in situ solution mining activities conducted beneath or adjacent to any perennial stream must be performed in a manner so that subsidence is not likely to cause material damage to streams, water bodies and associated structures.

7. Facilities storing/stockpiling wastes from underground and surface mines

Identify all reasonable potential physical/geotechnical stability failure modes for wastes from mines including any waste rock, overburden, rejects material, soil and other stockpiles subject to physical instability over the entire facility life-cycle including post-closure.

The design, layout, construction and maintenance of any dump or stockpile take into account the following factors to minimize any potential for instability of the dump or stockpile — (a) the nature of the material dumped; (b) the size and weight of the equipment used; (c) the site conditions, including stability of the area on which the dump is built; (d) the drainage conditions; and (e) the weather conditions. ⁵⁸⁶

⁵⁸³ See 30 CFR § 817.121 - Subsidence control. <u>https://www.law.cornell.edu/cfr/text/30/817.121</u>

⁵⁸⁴ See Oil, Gas and Salt Resources of Ontario, Provincial Operating Standards, Part 9. Solution Mining. <u>https://www.ontario.ca/document/oil-gas-and-salt-resources-ontario-provincial-operating-standards/solution-mining</u>

Michigan Administrative Code, Department - Environmental Quality Oil, Gas & Minerals Division, Mineral Wells, Part 7 – Operation of Brine Production and Solution Mining Wells, Section R. 299.2407 - Subsidence monitoring above a cavity created by solution mining. https://regulations.justia.com/states/michigan/environmental-quality/oil-gas-amp-minerals-division/mineral-wells/part-7/section-r-299-2407/

⁵⁸⁵ New Mexico Administrative Code, Title 19 Natural Resources and Wildlife, Chapter 10 Non-Coal Mining, Part 6 New Mining Operations, 603 Performance and Reclamation Standards and Requirements. <u>https://www.srca.nm.gov/parts/title19/19.010.0006.html</u>

⁵⁸⁶ Mines Safety and Inspection Regulations 1995, Western Australia, Version 06-dO-03 January 2017. https://faolex.fao.org/docs/pdf/wa130385.pdf

8. Waste storage facilities associated with mineral processing, chemical processing and waste remediation

Identify all reasonable potential physical/geotechnical stability failure modes for waste storage facilities including tailings storage facilities; sludge and residue storage facilities; hazardous and remediated waste storage facilities; above ground level process water and brine ponds, and any other waste storage facilities associated with mineral processing or waste remediation subject to physical instability over the entire facility life-cycle including post-closure.

• TBD

9. Water reservoirs

Identify and address all reasonable potential for water reservoirs operated by or specifically constructed for the purpose of the mining and/or mineral processing operations subject to physical instability over the entire facility life-cycle including post-closure.

• TBD

Facility Failure			Incremental Lo	sses	
Consequence Classification	Potential Population at Risk	Potential Loss of Life	Environment	Health, Social and Cultural	Infrastructure and Economics
Low	None	None expected	Minimal short-term loss or deterioration of habitat or rare and threatened or endangered species.	Minimal effects and disruption of business and livelihoods. No measurable effect on human health. No disruption of heritage, recreation, community or cultural assets.	Low economic losses (<us\$1m). area="" contains<br="">limited infrastructure or services.</us\$1m).>
Significant	1 – 10	Unspecifie d	No significant loss or deterioration of habitat. Potential contamination of livestock/fauna water supply with no health effects. Process water low potential toxicity. Tailings not potentially acid generating and have low neutral leaching potential. Restoration possible within 1 to 5 years.	Significant disruption of business, service or social dislocation. Low likelihood of loss of regional heritage, recreation, community, or cultural assets. Low likelihood of health effects.	Losses to recreational facilities, seasonal workplaces, and infrequently used transportation routes <us\$10m.< th=""></us\$10m.<>
High	10 - 100	Possible (1 – 10)	Significant loss or deterioration of critical habitat or rare and threatened or endangered species. Potential contamination of livestock/ fauna water supply with no health effects. Process water moderately toxic. Low potential for acid rock drainage or metal leaching effects of released tailings. Potential area of impact 10 km2 – 20 km2. Restoration possible but difficult and could take > 5 years	500-1,000 people affected by disruption of business, services or social dislocation. Disruption of regional heritage, recreation, community or cultural assets. Potential for short term human health effects.	High economic losses (<us\$100m) affecting<br="">infrastructure, public transportation, and commercial facilities, or employment. Moderate relocation/compensation to communities.</us\$100m)>
Very High	100 – 1000	Likely (10 – 100)	Major loss or deterioration of critical habitat or rare and threatened or endangered species. Process water highly toxic. High potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact > 20 km2. Restoration or compensation possible but very difficult and requires a long time (5 years to 20 years).	1,000 people affected by disruption of business, services or social dislocation for more than one year. Significant loss of national heritage, community or cultural assets. Potential for significant long-term human health effects.	Very high economic losses (< US\$1B) affecting important infrastructure or services (e.g., highway, industrial facility, storage facilities, for dangerous substances), or employment. High relocation/compensation to communities.
Extreme	> 1000	Many (>100)	Catastrophic loss of critical habitat or rare and threatened or endangered species. Process water highly toxic. Very high potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact > 20 km2. Restoration or compensation in kind impossible or requires a very long time (> 20 yrs).	5,000 people affected for years by disruption of business, services or social dislocation. Significant national heritage or cultural assets destroyed. Potential for severe and/or long- term human health effects.	Extreme economic losses (>US\$1B) affecting critical infrastructure or services, (e.g., hospital, major industrial complex) or employment. Very high relocation/compensation to communities and very high social readjustment costs.

Table 4.X-1. Failure Consequence Classification Matrix

Source: Adapted from GISTM, 2020587

⁵⁸⁷ Global Tailings Review. 2020. Global Industry Standard on Tailings Management. Table 1: Consequence Classification Matrix. (Available at: https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf)

Table 4.X-2. Target Levels for Flood Hazards, Standards-Based Assessments, for Construction, Operation, and Transition Phases

Dam Classification	Annual Exceedance Probability – Floods [1]
Low	1/100
Significant	Between 1/100 and 1/1,000 [2]
High	1/3 Between 1/1,000 and PMF [3]
Very High	2/3 Between 1/1,000 and PMF [3]
Extreme	PMF [3]

Acronyms: PMF, Probable Maximum Flood; AEP, annual exceedance probability

Notes: Values in the table align with those in the Canadian Dam Association (CDA). 2013. Dam Safety Guidelines. (Available for purchase at: <u>https://cda.ca/publications/cda-guidance-documents/dam-safety-publications</u>). Some values overlap with those in the Global Industry Standard on Tailings Management. Table 2: Flood Design Criteria.

[1] Simple extrapolation of flood statistics beyond 10⁻³ AEP is not acceptable.

[2] Selected on basis of incremental flood analysis, exposure, and consequences of failure.

[3] PMF has no associated AEP.

Table 4.X-3. Target Levels for Earthquake Hazards, Standards-Based Assessments, for Construction, Operation, and Transition Phases.

Dam Classification	Annual Exceedance Probability – Earthquakes [1]
Low	1/100 AEP
Significant	Between 1/100 and 1/1,000
High	1/2,475 [2]
Very High	1/2 Between 1/2,475 [2] and 1/10,000 or MCE [3]
Extreme	1/10,000 or MCE [3]

Acronyms: MCE, Maximum Credible Earthquake; AEP, annual exceedance probability

Notes: Values in the table align with those in the Canadian Dam Association (CDA). 2013. Dam Safety Guidelines. (Available for purchase at: <u>https://cda.ca/publications/cda-guidance-documents/dam-safety-publications</u>). Some values overlap with those in the Global Industry Standard on Tailings Management. Table 3: Seismic Design Criteria.

[1] Mean values of the estimated range in AEP levels for earthquakes should be used. The earthquake(s) with the AEP as defined above are then input as the contributory earthquake(s) to develop the Earthquake Design Ground Motion (EDGM) parameters as described in Section 6.5 of the *Dam Safety Guidelines* (CDA 2013).

[2] This level has been selected for consistency with seismic design levels given in the National Building Code of Canada.[3] MCE has no associated AEP.

Table 4.X-4. Target Factors of Safety for Slope Stability in Construction, Operation, and Transition Phases - Static Assessment.

Loading Condition	Minimum Factor of Safety	Slope
During or at end of construction	> 1.3 depending on risk assessment during construction	Downstream (typically)
Long term (steady state seepage, normal reservoir level)	1.5	Downstream
Full or partial rapid drawdown	1.2 to 1.3	Upstream slope where applicable

Notes: Values in the table align with those in the Canadian Dam Association (CDA). 2013. Dam Safety Guidelines. (Available for purchase at: <u>https://cda.ca/publications/cda-guidance-documents/dam-safety-publications</u>).

Table 4.X-5. Target Factors of Safety for Slope Stability in Construction, Operation, and Transition Phases - Seismic Assessment.

Loading Condition	Minimum Factor of Safety
Pseudo-static	1.0
Post-earthquake	1.2

Notes: Values in the table align with those in the Canadian Dam Association (CDA). 2013. Dam Safety Guidelines. (Available for purchase at: <u>https://cda.ca/publications/cda-guidance-documents/dam-safety-publications</u>).

Chapter 4.3 Air Quality

NOTES ON THIS CHAPTER: We are proposing to remove the flag from this chapter. There were three requirements that were being tested in the first audits, and there was no indication from those first audits that the flagged requirements were problematic. As a result, we are proposing that the requirements be incorporated into this chapter (See criterion 4.3.6).

Proposed additions and changes:

- The two most significant proposed changes in this chapter are to require the characterization of air emission sources, which was not required in the 2018 Mining Standard, and also add requirements for the operation of air emissions control equipment, and actions to take in the event of an emergency situation that causes an unintended release of air emissions.
- Moved some air-related requirements from Chapter 4.8 'Mercury Management,' as the elements from that chapter are being incorporated into other relevant chapters (see note for requirement 4.3.5.3).
- Reporting requirements have been updated to be more consistent with other IRMA chapters (see criterion 4.3.7).
- A correction to the Air Quality Table (Table 4.3).

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

BACKGROUND

Mine and mineral processing sites can release significant quantities of air contaminants such as gases, fumes, vapors, and dust. By volume, the great majority of air contaminants from mine sites is in the form of particulate matter, such as dust from blasting, conveyors, and ore crushing. Mineral processing facilities, which often use high temperature processes, may also generate large volumes of gaseous emissions, including fine particulates that can

carry metals and metalloids. Particulate matter and other emissions such as organic pollutants and sulfur can adversely affect human health and the environment.

Mines and processing sites may emit contaminants from diffuse sources, such as fugitive dust emitted by blasting or truck traffic, or wind-blown dust from exposed surfaces such as roads, pits, and waste piles, and the dried surfaces of tailings impoundments. These releases can generally be controlled with reasonably inexpensive measures. However, a mine's typically large geographic footprint makes control especially important and sometimes difficult. The most common method of dust control is spraying water - such as by truck on roads and near blasting activities. Chemical additives, such as magnesium chloride, may be added to increase the effectiveness and durability of dust suppression on mine roads.

TERMS USED IN THIS CHAPTER

Affected Community
Air Quality Modeling
Ambient Air Quality
Associated Facility
Baseline Air Quality
Best Available
Practices (BAP)
Best Available
techniques (BAT)
Best Environmental Practices (BEP)
Competent Professionals
Contaminants of Potential
Concern (COPC) NEW
Contamination NEW
Credible
Methodology NEW
Cultural Heritage NEW
Ecosystem
Entity NEW
Exploration NEW
Heap Leach
Mercury
Emission Control System
Mine Waste Facilities
Mineral
Processing NEW
Mining NEW
Mining-Related
Activities
Mitigation
Operation NEW
Pollution NEW
Project NEW
Receptor NEW
Root Cause Analysis
NEW
Scoping NEW
Maste Rock

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.
Mineral processing, smelting and refining operations can produce more localized air emissions from include units that involve pyrometallurgical, hydrometallurgical and electrometallurgical processes. The range of contaminants contained in off-gases and other emissions depend on the commodity be processed, impurities present in the feed, and mineral processing method employed. Off-gases and other emissions may be generated in an enclosed environment (where capture for subsequent treatment is less challenging) or in an open environment (where capture may be difficult or incomplete). The control mechanisms for emissions are often expensive and technically complex. The common methods for controlling these emissions include technologies such as acid plants (specifically for the capture of sulfur dioxide), bag houses, electrostatic precipitators, and wet and dry scrubbers.

OBJECTIVES/INTENT OF THIS CHAPTER

To protect human health and the environment from airborne contaminants.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

This chapter does not address air contaminants in the workplace. Those issues are addressed in IRMA Chapter 3.2: Occupational Health and Safety. Also, the management of emissions of greenhouse gases is addressed in Chapter 4.5.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

When significant potential impacts on air quality are identified, measures to avoid and minimize adverse impacts on air quality are developed, implemented and documented in an air quality management plan (4.3.4.1)

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Air Quality Requirements

4.3.1. Scoping and Characterizing Sources of Air Emissions

NOTE FOR 4.3.1: REVISED. The name of this criterion has changed from "Air Quality Screening and Impact Assessment" to its current proposed wording. Assessment is now covered in 4.3.3.

We are proposing to use the word scoping instead of screening throughout the IRMA Standard. These terms mean slightly different things in different jurisdictions. For IRMA's purposes, we are proposing the following definition of scoping, however, if this term is confusing, we are open to reverting to screening, or adopting another term altogether:

Scoping

A process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Three NEW requirements, 4.3.1.1, 4.3.1.2 and 4.3.1.3, have been added to fill a gap in the 2018 Mining Standard, and to be more consistent with other IRMA chapters.

The identification of all project/operation-related sources of air emissions is key to understanding what contaminants may be released to the environment. Without credible information on sources and potential contaminants, it is not possible to have confidence that all potential emissions and contaminants are being monitored and adequately controlled.

CONSULTATION QUESTION 4.3-1: Do you agree with the two requirements proposed below? Would you add any potential sources or categories of contaminants of potential concern?

4.3.1.1. The entity identifies all potential sources of air emissions (including fugitive emissions) from the project/operation and associated facilities, including, as relevant:⁵⁸⁸

- a. Mining, ore handling and transportation, grinding, crushing;
- b. Beneficiation and mineral processing, including thermal treatments;
- c. Mobile equipment;
- d. Stationary equipment;
- e. Power plants, and, if relevant, fuel (e.g., coal, diesel, etc.) handling and transportation;
- f. Water treatment plants;
- g. Waste handling, treatment, and disposal; and
- h. Roads.

4.3.1.2. For each air emission source, the entity identifies the contaminants of potential concern (COPCs), including: ⁵⁸⁹

- a. Particulate matter (PM₁₀, PM_{2.5})
- b. Sulfur dioxide (e.g., from sulfur in fuels and feed materials or from thermal treatment of sulfide ores);
- c. Nitrogen oxides (NO and NO₂);
- d. Carbon monoxide;
- e. Ozone;
- f. Polycyclic Aromatic Hydrocarbons (PAH);
- g. Volatile organic compounds (including benzene);
- h. Acids;
- i. Persistent organic pollutants;⁵⁹⁰ and
- j. Metals and metalloids.591

⁵⁸⁸ This should have been done during ESIA for proposed projects. If not, then it needs to be done for operations.

⁵⁸⁹ For mineral processing operations, COPCs for mineral processing feeds should have been done during the characterization of for potential hazardous constituents in Chapter 4.1, requirements 4.1.1.2 and 4.1.1.3. For example, those characterizations should have revealed the presence of constituents such as sulfur, metals, and metalloids, etc. that could be emitted to air.

⁵⁹⁰ Persistent organic pollutants include, for example, polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxin, and dibenzofuran (PCDD/F), polychlorinated naphthalenes, and others. These may be by-products from industrial processes or combustion, including smelting (e.g., see: Yang et al. 2020. "Concentrations and profiles of persistent organic pollutants unintentionally produced by secondary nonferrous metal smelters," Chemosphere. 255:126958. https://www.sciencedirect.com/science/article/abs/pii/S0045653520311516)

⁵⁹¹ Mining operations are notable with respect to the quantity of particulates generated, the global extent of the area impacted, and the toxicity of contaminants associated with metal and metalloid emissions. See, e.g., the following study (with case studies that focus on smelters and emissions of Pb, Zn, As, Hg, Cu, Cd, Se, and other metals and metalloids and their health and environmental impacts): Csavina et al., 2012. A

NOTE FOR 4.3.1.2: NEW. The list of categories to be identified include the parameters in Table 4.3, which is IRMA's air quality standards table (i.e., particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, ozone, benzene, and PAHs, as well as the metals/metalloids lead, nickel, cadmium, and arsenic).

Table 4.3 is based on EU standards developed to protect human health. However, we have added a general category of metals and metalloids, as well as volatile organic compounds and persistent organic pollutants, with the assumption that air emissions of metals other than lead, nickel, cadmium and arsenic, and the organic contaminants are also important to identify, as these may have toxic effects on other living organisms (plants, animals, fungi). For example, elements such as boron, copper, iron, molybdenum and zinc, while essential for plant growth become toxic when certain thresholds are exceeded.

Air emissions can affect plant, animals and fungi both by existing in high concentrations in ambient air, but also through deposition of contaminants into or on to water, soil or vegetation, where they can affect the growth of plants or aquatic organisms and also accumulate in plants and animals, and thus be introduced into the food chain of humans and other animal species, resulting in adverse impacts on health.⁵⁹² Contaminants may also be deposited in areas used by people for recreation, or growing or harvesting food, and pollutants may be carried into living and working spaces.⁵⁹³

The characterization of COPCs should have happened during the identification of chemicals and materials with potentially hazardous properties in Chapter 4.1. It is unclear, however, whether mineral processing operations typically carry out a comprehensive evaluation of all of the metals/metalloids or other potential air contaminants in the feed materials. Please see <u>CONSULTATION QUESTION 4.1-3</u> in Chapter 4.1 if you have expertise on that subject.

4.3.1.3. The <u>entity</u> identifies potential <u>receptors</u> and potential values that may be affected by air contaminants, including but not limited to:

- a. Individuals, communities, soils, water bodies, or <u>cultural heritage</u> that may be affected by emissions, deposition or dispersion of the identified <u>COPCs</u>;
- b. <u>Vulnerable groups</u> within nearby <u>affected communities</u> or vulnerable individuals in nearby residences who may be particularly sensitive receptors of the identified COPCs;⁵⁹⁴
- c. Plants, animals, or fungi with known sensitivity to the identified COPCs;
- d. Areas with scenic values that may be affected by haze; and
- e. Receptors that may be affected by dust or odors.

NOTE FOR 4.3.1.3: NEW. The list of categories to be identified include the parameters in IRMA's air quality standards table (i.e., particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, ozone, benzene, and PAHs, as well as the metals/metalloids lead, nickel, cadmium and arsenic).

4.3.1.4. <u>Competent professionals carry out a scoping or similar process to identify significant sources of air</u> emissions, including:

a. Documenting the particular contaminants and using credible methods to estimate emissions from each source (e.g., facilities, activities, processes), based on proposed or actual operational characteristics; and

review on the importance of metals and metalloids in atmospheric dust and aerosol from mining operations. Science of the Total Environment 433, 58-73. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3418464/</u>

⁵⁹² Edelstein, M. and Ben-Hur, M. 2018. "Heavy metals and metalloids: Sources, risks and strategies to reduce their accumulation in horticultural crops," Scientia Horticulturae. Vol 234, pp. 431-444. <u>https://www.sciencedirect.com/science/article/abs/pii/S0304423817307628</u>

⁵⁹³ For example, see "Health and Environment" information on the Colorado Smelter, Pueblo, Colorado Superfund Site. https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Healthenv&id=0802700

⁵⁹⁴ What may constitute a 'vulnerable group' requiring additional focus depends on the context and the matter at hand. Entities should draw on stakeholder mapping, stakeholder interviews, project documentation, as well as site observations to determine whether all relevant stakeholders have been identified and included. For this requirement, those who may be vulnerable to air pollution include children, elderly, people with respiratory conditions like asthma, and others who may be a heightened risk due to exposure to air pollution.

b. Documenting the rationale for why certain facilities, activities or processes are considered to be minor or insignificant sources of emissions of air contaminants.

NOTE FOR 4.3.1.4: MINOR CHANGE. This was 4.3.1.1 in the 2018 Mining Standard. It provides greater clarity on the scoping process (in the 2018 standard this was called 'screening,' but as in the note for 4.3.1, above, we are proposing to use more consistent language throughout the IRMA Standard), including the need to estimate emissions and to provide a rationale for why certain sources are deemed 'insignificant.' IRMA guidance includes more information on methods that can be used to estimate emissions.⁵⁹⁵

4.3.2. Baseline Air Quality

NOTE FOR 4.3.2: NEW. This is a new criterion heading. It has been added to be more consistent with other IRMA chapters. The requirement in this criterion is not new.

4.3.2.1. Competent professionals establish the baseline air quality in project/operation area using credible methods to determine the ambient concentrations of all contaminants of potential concern (COPCs).⁵⁹⁶

NOTE FOR 4.3.2.1: MINOR CHANGE. This was 4.3.1.2 in the 2018 Mining Standard. We added that competent professionals be responsible for establishing the baseline, using credible methods. This is consistent with other IRMA chapters.

This requirement also applies to existing operations. As in IRMA Guidance, if baseline data were not collected early in the development process the entity will be expected to carry out a study to estimate baseline.⁵⁹⁷

4.3.3. Assessment of Risks to Air Quality

NOTE FOR 4.3.3: NEW. This is a new criterion heading. Previously, this impact assessment requirements were included in criterion 4.3.1 in the 2018 Mining Standard (4.3.1 'Screening and Impact Assessment'). See note for 4.3.1, also.

4.3.3.1. If scoping or other credible information indicates that air emissions from mining-related activities may adversely impact human health, quality of life or the environment, a credible methodology is used to assess and document air quality risks associated with the project/operation. The assessment includes:

- a. The use of <u>air quality modeling</u> and monitoring consistent with widely accepted and documented methodologies to estimate the concentrations, transport, and dispersion of air contaminants, including:⁵⁹⁸
 - i. Estimation of potential emissions on a contaminant-by-contaminant basis, and under various operational scenarios including maximum emissions during maximum production levels; and
 - ii. Estimation of potential emissions at potentially sensitive receptors (e.g., residences, water bodies, ecosystems) under the worst-case dispersion conditions.
- b. Conducting an assessment to predict and evaluate the significance of the potential impacts.

NOTE FOR 4.3.3.1: REVISED. This combines 4.3.1.3 (assessment) and 4.3.1.4 (modeling) in the 2018 Mining Standard, as modeling will inevitably be used to inform the risk/impact assessment.

and European Environment Agency. 2011 The Application of Models under the EU Air Quality Directive. <u>https://www.eea.europa.eu/publications/fairmode</u>

⁵⁹⁵ IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). p. 550. Available at: <u>https://responsiblemining.net/resources/#full-documentation-and-guidance</u>

⁵⁹⁶ This is to establish the pre-project air quality conditions, and/or any existing air contaminants that are unrelated to the project/operation.

⁵⁹⁷ IRMA Standard for Responsible Mining 1.0, Guidance Document (v.1.2). p. 551. Available at: <u>https://responsiblemining.net/resources/#full-documentation-and-guidance</u>

See also: DiGiovanni, F. and Coutinho, M. 2017. Guiding Principles for Air Quality Assessment Components of Environmental Impact Assessments. pp. 8 and 9. <u>https://www.iaia.org/downloads/Guiding%20Principles%20for%20Air%20Quality_2_1.pdf</u>

⁵⁹⁸ See, e.g., US EPA's Air Quality Guidelines. Appendix W To Part 51—Guideline On Air Quality Models. Pt. 51, App. W, 40 CFR Ch. I (7–1–03 Edition). Available at: <u>https://www.ecfr.gov/current/tile-40/chapter-l/subchapter-C/part-51/appendix-Appendix%20W%20to%20Part%2051</u>

Sub-requirements 4.3.1.3.a.i and 4.3.1.3.a.ii are NEW. They come from guidance developed by the International Association of Impact Assessment.⁵⁹⁹

4.3.3.2. The assessment is updated if there are proposed changes to <u>mining-related activities</u> that will result in new sources or changes in the volume of emissions, or if there are changes in in the operational or social context that may change the probability or severity of impacts of (e.g., a new school is constructed downwind of the site).

NOTE FOR 4.3.3.2: NEW. This is similar to expectations in other chapters where risk assessments need to be updated.

4.3.3.3. Any models used to inform risk assessments are:

- a. Consistent with credible methodologies; and
- b. Evaluated annually and updated, as necessary, through an iterative process using operational monitoring data, as they become available.⁶⁰⁰

NOTE FOR 4.33.3: NEW. This aligns with 4.2.4.4 in the Water Management chapter.

4.3.4. Air Quality Management

NOTE FOR 4.3.4. This has been changed from 'Air Quality Management Plan' to Air Quality Management, as some of the elements contained below are management actions that are not directly related to the plan itself.

4.3.4.1. (Critical Requirement)

If significant potential impacts on air quality are identified, an air quality management plan is in place and implemented that:

- a. Is developed by competent professionals;
- b. Outlines the <u>mitigation</u> measures to avoid and, where that is not possible, minimize adverse impacts on human health and the environment (including impacts to land, soil, water, and vegetation). The measures in the plan are specific, measurable, linked to clearly defined outcomes, relevant, and time-bound;
- c. Identifies key indicators, linked to adequate <u>baseline</u> data, to enable measurement of the effectiveness of mitigation activities over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁶⁰¹
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 4.3.4.1: REVISED. This was 4.3.2.1 in the 2018 Mining Standard. It has been revised to include the elements of a management plan that are outlined in other IRMA chapters, so that there is consistency in these plans across all chapters.

4.3.4.2. In the event of an <u>unwanted event</u> that causes a loss of normal operation in air <u>pollution</u> control equipment:

a. All reasonable and safe corrective actions are taken to minimize air emissions, and the actions are documented;

⁵⁹⁹ DiGiovanni, F. and Coutinho, M. 2017. Guiding Principles for Air Quality Assessment Components of Environmental Impact Assessments. pp. 8 and 9. <u>https://www.iaia.org/downloads/Guiding%20Principles%20for%20Air%20Quality_2_1.pdf</u>

⁶⁰⁰ This process includes comparing the predicted model results with actual monitoring data and set parameters for what constitutes acceptable versus unacceptable deviations between modeled and actual results. When predicted and actual results do not agree, models should be revised and predictions updated to ensure that water management practices are based on the best possible data.

⁶⁰¹ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

- b. <u>Ambient air quality</u> and dust sampling is carried out if there are uncontrolled emissions, and any exceedance of a <u>pollution</u> limit in <u>Table 4.3</u> or host country air quality regulations is recorded;
- c. A documented <u>root cause analysis</u> is carried out to determine the cause (e.g., improperly designed equipment, lack of preventative maintenance, careless or improper operation, operator error, etc.) of the <u>unwanted event</u>; and
- d. The air quality management plan is updated with actions to prevent a similar occurrence.

NOTE FOR 4.3.4.2: NEW. This proposed requirement will be applicable to all operations that utilize a process that has air emissions control equipment. Some of proposed material in this requirement was drawn from the U.S. National Emission Standards for Hazardous Air Pollutants for Source Categories.⁶⁰²

4.3.4.3. If mercury is detected in ore, concentrate, or mining facilities (e.g., tailings, heap leaches, waste rock), as determined in 4.3.1.2.i, then mercury emissions are managed as follows:

- a. <u>Best available techniques</u> (BAT) and <u>best environmental practices</u> (BEP) are implemented at mineral processing or smelting facilities that use thermal processes, ⁶⁰³ unless the entity demonstrates that air emissions (gaseous and dust) from the facility are unlikely to pose a significant risk to human health or the environment;⁶⁰⁴ and
- b. Fugitive gaseous and dust emissions associated with crushing, grinding, handling, and transporting of ore, concentrate and/or disposal of waste materials containing mercury are controlled using <u>BAT</u> and <u>BEP</u> unless the entity demonstrates that fugitive emissions (gaseous and dust) from certain sources are unlikely to pose a significant risk to human health or the environment.

NOTE FOR 4.3.4.3: MOVED from Chapter 4.8. This was requirement 4.8.2.1 in Chapter 4.8 – 'Mercury Management' in the 2018 Mining Standard. We are proposing to delete chapter 4.8 and integrate the requirements into other relevant chapters so that auditors with specialty in water, air, soils, etc., are able to evaluate the requirements alongside other water, air and soil requirements (since the documentation being reviewed in those chapters should also contain mercury-related information, if they are relevant to the project/operation), rather than having a single auditor cross the different areas of expertise.

4.3.4.3.b is NEW. These potential sources of mercury-related air emissions are increasingly being addressed in impact assessments and should be managed if they represent significant air emissions.⁶⁰⁵

4.3.4.4. Annually or more frequently, if necessary (e.g., due to proposed or actual changes in operational or environmental factors):

- a. The entity reviews air quality monitoring data and evaluates the effectiveness of measures to minimize air quality impacts; and
- b. If actions are not being effective, develops new <u>mitigation</u> measures and revises the air quality management plan.

⁶⁰² US Code of Federal Regulations. Title 40. Chapter I, Subchapter C, Part 63, "Primary Copper Smelting Area Sources." <u>https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-63/subpart-EEEEE</u>

⁶⁰³ For example, an autoclave, roaster, carbon kiln, refining furnace, or other thermal processes.

⁶⁰⁴ While many air emissions of many metals can be controlled using technologies that control emissions of particulate matter, some metals, like mercury, remain a vapor at ambient temperatures, and can pass through some control equipment. So alternative control techniques and technologies must be used. (Source: IFC. 2007. Environmental, Health, and Safety Guidance. Base Metal Smelting and Refining. pp. 3, 4. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/605891489653831342/environmental-health-and-safety-guidelines-base-metal-smelting-and-refining)

⁶⁰⁵ For example, see: Ramboll US Consulting, Inc. 2021. Draft Report: Donlin Gold Mine Supplemental Mercury Modeling and Mass Balance Analysis. Available at: <u>https://dec.alaska.gov/water/wastewater/donlin-gold-mine-certification-remand-decsion/</u>

Barr. 2012. Mercury Emission Control Technology Review for NorthMet Project Processing Plant. https://www.leg.mn.gov/docs/2015/other/150681/PFEISref_1/Barr%202012k.pdf

NOTE FOR 4.3.4.4: REVISED. This was 4.3.2.1 and 4.3.2.2 in the 2018 Mining Standard. It has been revised to require annual review of monitoring data and updating of plans if necessary. This is consistent with other IRMA chapters.

4.3.5. Air Quality Monitoring and Inspections

4.3.5.1. <u>Competent professionals monitor and document ambient air quality and dust from the project/operation</u>.

NOTE FOR 4.3.5.1: REVISED. This was 4.3.3.1 in the 2018 Mining Standard. We are proposing to change the language from "personnel trained in air quality monitoring" to "competent professionals," which is a defined term, and is more consistent with other IRMA chapters.

4.3.5.2. Ambient air quality and dust monitoring locations are:

- a. Situated around the site, associated facilities (if there are any emissions sources), transportation routes and the surrounding environment such that they provide a representative sampling of air quality sufficient to detect air quality and dust impacts on affected communities and the environment; and
- b. Informed by the air quality modeling results (see 4.3.3.1).

NOTE FOR 4.3.5.2: This was 4.3.3.2 in the 2018 Mining Standard. We separated the information into two sub-requirements to make it clear that both elements should be evaluated during audits.

- 4.3.5.3. If mercury will be or is released to air (as gaseous emissions or dust), the entity:
 - a. Includes mercury in the ambient air monitoring (as per 4.3.5.3);
 - b. Monitors and documents:606
 - i. Direct releases of mercury to the atmosphere from ore treatment and/or <u>mineral processing</u> or smelting facilities that use thermal processes;⁶⁰⁷
 - ii. Fugitive emissions (to the extent technologically and economically feasible with air monitoring equipment), or provides best estimates for these emissions; and
 - iii. The amount of mercury recovered or captured as by-product in mercury emission control systems;
 - c. Monitors and documents the concentration of mercury in soils, water, sediment, and biota downwind of the emissions sources (as part of the soil quality monitoring program in proposed Chapter 4.XX, and water monitoring program in Chapter 4.2);⁶⁰⁸ and
 - d. <u>Consults with affected communities</u> to develop and implement a plan to monitor mercury levels in community members (e.g., in blood or hair) and in any significant food sources that may be affected by the emissions.

NOTE FOR 4.3.5.3: MOVED from Chapter 4.8. This requirement incorporates material from 4.8.3.2 and 4.8.3.3 in Chapter 4.8 – 'Mercury Management' in the 2018 Mining Standard. As mentioned in the Note for 4.3.4.3, we are proposing to delete chapter 4.8 on Mercury Management and integrate the requirements into other relevant chapters.

⁶⁰⁶ The information from monitoring feeds into the mercury mass balance in Chapter 4.1 (see requirement 4.1.6.2.a).

⁶⁰⁷ This could be carried out through continuous monitoring or measured at least annually if using sorbent trap systems, or. See, e.g., Envirotech. 2022. Mercury sorbent trap sampling for compliance in the U.S. <u>https://www.envirotech-online.com/article/air-monitoring/6/ohio-lumex/mercury-sorbent-trap-sampling-for-compliance-in-the-us/3153</u>

⁶⁰⁸ The entity would need to sample for mercury (total and dissolved) and methyl mercury and sulfate in wetlands and water bodies located on or downwind of the mine site and carry out environmental sampling (e.g., fish tissue and sediment mercury levels) in locations that are most likely to promote mercury methylation, such as still waters, wetlands, and anaerobic sediment. This would be incorporated into the water sampling and analysis plan (see 4.2.5.1.a.iv, and the accompanying footnote).

4.3.5.5.b.ii includes monitoring of fugitive emissions. When mercury is known to be present in ores and waste rock, mercury-related fugitive air emissions are increasingly being addressed in impact assessments. If these sources represent potentially significant emissions of mercury, they need to be monitored (or estimated).⁶⁰⁹

4.3.5.4. Air pollution control equipment is inspected on a regular basis by <u>competent professionals</u> to verify that the equipment was installed and is being maintained in accordance with vendor instructions and is operating as expected. Inspection dates and observations are recorded and maintained by the entity.

NOTE FOR 4.3.5.4: NEW. This proposed new requirement will be applicable to all operations that utilize a process that has air emissions control equipment. It is being proposed to fill a gap regarding equipment inspection.

4.3.6. Comparison of Monitoring Results to Air Quality Standards

NOTE FOR 4.3.6: NEW. This is a new criterion heading, but the requirements are not new. Previously, this criterion was called Protection of Air Quality. It has been revised to be more consistent with a similar criterion heading in the Water Management chapter (see 4.2.6).

In the 2018 Mining Standard, the requirements in this criterion were flagged. They were audited, to gain information, but not scored. There was no indication from the audits that the flagged requirements were problematic. As a result, we are proposing that the two requirements be incorporated into this chapter. See additional notes below.

4.3.6.1. <u>Ambient air quality</u> monitoring results demonstrate that the <u>site</u> is in compliance with the European Union's Air Quality Standards⁶¹⁰ (EU Standards) as amended to their latest form (see <u>Table 4.3</u>, below) at the boundaries of the <u>project/operation</u> site and on transportation routes. If emissions from <u>mining-related activities</u> cause an exceedance beyond what is allowed in Table 4.3:

- a. And an operation is located in an airshed where <u>baseline air quality</u> conditions meet EU Standards, the <u>entity</u>:
 - i. Develops mitigation measures to reduce its emissions;
 - ii. Demonstrates that it is making incremental reductions in the non-compliant emissions, and within five years demonstrates compliance with the EU Standards; and
 - iii. Incorporates mitigation measures into the air quality management plan;
- b. And an operation is located in an airshed where <u>baseline air quality</u> was already degraded beyond EU Standards, the entity:
 - i. Demonstrates that emissions from mining-related activities, alone, do not exceed EU Standards,
 - ii. Develops and implements mitigation measures to make incremental improvements to the air quality in the airshed that are at least equivalent to the operation's emissions; and
 - iii. Incorporates mitigation measures into the air quality management plan.
- c. As an alternative to 4.3.6.1.a or b, the entity undertakes a risk-based approach to protecting air quality as follows:

⁶⁰⁹ For example, see: Ramboll US Consulting, Inc. 2021. Draft Report: Donlin Gold Mine Supplemental Mercury Modeling and Mass Balance Analysis. Available at: <u>https://dec.alaska.gov/water/wastewater/donlin-gold-mine-certification-remand-decsion/</u>

Barr. 2012. Mercury Emission Control Technology Review for NorthMet Project Processing Plant. https://www.leg.mn.gov/docs/2015/other/150681/PFEISref_1/Barr%202012k.pdf

⁶¹⁰ The most recent version of the EU Air Quality Standards can be found at: <u>http://ec.europa.eu/environment/air/quality/standards.htm</u>

Note that mercury is not included in the list of air contaminants in Table 4.3. Similarly, there are no emissions limits for the following greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, or nitrogen trifluoride. Greenhouse gas air emissions are addressed in Chapter 4.5 (Greenhouse Gas Emissions and Energy Consumption).

- i. Operations demonstrate compliance with host country air quality standards, if they exist, or more stringent international best practice standards;⁶¹¹
- ii. A risk assessment is undertaken to determine residual risks from the operation's air emissions;
- iii. Where residual risks remain, the operation sets more stringent self-designed limits, develops, and implements a multi-year phased set of mitigation measures with defined timelines to make incremental reductions in emissions, and incorporates this information into the air quality management plan.

NOTE FOR 4.3.6.1: REVISED. This combines 4.3.4.1 and 4.3.4.2 in the 2018 Mining Standard. It also now requires that mitigation measures be incorporated into the air quality management plan.

CONSULTATION QUESTION 4.3-2: We are proposing that all entities measure their air quality emissions against the standards in Table 4.3, so that there is comparability between sites, but then offer a menu of how they might mitigate any exceedances of the air quality limits. The options align with the options that were proposed in the 2018 Mining Standard. Do you agree with this approach?

4.3.6.2. Dust deposition from mining-related activities is below exceed 350 mg/m²/day, measured as an annual average.⁶¹² An exception to 4.3.4.3 may be made if demonstrating compliance is not reasonably possible through ordinary monitoring methods.⁶¹³ In such cases, the entity documents its rationale, implements <u>best</u> available/applicable practices (BAP) to minimize dust <u>contamination</u>, and incorporates the BAP measures into its air quality management plan.

NOTE FOR 4.3.6.2: REVISED. This was 4.3.4.3 in the 2018 Mining Standard. Note that the German Technical Instructions on Air Quality Control (TA Luft) regulation, which was used as the basis for the 350 mg/m²/day deposition value, was updated in 2021. The TA Luft dust deposition value to protect against significant nuisance or significant disadvantages due to dustfall (Section 4.3.1, Table 2 of the 2002 regulation) remained unchanged,⁶¹⁴ and so we are maintaining this prescriptive expectation.

We added that the entity must document its rationale for why the dust emission levels cannot be met, and that the dust mitigation measures be added into the management plan.

4.3.7. Disclosure of Information

4.3.7.1. Information on air quality management, including the air quality management plan and compliance and monitoring information is: ⁶¹⁵

a. Publicly available; or

⁶¹¹ Residual risk may include, for example, a saturated airshed with elevated background levels of pollution, stakeholder grievances, community unrest, impending regulatory changes, media attention and reputational damage, or potential health impacts or harm to sensitive receptors associated with emissions impacts.

Best practice international standards include, for example, the International Finance Corporation. 2007. Environmental, Health and Safety Guidelines, 1.1 Air Emissions and Ambient Air Quality. <u>https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines</u>

⁶¹² IRMA has added a dust criterion because dust is not listed on EU list of contaminants as it is not strictly harmful to health rather it is a "nuisance", and can be problematic communities and ecosystems located near mine sites. This requirement is based on the German Technical Instructions on Air Quality Control (TA Luft) Regulation, available at:

https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Luft/taluft_engl.pdf. The German dust guidelines have been incorporated here as the minimum requirement, but may require further citation and consideration, notably the potential inclusion of both an annual and a monthly mean. More information will be provided in IRMA Guidance.

⁶¹³ An example of where exceptions might be appropriate are where roads are shared by external third parties, or operational and nonoperational roads are so close to each other so as to make it impossible to distinguish their contributions.

⁶¹⁴ The TA Luft regulation 2002 (in English) is available here: <u>https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Luft/taluft_engl.pdf</u> The 2021 updated version (in German) is available here: <u>https://www.verwaltungsvorschriften-im-</u> <u>internet.de/bsvwvbund_18082021_IGI25025005.htm</u>

⁶¹⁵ Compliance information may include monitoring data or air quality reports to regulatory agencies, and records related to non-compliance (as per Chapter 1.1) etc.

b. A publicly available access to information (or equivalent) policy that commits the entity to providing stakeholders with this information upon request is in place and shared with stakeholders.⁶¹⁶

NOTE FOR 4.1.7.1: REVISED. This was 4.3.5.1 in the 2018 Mining Standard. In the 2018 Mining Standard there was a blanket requirement in Chapter 1.2 - 'Community and Stakeholder Engagement,' requirement 1.2.4.1, that "Any information that relates to the mine's performance against the IRMA Standard shall be made available to relevant stakeholders upon request." We are adding this element into each chapter where there was not previously a reporting requirement, to make it clear that information related to the specific topic is included in the blanket requirement. Note that the requirement for an access to information policy (of equivalent) is being proposed in Chapter 1.2 (see <u>Note for requirement 1.2.4.3</u>).

CONSULTATION QUESTION 4.3-3: In addition to disclosure requirements, some IRMA chapters require annual reporting to stakeholders on the entity's management of the issues. In some cases, the reporting is to stakeholders generally (e.g., reporting on human rights due diligence), and in other cases, it involves more active discussion with relevant stakeholders, which tend to be the affected communities, on the issues (e.g., annual discussions on water management). Should IRMA require that entities report to stakeholders, or that they meet with and discuss air quality issues with affected communities? Or should IRMA not require this (and assume that if it is an important issue to stakeholders, that they will request such meetings with the entity)?

NOTES

Air quality standards and requirements were reviewed for various countries, focusing on the most expansive, standards those of the European Union, Canada, Australia, and United States. With the goal in mind of adopting a standard that would evolve over time the decision was made to adopt the European Union's (EU) numeric air quality standards. The EU's stands out for its breadth of contaminants including some known to be released during mining and mineral processing (in particular, metal and metalloid contaminants such as nickel, lead, cadmium, arsenic).⁶¹⁷ Further, like many developed national standards, EU's air quality standards were developed to be comprehensive, transparent, and enduring. Finally, the EU's air quality standards are evolving and therefore predicating IRMA's air quality standard on them will ensure that IRMA's air quality standards also evolve.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Contaminant of Potential Concern (COPC)

Contaminants that may pose a risk to human health or non-human biological receptors (e.g., plants, animals).

Contamination

The presence of a substance where it should not be or at concentrations above background, but not necessarily high enough to have an adverse impact on ecosystem and/or human health. See also 'Pollution'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

⁶¹⁶ As per Chapter 1.2, requirement 1.2.4.3, an access to information policy is proposed in the revised IRMA Standard. It is expected that this policy could include the relevant provisions related to stakeholder access to entity-generated information and data on air quality.

⁶¹⁷ The US EPA's Air Quality Standards are similar in many ways, however the EU includes contaminants not found in the US standards that may be released by mining and mining-related activities, such as arsenic, cadmium, and nickel.

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Cultural Heritage

Refers to (i) tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles. Source: Adapted from IFC Performance Standard 8.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Receptor

Any human, plant, animal, or structure which is, or has the potential to be, affected by the release or migration of contaminants.

Root Cause Analysis

Root cause analysis seeks to identify the primary cause of a problem that allowed a NC to occur. By identifying the root cause, a NC can be effectively addressed and recurrence can be avoided.

Source: Adapted from Aluminum Stewardship Initiative Glossary. <u>https://aluminium-stewardship.org/wp-content/uploads/2022/05/ASI-Glossary-V1-May2022.pdf</u>

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Air Quality Modeling

Mathematical and numerical techniques used to simulate the physical and chemical processes that affect air pollutants as they disperse and react in the atmosphere. These include, for example: air dispersion models, which are used to predict concentrations of pollutants at selected downwind receptor locations; and receptor models, which use observational techniques and chemical and physical characteristics of gases and particles measured at source and receptor and to identify the presence of and to quantify source contributions to receptor concentrations.

Ambient Air Quality

The concentrations of pollutants (e.g., chemicals, particulate matter) in air (for IRMA's purposes, outdoor air).

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities, construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Baseline Air Quality

Ambient air quality at the site and in the area surrounding a proposed project, before mining-related activities have occurred.

Best Available/Applicable Practice (BAP)

Encompasses management systems, operational procedures, techniques and methodologies that, through experience and demonstrated application, have proven to reliably manage risk and achieve performance objectives in a technically sound and economically efficient manner. BAP is an operating philosophy that embraces continual improvement and operational excellence, and which is applied consistently throughout the life of a facility, including the post-closure period.

Best Available Techniques (BAT)

Techniques that can most effectively achieve a high level of environmental protection and allow implementation in relevant sectors under economically and technically viable conditions. "Techniques" includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned; "Available" techniques means those techniques that are accessible to the operator and that are developed on a scale that allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages; and "Best" means most effective in achieving a high general level of protection of the environment as a whole.

Best Environmental Practices (BEP)

The application of the most appropriate combination of environmental control measures and strategies.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Heap Leach/Heap Leaching

An industrial mining process to extract precious metals, copper, and other compounds from ore. Typically, mined ore is crushed and heaped on an impermeable leach pad, and chemicals (reagents) are applied that percolate through the ore and absorb specific minerals and metals. The solution is collected and target metals are recovered from the solution.

Mercury Emission Control System

Any system that will limit mercury emissions (either designed specifically for mercury, or mercury capture is a co-benefit), including sorbent technologies that can remove mercury from the gas stream during processing, or oxidation technologies that will increase the percentage of particulate-bound mercury removed by particulate scrubbers.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Ac Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Tailings

The waste stream resulting from milling and mineral concentration processes that are applied to ground ore (i.e., washing, concentration, and/or treatment). Tailings are typically sand to clay-sized materials that are considered too low in mineral values to be treated further. They are usually discharged in slurry form to a final storage area commonly referred to as a tailings storage facility (TSF) or tailings management facility (TMF).

Waste Rock

Barren or mineralized rock that has been mined but is of insufficient value to warrant treatment and, therefore, is removed ahead of the metallurgical processes and disposed of on site. The term is usually used for wastes that are larger than sand-sized material and can be up to large boulders in size; also referred to as waste rock dump or rock pile.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

Pollutant	Concentration	Averaging period	Permitted exceedances / year
Sulphur dioxide (SO2)	350 μg/m³	1 hour	24
	125 μg/m³	24 hours	3
Nitrogen dioxide (NO2)	200 μg/m³	1 hour	18
	40 μg/m³	1 year	not applicable
Fine particles (PM-2.5)	20 μg/m ³	1 year	not applicable
PM-10	50 μg/m³	24 hours	35
	40 μg/m³	1 year	not applicable
Lead (Pb)	0.5 μg/m³	1 year	not applicable
Carbon monoxide (CO)	10 mg/m³	Maximum daily 8-hour mean	not applicable
Benzene	5 μg/m³	1 year	not applicable
Ozone	120 μg/m³	Maximum daily 8-hour mean	25 days averaged over 3 years
Arsenic (As)	6 ng/m ³	1 year	not applicable
Cadmium (Cd)	5 ng/m ³	1 year	not applicable
Nickel (Ni)	20 ng/ m ³	1 year	not applicable
Polycyclic Aromatic Hydrocarbons	1 ng/m ³ (as concentration of Benzo(a)pyrene)	1 year	not applicable

TABLE 4.3. – European Union (EL	J) Numeric Air Quality Standards
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Notes: EU. Air Quality Standards (as of July 3, 2013). https://environment.ec.europa.eu/topics/air/quality/eu-air-quality-standards_en

NOTE ON TABLE 4.3: In 2021, the World Health Organization (WHO) updated its 2005 Global Air Quality Guidelines (AQG). According to WHO, "More than 15 years have passed since the publication of Global update 2005. In that time there has been a marked increase in evidence on the adverse health effects of air . . . air pollution is now recognized as the single biggest environmental threat to human health . . . ")⁶¹⁸

The new WHO air quality guidelines recommend aiming for annual mean concentrations of $PM_{2.5}$ not exceeding 5 µg/m³ and NO₂ not exceeding 10 µg/m³, and the peak season mean 8-hr ozone concentration not exceeding 60 µg/m³ [1]. For reference, the corresponding 2005 WHO guideline values for $PM_{2.5}$ and NO₂ were, respectively, 10 µg/m³ and 40 µg/m³ with no recommendation issued for long-term ozone concentrations.

The EU has proposed changes to its Air Quality Standard that would revise its standards for annual mean concentrations of $PM_{2.5}$ to 10 µg/m³ and NO_2 to 20 µg/m³, and PM10 to 20, however, these have not yet been approved.⁶¹⁹ IRMA will be tracking these changes, and if they are made in the EU Numerical Air Quality Standards then we will update Table 4.3 accordingly.

⁶¹⁸ World Health Organization. 2021. WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. p. xiv and xv. https://apps.who.int/iris/handle/10665/345329.

⁶¹⁹ The proposed revisions to the EU's Ambient Air Quality Directives (and air quality standards) can be found here: <u>https://environment.ec.europa.eu/topics/air/air-quality/revision-ambient-air-quality-directives_en;</u> Updates on the status of the legislation are available here: <u>https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2022/0347(COD)&l=en</u>

Chapter 4.4 Noise and Vibration

NOTES ON THIS CHAPTER: As with other chapters, there are proposed structural changes, and a number of related requirements have been combined.

Proposed additions and changes:

- In the 2018 Mining Standard, this chapter focused on the impacts of noise and vibrations on human noise
 receptors. We are proposing to carry over changes to this chapter proposed in the draft the IRMA-Ready
 Standard that incorporated scoping, and if necessary, mitigation of noise impacts on wildlife. Exploration often
 occurs in more remote areas where wildlife may not have had much previous exposure to human industrial
 activity and/or may be more sensitive to noise and vibration.⁶²⁰ Because this standard now applies to all phases
 of mineral development from exploration through mineral processing and the decommissioning and closure of
 operations, potential impacts of noise on wildlife are proposed for inclusion.
- All projects/operations are required to scope potential impacts related to noise and vibration (see 4.4.1.1)
- A requirement for a management plan to document and guide mitigation actions (see 4.4.2.1)

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

CONSULTATION QUESTION 4.4-1: Currently, we do not have a requirement for noise monitoring. Do entities typically carry out regular or even periodic monitoring of noise levels, e.g., at site boundaries, or is monitoring more typically only done in response to complaints or other indications that there may be noise-related issues?

BACKGROUND

Mineral exploration and development, mining, and mineral processing can all create significant noise and/or vibration. Noise and vibration may result from airborne and groundbased geophysics, drilling, blasting during construction or at open pit and underground mines, ore stockpiling, screening, and crushing, handling and movement of materials on-site, emission treatment processes, fans and filtration systems, electrical substations and cooling towers, truck or rail traffic bringing consumables to the site and shipping final products from the site.

Studies have shown that there are direct links between noise and health. Problems related to noise include stress-related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption, and lost productivity for humans,⁶²¹ but

TERMS USED IN THIS CHAPTER

Affected Community
Baseline Ambient Noise
Levels
Consultation
Entity NEW
Exploration
NEW
Grievance
Ground Vibration
Lin
Peak/Linear Peak
Mineral Processing NEW
Mining NEW
Mining NEW
Mining-Related Activities
Nitigation
Noise Receptor
Offset
Operation
NEW
Peak Particle Velocity
Project NEW
Remedy
Scoping NEW
Site NEW
Stakeholder
Worker

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

⁶²⁰ SLR Consulting. 2017. Expert Environmental Guidance on Exploration Methodologies: Part Four: Drilling. p. 121. https://assets.gov.ie/76753/9a4ac3d4-6f71-412d-a013-1ac32a2128e3.pdf

⁶²¹ For example, see various documents on US EPA Noise Pollution Clearinghouse website: <u>www.nonoise.org/epa.htm</u>; Also, see various publications on World Health Organization website: <u>www.euro.who.int/en/health-topics/environment-and-health/noise/publications</u>

there are also noise-related impacts on wildlife.⁶²² Studies have also demonstrated that vibrations, such as those created by blasting, can sometimes be felt in nearby communities, and even cause damage to buildings or the contents of buildings, such as items on walls or shelves.⁶²³

Many noises and vibrations can be moderated or partially managed by employing mitigation measures to reduce a noise or vibration at its source, or by eliminating or minimizing the pathways for transmission of noise and screening sensitive receptors. Measures include installing new low noise/vibration equipment or retrofitting existing equipment, using acoustic enclosures and sound-absorbing materials to limit transmission and constructing berms and planting trees to screen sensitive receptors from noise. Vibration impacts from blasting can be mitigated, for example, by controlling charge weight diameter and charge coupling within boreholes or controlling the direction of blast initiation.⁶²⁴ Planning and timing of activities and communications with affected stakeholders are also important management measures; however, effective control may be challenging when a project or operation is located near communities.

OBJECTIVES/INTENT OF THIS CHAPTER

To preserve the health and well-being of nearby noise receptors and the amenity of properties and community values, and to protect off-site structures from vibration impacts.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

Two requirements are not relevant if blasting is not taking place (4.4.2.2.c, 4.4.2.4).

This chapter does not cover worker-related noise or vibration issues. Those are covered under IRMA Chapter 3.2— Occupational Health and Safety.⁶²⁵

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical

⁶²² U.S. National Parks Service. 2014. Annotated Bibliography – Impacts of Noise on Wildlife. <u>https://www.nhsec.nh.gov/projects/2014-04/documents/150420pastoriza.pdf</u>

⁶²³ See, for example: Victoria (Australia) State Government. Ground Vibration and Airblast Limits for Blasting in Mines and Quarries. <u>http://earthresources.vic.gov.au/earth-resources-regulation/licensing-and-approvals/minerals/guidelines-and-codes-of-practice/ground-vibration-and-airblast-limits-for-blasting-in-mines-and-quarries; and U.S. Office of Surface Mining Reclamation and Enforcement: <u>https://www.osmre.gov/programs/regulating-active-coal-mines/blasting;</u> and the Pennsylvania Department of Environmental Protect Blasting Resarch page: <u>https://www.dep.pa.gov/Business/Land/Mining/BureauofDistrictMining/SurfaceBlasting/Training/Pages/Blasting-Research-Papers-.aspx</u></u>

⁶²⁴ See e.g., Controlling the Adverse Effects of Blasting. OSMRE Presentation, available at: https://www.osmre.gov/resources/blasting/docs/WYBlasterCertModules/8AdverseEffectsBlasting.pdf

⁶²⁵ The structural vibration issues in this chapter (4.4) relate to buildings and structures. Chapter 3.2 includes job related vibration such as caused by sitting on a vibrating seat (such as operating heavy machinery) or hand vibration while working on a vibrating machine with one's hands. See e.g., <u>http://www.ohsrep.org.au/hazards/vibration/effects-of-vibration;</u> and <u>https://www.ccohs.ca/oshanswers/phys_agents/vibration/vibration_effects.html</u>

requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Noise and Vibration Requirements

4.4.1. Noise and Vibration Scoping

NOTE ON 4.4.1: REVISED. We are proposing to use the word scoping instead of screening throughout the IRMA Standard. These terms mean slightly different things in different jurisdictions.

For IRMA's purposes, we are proposing the following definition of **scoping**:

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

If this term is confusing, we are open to reverting to screening, or adopting another term altogether:

4.4.1.1. The <u>entity</u> implements a <u>scoping</u> process (or equivalent) to determine if there may be significant noise and/or vibration impacts on human or wildlife receptors from <u>mining-related activities</u>. The scoping process:

- a. Includes <u>consultations</u> with representatives from potentially <u>affected communities</u>, as well as other relevant <u>stakeholders</u>;⁶²⁶ and
- b. Scoping is updated if there are proposed changes in the project/operation that may result in a new source of noise or vibration or an increase in existing noise or vibration levels.

NOTE FOR 4.4.1.1: REVISED. This was 4.4.1.1 in the Mining Standard. We are proposing to incorporate material from the draft IRMA-Ready Standard,⁶²⁷ in particular, the addition of scoping of impacts on wildlife. It is important for companies to understand the potential impacts of noise/vibration on wildlife because those impacts can, in turn, affect the livelihood and sustenance activities of local communities.⁶²⁸

Also, 4.4.1.1.a is from the IRMA-Ready Standard. Consultations with stakeholder during scoping was added there because local community members and/or government officials or wildlife-focused NGOs can be important sources of information on wildlife (and humans) that may be sensitive to noise or vibrations. They may be able to provide input on appropriate mitigation measures (such as times of year, or times of day, etc., that are better for carrying out activities in a manner that will not create a significant impact on wildlife, or communities, etc.).

CONSULTATION QUESTION 4.4-2

Background: In the 2018 Mining Standard, existing operations were not expected to carry out noise scoping unless there was a change to the operation that could increase noise levels. If there was a noise-related complaint at the existing site, however, the operation would be required to take action as per the requirements in the rest of the chapter. We are proposing here that all sites (proposed projects and existing

⁶²⁶ Relevant stakeholders may include government biologists, wildlife conservation organizations, academic experts and community members whose quality of life may be affected by noise/vibration, or whose livelihoods or sustenance may be affected if noise/vibration has an adverse impact on wildlife.

⁶²⁷ The draft IRMA-Ready Standard for Responsible Minera Exploration and Development (2021) is available at: <u>https://responsiblemining.net/wp-content/uploads/2021/12/IRMA-Ready-Draft-1.0-December2021-All-Stages.pdf</u>

⁶²⁸ For example, see section called "Why caribou are important" in: Government of the Yukon Territory.2008. Flying in Caribou Country – how to minimize disturbance from aircraft. <u>https://www.miningnorth.com/ rsc/site-content/library/Flying in Caribou Country.pdf</u>

operations) demonstrate that they have carried out a scoping of potential noise and vibration impacts. The rationale is that without such evidence, it is difficult for entities to know if there may be impacts that are being overlooked.

Also, the 2018 Mining Standard (and this proposed updated version of the Standard) expects that noiserelated impacts on human and wildlife receptors would be considered as part of the Environmental and Social Impact Assessment (ESIA) process in Chapter 2.1 and if significant impacts are identified then mitigation options are developed as per the ESIA process. Therefore, in many cases, scoping of potential noise/vibrationrelated impacts will already have been done. However, for projects or operations that either have not/did not go through ESIA or did not do a comprehensive assessment of the range of potential impacts during the ESIA, then it seems reasonable that these issues be scoped as a standalone exercise so that all entities are held to the same expectations.

Question: Do you agree with this new approach requiring that all sites demonstrate that they have scoped noise issues? Or should a scoping only be triggered at existing operations if there is a complaint or a change in potential noise sources?

4.4.1.2. If scoping identifies that human or wildlife receptors may be significantly affected by noise from miningrelated activities, the entity documents baseline ambient noise levels in potentially affected areas, including at the location(s) of off-site receptors that are closest to the noise/vibration sources, and at locations of other relevant off-site receptors.⁶²⁹

NOTE FOR 4.4.1.2: REVISED. This was 4.4.1.2 in the Mining Standard. As per 4.4.1.1, we have added wildlife receptors to this requirement.

4.4.2. Management and Mitigation of Impacts

NOTE FOR 4.4.2: The title of this criterion is different than the 2018 Mining Standard, which referred specifically to impacts on human receptors. As mentioned in the Note for 4.4.1, we have added screening/scoping of potential impacts of noise and vibration on wildlife, and therefore, it follows to add mitigation if potential impacts are identified.

4.4.2.1. If <u>scoping</u> or other credible information there are human or wildlife <u>noise receptors</u> that may be significantly affected by noise or vibration from <u>mining-related activities</u>, a noise and vibration management plan (or equivalent) is in place and implemented that:⁶³⁰

- a. Is developed by competent professionals;
- b. Outlines measures to avoid and, where that is not possible, minimize adverse impacts related to noise and vibration. The measures in the plan are specific, measurable, linked to clearly defined outcomes, relevant, and time-bound;
- c. Provides key indicators, linked to adequate baseline data, to enable measurement of the effectiveness of avoidance, minimization and/or offsetting activities over time; and
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁶³¹
- e. Includes an implementation schedule; and

⁶²⁹ Relevant receptors should include the closest receptors to where exploration, mining or processing activities will take place, but also any others that have the potential to be affected by noise or vibrations. Topography and meteorology (e.g., prevailing wind directions, temperature inversions) should be considered, when evaluating which receptors might be relevant. (Australian Department of Industry, Innovation and Science. Leading Practice Sustainable Development Program: 3.0 Noise. <u>https://www.industry.gov.au/sites/default/files/2019-04/lpsdp-airborne-contaminants-noise-and-vibration-handbook-english.pdf</u>)

⁶³⁰ Other credible information could come from affected communities, local governments, wildlife biologists, academics, etc. and could include complaints, research studies, etc.

⁶³¹ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 4.4.2.1: NEW. This is being proposed to be more consistent with other IRMA chapters. As in other chapters, when impacts are identified, mitigation measures are developed and incorporated into a management plan.

Note that if scoping indicates that noise of vibration may potentially impact threatened or endangered <u>species</u> of wildlife, or affect those that have important biodiversity value, those impacts should be further evaluated during the biodiversity assessment process (see Chapter 4.6), and mitigation for those species could be incorporated into the Biodiversity Management Plan.

4.4.2.2. If <u>scoping</u> or other credible information indicates that there are residential, institutional or educational <u>receptors</u> that may be affected by noise from <u>mining-related activities</u>, the <u>entity</u> demonstrates that noise levels measured at the nearest off-site receptors do not exceed a maximum one-hour LAeq (dBA) of 55 dBA during the hours of 07:00 to 22:00 (i.e., day) and 45 dBA at other times (i.e., night), with the following exceptions: ⁶³²

- a. The hours during which elevated noise levels are allowed may be adjusted if the entity can justify that alternative hours are necessary and/or appropriate because of local, cultural, or social norms;
- b. If <u>baseline ambient noise levels</u> exceed 55 dBA (day) and/or 45 dBA (night), then noise do not exceed 3 dB above <u>baseline</u> as measured at relevant off-site noise receptors; and/or
- c. During periods of blasting, the dBA levels may be exceeded, as long as the other requirements in 4.4.2.4 are met.

NOTE FOR 4.4.2.2: This combines requirements 4.4.2.1 and 4.4.2.2 from the 2018 Mining Standard.

4.4.2.3. If <u>scoping</u> or other credible information indicates that there are only industrial or commercial <u>receptors</u> that may be affected by noise from <u>mining-related activities</u>, the <u>entity</u> demonstrates that noise levels measured at the <u>project/operation</u> boundary, or nearest industrial or commercial receptor do not exceed 70 dBA.

4.4.2.4. If scoping or other credible information indicates that noise or vibration from blasting activities may have an adverse impact on human noise receptors blasting operations are undertaken as follows:⁶³³

- a. A maximum level for air blast overpressure of 115 dB (Lin Peak) is exceeded for no more than 5 % of blasts over a 12-month period;
- b. <u>Ground vibration (peak particle velocity</u>) neither exceeds 5 mm/second on 9 out of 10 consecutive blasts, nor exceeds 10 mm/second at any time; and
- c. Blasting only occurs during the hours of 09:00 to 17:00 on traditionally normal working days unless:
 - i. Alternative hours are necessary and/or appropriate because of local, cultural, or social norms; and/or
 - ii. Potentially affected human receptors have given voluntary approval for the expanded blasting hours.

NOTE FOR 4.4.2.4: This requirement consolidates two blasting-related requirements from the 2018 Mining Standard (4.2.2.4 and 4.2.2.5).

CONSULTATION QUESTION 4.4-3: As with the 2018 Mining Standard, the blasting measures are only required if there are human receptors who may be affected by the noise or vibrations from blasting. While wildlife may be affected by blasting, it is not clear if the measures outlined in 4.4.2.4 would even prevent impacts on them.

⁶³² The dBA noise limits in 4.4.2.2 and 4.4.2.3 are from IFC Environmental, Health and Safety General Guidelines (2007). As per IFC guidelines, the dBA decibel levels for receptors should be measured out of doors. (IFC. 2007. General Environmental, Health and Safety Guidelines. Noise Management. p. 53 (footnote 54) <u>https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines</u>)

⁶³³ These requirements are based on the Australia and New Zealand Environment Council's "Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration." ANZEC, 1990. Available at: <u>www.environment.nsw.gov.au/resources/noise/anzecblasting.pdf</u>

If there are special mitigation measures that can reduce blasting-related impacts on wildlife (for example, maybe cessation of blasting during particularly sensitive calving times, etc.) then it is our presumption that those specific actions would be incorporated into the management plan (requirement 4.4.2.1).

Do you agree with this approach?

4.4.2.5. If the <u>entity</u> receives a credible, supported <u>grievance</u> that noise or vibration is adversely impacting human or wildlife <u>noise receptors</u>, the entity:

- a. Consults with the affected <u>stakeholder</u> and other relevant stakeholders and experts to develop <u>mitigation</u> strategies or other proposed actions to resolve the <u>grievance</u>;
- b. Incorporates any mitigation actions in the management plan (see 4.4.2.1); and
- c. Documents the grievance, the outcome and remedy, and all communications with complainant.

NOTE FOR 4.4.2.5: This combines 4.4.2.5 and 4.4.2.6 from the 2018 Mining Standard. We have added in that any agreed mitigation actions go into the management plan, as this is the logical place for those actions to be recorded. We have changed the term from complaint to grievance to be more consistent with terminology in other chapters. Grievance is a defined term, and as in the definition, it includes complaints.

4.4.3. Disclosure of Information

NOTE FOR 4.4.3: REVISED. This name of this criterion heading has changed from 'Reporting' to 'Disclosure of Information,' as the latter better represents what is being required below.

4.4.3.1. When <u>stakeholders</u> make a noise-related complaint, the <u>entity</u> provides relevant noise data and information to them.

NOTE FOR 4.4.3.1: This was included in requirement 4.4.3.1 in the 2018 Mining Standard.

4.4.3.2. A publicly available access to information policy (or equivalent) is in place that commits the entity to providing <u>stakeholders</u> with noise data and information upon request.⁶³⁴

NOTE FOR 4.4.3.2: REVISED. This was included in requirement 4.4.3.1 in the 2018 Mining Standard. Previously, the language was "noise data and information shall be made available to stakeholders upon request."

We have separated out this component, and we have changed the wording in 4.4.3.2 to require that the entity have a policy in place to make the information available to stakeholders upon request.

There were numerous places in the IRMA Standard that mentioned provision of information to stakeholders "upon request." Those requirements have proven very difficult to audit as written, because if the auditee tells auditors that there were no requests for information then the auditor has two choices – mark it as fully meets (which isn't accurate, since there is no evidence, other than perhaps a verbal guarantee, that if asked the entity would provide the information) or mark it as not relevant (which is more accurate, since there were not requests, but is problematic because if stakeholders are not aware that they can request information, then there may never be any requests).

In Chapter 1.2, we are proposing that instead of the approach in the 2018 Mining Standard, which was essentially a blanket statement saying "information shall be made available upon request," that entities have in place a publicly available "access to information" or similar policy that commits the entity to providing information to stakeholders if requests are made, and that this policy be communicated to stakeholders (see Note for requirement 1.2.4.3).

⁶³⁴ As per Chapter 1.2, requirement 1.2.4.3, an access to information policy is proposed in the updated IRMA Standard. It is expected that this policy could include the relevant provisions related to stakeholder access to entity-generated information and data on noise and vibration.

NOTES

To be developed, pending changes to the chapter.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Baseline (Ambient Noise Levels)

Ambient noise level is the total noise from all sources at a given location and time. For the purposes of this chapter, baseline ambient noise is the background sound pressure level at a given location without the presence of noise sources of interest (in this case, sources of interest would be noise related to a mining and/or mineral processing operation).

NEW. Added to Chapter 4.4.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Ground Vibration

The level of vibration (peak particle velocity) measured in millimetre/second in the ground. The measurement point should be at least the longest dimension of the foundations of a building or structure away from the building or structure, if possible. If this is not possible, the measurement point should be as far from the building or structure as is practical.

Source: Adapted from Victoria (Australia) State Government. Ground Vibration and Airblast Limits for Blasting in Mines and Quarries.

Lin Peak/Linear Peak

The maximum level of air pressure fluctuation measured in decibels without frequency weighting.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact.

Noise Receptor

A point of reception or (human) receptor may be defined as any point on the premises occupied by people where extraneous noise and/or vibration are received. Examples of receptor locations may include permanent or seasonal residences; hotels/motels; schools and daycares; hospitals and nursing homes; places of worship; and parks and campgrounds, and similar public spaces and commons. For wildlife, receptor locations may include wildlife habitat for sensitive animal species.

Offset

An activity undertaken to counterbalance a significant residual impact.

Peak Particle Velocity

The instantaneous sum of the velocity vectors (measured in millimetres per second) of the ground movement caused by the passage of vibration from blasting.

Remediation/Remedy (including in relation to human rights impacts)

Remediation and remedy refer to both the processes of providing remedy for an adverse (human rights) impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Chapter 4.5 Greenhouse Gas Emissions and Energy Consumption

NOTES ON THIS CHAPTER: There are significant changes between this proposed chapter and the 2018 Mining Standard. The changes listed below are being proposed for two primary reasons. First, many stakeholders have commented that IRMA's current chapter does not reflect best practices found in other standards. And second, in the five years since IRMA's 2018 Standard has been in effect, critical actions to limit warming to around 1.5°C and avoid the worst effects of climate change continue to lag behind what is necessary. The mining industry, as with the rest of the world, must make rapid progress during this decade, and IRMA is seeking to promote positive change by adding and strengthening its requirements.

The proposed changes have been informed by IRMA Expert Working Group discussions, a review of requirements in other standards and guidance applicable to the mining and minerals sector, and a survey to mining companies as part of the M3 Standards Partnership, a joint project of IRMA, ResponsibleSteel, the Responsible Jewellery Council and the Mining Association of Canada.

Proposed additions and changes:

- This chapter (and title) has been expanded and now integrates requirements related to energy consumption and efficiency.
- Added requirements related to design consideration (embedding energy efficiency, and minimization of energy consumption and greenhouse gas emissions at the design stage) (4.5.1.1).
- Timebound requirements have been introduced to calculate and potentially establish targets for reducing upstream Scope 3 emissions (4.5.2.1.c), calculate and report downstream Scope 3 emissions (4.5.2.1.d).
- Inclusion of carbon losses from land use changes in calculation of emissions (4.5.3.1.b).
- Evaluation against targets is now required, with appropriate corrective actions implemented as necessary (4.5.4.2).
- Specific requirements related to the use and characteristics of acceptable carbon offsets have been added (4.5.5).
- Broadened the scope of transparency and public disclosure requirements (4.5.6).
- See notes on each requirement for more rationale.

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

BACKGROUND

Humans are increasingly influencing the climate and the earth's temperature by burning fossil fuels, cutting down rainforests and raising livestock.⁶³⁵ These activities release gases such as carbon dioxide, methane, nitrous oxide, ozone and a few others that have the ability to trap heat in the Earth's atmosphere. Many of these gases occur naturally, but human activity is increasing the concentrations of some of them in the atmosphere⁶³⁶ The need to reduce emissions is urgent: the Intergovernmental Panel on Climate Change (IPCC) recently noted that to limit warming to around 1.5°C (2.7°F) requires global greenhouse gas emissions to peak before 2025 at the latest, and be

⁶³⁵ European Commission website: "Causes of Climate Change." https://ec.europa.eu/clima/change/causes_en

⁶³⁶ Ibid.

reduced by 43% by 2030.⁶³⁷ As a result, the United Nations Framework Convention on Climate Change has spurred the establishment of targets for the reduction of greenhouse gas emissions that are applicable in nearly 200 countries.⁶³⁸

Mines and mineral processing operations are major energy consumers and emitters of greenhouse gases. These operations therefore have an opportunity and responsibility to manage their energy use and carbon emissions, and the potential exists for these operations to consume less energy, increase the proportion of energy used that comes from renewable sources, emit less carbon from ongoing activities, capture carbon already emitted to the atmosphere, and improve the entity's bottom line.

There are three categories of greenhouse gas emissions from mines and mineral processing operations: 1) Scope 1 or direct emissions resulting from fossil fuel use in operations, transportation of ore, feed and waste materials and products, and non-renewable electricity generation at remote sites, and fugitive emissions; 2)

TERMS USED IN THIS CHAPTER

Affected Community
Baseline
Carbon Offset
NEW
Competent Professionals
Consultation
Corporate Owner
CO₂e NEW
Credible
Method/Methodology NEW
Energy
Consumption NEW
Entity NEW
Exploration
NEW
Free, Prior and Informed Consent
Indigenous Peoples
Mineral Processing NEW
Mining NEW
Mitigation Hierarchy
Operations
NEW
Project NEW
Revegetation
Site NEW
Scope 1 NEW
Scope 2 NEW
Scope 3 NEW
Stakeholder
Suppliers

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

Scope 2 or indirect emissions associated with electricity purchased from third-party service providers and 3) Scope 3 emissions, which are defined as all other indirect emissions not included in Scope 2 that occur in the upstream and downstream value chain of the operation. Mines and mineral processing operations can manage Scope 1 and Scope 2 emissions and at the same time cut costs and improve competitiveness by adopting best practices in energy sourcing, efficiency, and emissions reductions. Until relatively recently, the focus in the mining sector has been on Scope 1 and Scope 2 emissions. For many operations, however, Scope 3 emissions are substantially larger than then cumulative total of Scope 1 and Scope 2. Therefore, progress must also be made on this third category of emissions if the mining sector is to successfully decarbonize its operations.

OBJECTIVES/INTENT OF THIS CHAPTER

To minimize contribution to climate change impacts through increased energy efficiency, reduced energy consumption, reduced emissions of greenhouse gases from direct and indirect sources, and increased capture of carbon already emitted to the atmosphere.

NOTE ON OBJECTIVES: REVISED. Now incorporates energy-related issues.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

⁶³⁷ Intergovernmental Panel on Climate Change. 2022. "The evidence is clear: the time for action is now. We can halve emissions by 2030." https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease/

⁶³⁸ For example, see: "Nationally appropriate mitigation commitments or actions by developed country Parties," United Nations Climate Change website. <u>https://unfccc.int/topics/mitigation/workstreams/nationally-appropriate-mitigation-actions</u>

CRITICAL REQUIREMENTS IN THIS CHAPTER

There is a policy that includes targets for reducing direct and indirect greenhouse gas emissions, reducing energy consumption, and increasing the proportion of energy consumed from renewable sources (4.5.2.1).

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Greenhouse Gas Emissions and Energy Consumption Requirements

4.5.1. Technology Selection

4.5.1.1. The <u>entity</u> demonstrates that energy efficiency, minimization of <u>energy consumption</u> and minimization of greenhouse gas emissions are material considerations in the selection of energy sources, <u>mining</u> and processing methods, technologies and equipment, and the design of buildings and <u>facilities</u> at proposed <u>projects</u> and when there are opportunities to replace or add technology or change processes at <u>operations</u>, and documents its rationale for the final selections.

NOTE FOR 4.5.1.1: This is a NEW requirement. It was proposed in the draft IRMA-Ready Standard for Exploration, and is being carried over into this proposed update to the 2018 Mining Standard. One addition from what was proposed in IRMA-Ready is that entities also document their rationale for technology, so that there is something that can be provided as evidence of how decisions were made on technology selection.

We are proposing that proposed projects be required to demonstrate how energy efficiency, energy consumption and greenhouse gas emissions have been considered in technology selection. Ideally this would be carried out during the pre-feasibility and feasibility phases of project development, as this is time when there are still excellent opportunities for eliminating and minimizing GHG emissions and energy consumption through the selection of technologies and mining/processing techniques, design of buildings, facilities, and processes.⁶³⁹

However, while new projects have the best opportunity to utilize the most energy efficient and low emissions technology, options also exist at operations when they are adding or replacing equipment or processes. While not requiring that energy efficient and low emission technologies be used in all cases, we are proposing that, at minimum, sites are required to demonstrate that they have carried out a thorough analysis and are not choosing equipment and processes based on, for example, economics alone.

It may be difficult to assess whether minimization of energy consumption and greenhouse gas emissions have been given due weight in the final selection of technologies and practices. Perhaps if companies can demonstrate that they have investigated and calculated the energy use and greenhouse gas emissions of potential options, and have selected more efficient, less polluting technologies and processes, even though some of these approaches might have had higher upfront costs, then that could be sufficient evidence that they have integrated "clean energy" concerns into their technology choices and design processes.

⁶³⁹ Igogo, T., Loweder, T., Engel-Cox, J., Newman, A and Awuah-Offei, K. 2020. Integrating Clean Energy in Mining Operations: Opportunities: Challenges and Enabling Approaches. (Joint Institute for Strategic Energy Analysis). p. vii. <u>https://www.nrel.gov/docs/fy20osti/76156.pdf</u>

CONSULTATION QUESTION 4.5-1: Do you agree with adding this requirement? Are there other ways a company might demonstrate it has given the minimization of energy use and greenhouse gas emissions due weight in its mine design processes? Should this requirement be limited to proposed projects, or is it reasonable to create a similar requirement that applies to existing operations that are adding or replacing equipment or processes?

4.5.2. Greenhouse Gas and Energy Policy

NOTE FOR 4.5.2: This criterion used to be Greenhouse Gas Policy. It has been revised to reflect the addition of energy-related requirements in this chapter.

4.5.2.1. (Critical Requirement)

A policy (or equivalent) is in place that includes:

- a. A commitment to manage <u>energy consumption</u> and greenhouse gas emissions in a manner that aligns with the goals of the Paris Agreement;⁶⁴⁰
- b. Quantitative timebound short-term (<5 years), medium-term (5-15 years) and long-term (>15 years) sitebased targets,⁶⁴¹ and targets set by <u>corporate owners</u> for reducing <u>Scope 1</u> and <u>Scope 2</u> greenhouse gas emissions in absolute and intensity terms that demonstrably contribute to the goals of the Paris Agreement;⁶⁴²
- c. A timebound commitment to calculate⁶⁴³ and publicly report upstream <u>Scope 3</u> emissions, and, if upstream Scope 3 greenhouse gas emissions represent more than 40% of a site's total emissions, establishing quantitative, timebound short-term, medium-term and long-term site-based targets⁶⁴⁴ (absolute or intensity) for reducing upstream Scope 3 emissions that demonstrably contribute to the goals of the Paris Agreement; ⁶⁴⁵
- d. A timebound commitment to calculate and publicly report downstream Scope 3 emissions;
- e. A site-based energy reduction target; and
- f. A site-based target for increasing the proportion of energy consumed that comes from renewable sources.

NOTE FOR 4.5.1.1: REVISED. This was a requirement 4.5.1.1 in the 2018 Mining Standard.

⁶⁴⁰ In 2015 a legally binding international treaty was reached by world leaders in Paris (known as 'the Paris Agreement'), which set long-term goals to guide all nations, including substantially reducing global greenhouse gas emissions to limit the global temperature increase in this century to 2 degrees Celsius, while pursing efforts to limit the increase further, to 1.5 degrees. (Source: United Nation web site: "The Paris Agreement." <u>https://www.un.org/en/climatechange/paris-agreement</u>)

⁶⁴¹ IRMA's definitions of short-term (<5 years), medium-term (5-15 years) and long-term (>15 years) are aligned with those defined in the ResponsibleSteel International Standard Version 2.0 (published 14 September 2022). Note that for the long-term targets, the final date cannot be beyond 2050, which is the target date for achievement of net-zero carbon emissions established by the Paris Agreement (middle of the 21st century, which is taken to mean 2050).

⁶⁴² target for reductions in absolute greenhouse gas emissions is defined by a reduction in absolute (or total) emissions over time (e.g., reduce total greenhouse gas emissions by 20% below 2007 levels by 2015). Scope 1 emissions are the direct emissions from the mineral processing operation (or company, if setting targets on a corporate-wide basis). Scope 2 emissions are the indirect emissions from consumption of purchased electricity, heat, and steam. Scope 3 are other indirect emissions. See GHG Protocol Standard for more details. https://ghgprotocol.org/corporate-standard

 $[\]label{eq:constraint} Emissions intensity is calculated as_tonne of GHG equivalents (CO_2e) per unit of product. The site must be able to clearly demonstrate how the targets contribute to the achievement of the Paris Agreement.$

⁶⁴³ The GHG Protocol notes "Direct measurement of GHG emissions by monitoring concentration and flow rate is not common. More often, emissions may be calculated based on a mass balance or stoichiometric basis specific to a facility or process. However, the most common approach for calculating GHG emissions is through the application of documented emission factors. These factors are calculated ratios relating GHG emissions to a proxy measure of activity at an emissions source". Based on this, IRMA refers to the calculation of Scope 1, Scope 2 and Scope 3 emissions (as the most widely adopted approach), but will accept direct measurement data where this is based on a credible methodology.

⁶⁴⁴ IRMA's definition of short-term (<5 years), medium-term (5-15 years) and long-term (>15 years) are aligned with those defined in the ResponsibleSteel International Standard Version 2.0 (published 14 September 2022).

⁶⁴⁵ For example, see Science Based Targets Initiative. May 23, 2018. SBTi Criteria and Recommendations. TWG-INF-002 | Version 3.0. pp. 4 – 6. <u>https://sciencebasedtargets.org/resources/legacy/2017/02/SBTi-criteria.pdf</u>

4.5.2.1.a. is NEW. While the 2018 Mining Standard expected that targets for Scope 1 and 2 emissions be set, the targets were not tied to any overarching goal. Since that time, there has been a growing expectation that all companies across every sector, and all assets within a company should play a positive part in achieving netzero carbon emissions according to the timeline defined in the Paris Agreement. Mining, with its central role in providing primary critical minerals and metals, must ensure that meeting growing demand does not undermine the achievement of the Paris Agreement goals. In this context, IRMA now requires sites to commit to managing energy use and greenhouse gas emissions in a way that supports the Paris Agreement.

We are proposing to define **energy consumption** as:

The total use of energy from fossil fuel and non-fossil fuel sources (including renewables), whether delivered in the form of electricity, steam, heat (combustion) or cooling. (See proposed glossary additions at the end of the chapter)

4.5.2.1.b is REVISED – the 2018 mining standard says "setting meaningful and achievable targets," but the proposed language is now more explicit and refers to targets within defined short-, medium- and long-term timelines that clearly contribute to the goals of the Paris Agreement. IRMA's definitions of short-term (<5 years), medium-term (5-15 years) and long-term (>15 years) are aligned with those defined in the ResponsibleSteel International Standard Version 2.0 (published 14 September 2022. IRMA has also added a timebound consideration, so that the achievement of a site's long-term target cannot occur beyond the date set for net-zero by the Paris Agreement (2050). This means that for sites commencing operations after 2035, 'long-term' will be the interval to 2050 (rather than >15 years). Also, while there was an option in the 2018 Mining Standard for targets to apply to the site OR corporate level, we are proposing here that site-level and corporate-level targets be set.

4.5.2.1.c is NEW. There was general agreement in the Expert Working Group on greenhouse gases convened by IRMA about the well-documented challenges of measuring and reporting Scope 3 emissions. At the same time, it is generally agreed that companies need to not only reduce their own direct emissions, but also use their leverage to reduce emissions in their upstream and downstream supply chains. Alongside this, there is recognition of the significance of Scope 3 emissions for many (and possibly, most) mine and mineral processing sites, where Scope 3 emissions can be substantially larger than collective Scope 1 and 2 emissions.

There is a move towards improved accounting and reporting of Scope 3 emissions, for example:

- ICMM is currently working with its members to identify a common approach and methodology to account for and report Scope 3 emissions (which implies it will move to a reporting requirement in the future).
- TSM requires some reporting of Scope 3 emissions.
- The Taskforce on Climate-related Financial Disclosures (TCFD) explicitly recommends that organizations disclose Scope 3 emissions associated with their business.

Calculating and reporting of Scope 3 emissions have moved beyond being an aspirational concept and in this context, IRMA believes the time is right to include requirements related to (at least) the calculation of Scope 3 emissions, with an initial focus on the upstream (where sites are likely to have better access to relevant data and greater opportunities to influence or select suppliers to reduce Scope 3 emissions). Where Scope 3 emissions are a significant proportion of overall emissions (set at >40% to align with the threshold established by the Science Based Targets initiative (SBTi), requirements are extended to establishing reduction targets for Scope 3 (in much the same way this is done in 4.5.2.1.b for Scopes 1 and 2).

4.5.2.1.d is NEW. Downstream Scope 3 emissions are more complex, and sites are likely to have only limited access to incomplete sets of relevant data and less leverage to influence how mineral and metals sold by them are manufactured into an enormous range of end products. Therefore, IRMA does not currently expect companies and sites to calculate and publicly report downstream Scope 3 emissions (or to set targets for reducing downstream Scope 3 emissions, irrespective of their size). It does, however, expect companies and sites to establish a timeframe within with such calculation and reporting will commence; the timeframe should give the company or site sufficient time to develop or identify a consistent and transparent calculation methodology (potentially in partnership with commodity- or sector-level partners, or, for example, using the

outputs of cross-sectoral initiatives). The timeframe should not be artificially inflated, however, to delay implementation of calculation or reporting unnecessarily.

The energy consumption target (4.5.2.1.e) and renewable energy-use target (4.5.2.1.f) are NEW. Subrequirement I is being added because other mining standards include energy use targets, so we are filling that gap to align better with others.

CONSULTATION QUESTION 4.5-2

Background: There is some debate about whether reduction targets should relate to absolute emissions or emissions intensity.

An intensity-based target means sites can have higher absolute emissions if production is rising. In a world where demand for certain commodities (e.g., lithium, cobalt and copper) is forecast to rise steeply in the near- and medium-term, this could lead to a scenario of falling greenhouse gas emissions intensity in the mining sector, but rising contribution to global emissions by the industry.

If absolute emissions are used as the basis of reduction targets, the contribution to climate change can be more effectively managed, but this may be challenging for existing operations that are ramping up production to meet market demands, particularly in the short-term (when it may not be possible to immediately make technical and operational changes to reduce GHG emissions). There is also concern that absolute targets could potentially reward operations with high historical emissions, as this establishes a higher baseline for which more reduction opportunities exist, so such sites may gain the appearance of very positive progress off the back of poor performance in the past.

Given the uncertainty about whether one measure can always be considered the most appropriate, IRMA proposes to require both absolute and intensity targets as they speak to different aspects of the bigger picture and both are needed to fully understand a site's performance.

Question: Do you agree with the proposal to require absolute emissions AND intensity targets? If this is the chosen approach, what would realistic targets and timeframes be for each measure and how should they be linked?

CONSULTATION QUESTION 4.5-3

Background: We are proposing a target related to use of renewable energy (sub-requirement 4.5.2.1.f), in recognition that a deep reduction in the burning of fossil fuels must be part of any company's strategy if we are to limit the effects of climate change. For large industrial operations like mines and mineral processing facilities, a two pronged-approach of reducing overall energy use, and over time increasing the percentage of energy from renewables will be most effective.

The two new requirements are complementary as reducing energy use remains important even if consumed energy is solely derived from renewable sources (i.e., unnecessarily high consumption of renewable energy from external parties limits the availability for other consumers users, whose reliance on non-renewable sources increase, with knock on emission impacts).

We recognize that in some locations, there may be limited options for buying renewable energy sourced from external parties, but there should always be an opportunity for a site to produce its own energy from solar, wind or water sources, for example. On this basis, IRMA considers at this stage that it is reasonable to require companies to set renewable energy use targets of some sort (and not allow them to say this is 'not relevant').

Question: Do you agree with the addition of a renewable energy target? If not, why not?

4.5.2.2. The policy is reviewed annually, and revised as needed, with a clear review/revision history.⁶⁴⁶

NOTE FOR 4.5.2.2: This was 4.5.1.1.d in the 2018 Mining Standard. We are proposing to require a more frequent review cycle partly because a policy review is not particularly onerous, but importantly because the need to review and adapt reduction targets more frequently than every five years (the expectation in the 2018 Standard) is being driven by the need to close the gap between current actions and the actions necessary to meet the Paris Agreement goals.⁶⁴⁷

4.5.3. Greenhouse Gas Emissions and Energy Consumption Quantification

NOTE FOR 4.5.3: This criterion used to be 'Emissions Quantification.' It has been revised to reflect the addition of energy-related requirements in this chapter.

4.5.3.1. For Scope 1 and Scope 2:

- a. Emissions of all relevant greenhouse gases associated with the site are calculated using credible methodologies;
- b. For Scope 1, the calculations account for emissions arising from land use changes and reductions in land carbon stock arising from the site's direct activities;
- c. All calculations are verified by a credible third-party expert.

NOTE FOR 4.5.3.1: REVISED. Quantification of greenhouse gas emissions was addressed in requirement 4.5.2.1 in the 2018 Mining Standard.

4.5.3.1.b is a NEW expectation. It is being proposed so that the contributions from land clearing (and the associated loss of vegetation and potential degradation of soil resources) are not overlooked in the GHG accounting. This will be particularly important for proposed mines (and is included in <u>Annex 2.1-B</u> in Chapter 2.1 as something to be scoped during ESIA), but also for expansions of existing operations that require the clearing, degradation or burial of previously undisturbed land and its associated soils and flora.

In both 4.5.3.1 and 4.5.3.2, we refer to using 'credible methodologies,' The 2018 Mining Standard specifically named the Greenhouse Gas Protocol Corporate Standard and the Global Reporting Initiative's GRI 305 emissions reporting standards as methods that could be followed in calculating emissions. Rather than referring to specific methods, we are now proposing that any credible methodology can be used. We will still provide some examples of credible methodologies in guidance.

We are proposing to define credible method/methodology as:

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Also, in both 4.5.3.1 and 4.5.3.2, we have added a NEW expectation that the emissions calculations be verified by a credible third-party expert. This is similar to an expectation in the Mining Association of Canada's Toward Sustainable Mining Climate Change protocol. That protocol requires that Scope 1, 2 and 3 data are independently assured for accuracy in order to meet their higher achievement levels of AA and AAA levels (not required for levels C, B, or A).⁶⁴⁸

CONSULTATION QUESTION 4.5-4: Do you have any suggestions of other methodologies for calculating Scope 1, Scope 2 and Scope 3 emissions that could be added as examples in IRMA Guidance?

⁶⁴⁶ Revisions might be needed, for example, if there are significant changes to site-based activities, new technologies become available, or there are newly identified opportunities for reductions in energy consumption and greenhouse gas emissions or increases in energy efficiency and use of energy from renewable sources.

⁶⁴⁷ See, for example, UNEP's annual Emissions Gap Report (available at <u>https://www.unep.org/resources/emissions-gap-report</u>), which in 2022 noted "the international community is falling far short of the Paris goals, with no credible pathway to 1.5°C in place".

⁶⁴⁸ Mining Association of Canada. Toward Sustainable Mining Climate Change Protocol. p. 10. <u>https://mining.ca/wp-content/uploads/dlm_uploads/2023/04/Climate-Change-Protocol-English.pdf</u>

CONSULTATION QUESTION 4.5-5

Background: A question was raised during the Expert Working Group discussions about prioritizing direct measurement of emissions over calculations, due to lack of confidence in the quality of emissions factors. The GHG Protocol notes "Direct measurement of GHG emissions by monitoring concentration and flow rate is not common. More often, emissions may be calculated based on a mass balance or stoichiometric basis specific to a facility or process. However, the most common approach for calculating GHG emissions is through the application of documented emission factors. These factors are calculated ratios relating GHG emissions to a proxy measure of activity at an emissions source."

Question: Are you aware of trends in use of direct measurements for particular greenhouse gas emissions? If so, what are the methods being used to do so, and what are the main limitations in the use of those approaches?

4.5.3.2. For Scope 3:

- a. A screening exercise is completed to determine relevant upstream and downstream Scope 3⁶⁴⁹ categories using credible methodologies according to the timebound commitments noted for upstream and downstream Scope 3 emissions in 4.5.2.1.c and 4.5.2.1.d respectively;
- b. Scope 3 emissions of all relevant greenhouse gases and relevant categories of emissions associated with the site are calculated using credible methodologies according to the timebound commitments noted for upstream and downstream Scope 3 emissions in 4.5.2.1.c and 4.5.2.1.d respectively. If a site's upstream Scope 3 emissions represent more than 40% of the site's total emissions, a Scope 3 target is required (see 4.5.2.1.c); and
- c. All calculations are verified by a credible third-party expert.

NOTE FOR 4.5.3.2: This is a NEW requirement. We are proposing that Scope 3 emissions be calculated, as this aligns with the target-setting requirement for upstream emissions in the proposed 4.5.2.1.c. However, the timing of the calculation of Scope 3 emissions will be expected to occur according to the timebound plans in 4.5.2.1 c and d for upstream and downstream emissions, respectively. At present, no target is envisaged for <u>downstream</u> Scope 3 emissions.

This new requirement is based on earlier discussions with IRMA's multi-stakeholder GHG Working Group and a review of the status of Scope 3 emissions in other mineral and metal ESG standards. While there is no single consistent viewpoint on how companies and sites should calculate and report Scope 3 emissions, there is a developing consensus that for the mining industry, Scope 3 is too significant in too many cases for Scope 3 requirements to be deferred any longer. IRMA is seeking to balance urgency and pragmatism, introducing requirements related to Scope 3 while acknowledging that sites will require time to define, develop and implement the necessary systems for data acquisition and management.

CONSULTATION QUESTION 4.5-6: Has IRMA struck an appropriate balance between driving progress on Scope 3 emissions with creating the necessary breathing space for sites to work towards conformance within a reasonable timeframe?

4.5.3.3. <u>Energy consumption</u> associated with the <u>site</u> is measured using a <u>credible methodology</u>, and data are disaggregated into:

- a. Energy generated by the site from fossil fuels and consumed by fixed and mobile equipment (collectively, sources of Scope_1 emissions);
- b. Acquired and consumed electricity, steam, heat, or cooling (collectively, sources of Scope 2 emissions);
- c. Energy derived from renewable sources purchased from external suppliers; and
- d. Energy derived from renewable sources generated by the site.

⁶⁴⁹ The timing of Scope 3 calculations will be according to the timebound plans in 4.5.1.1.c and 4.5.1.1.d for upstream and downstream emissions, respectively.

NOTE FOR 4.5.3.3: NEW. The 2018 Standard did not include energy quantification. The proposed disaggregated information will be necessary in order to conform with other energy-related requirements in this chapter (and therefore, this disaggregation does not imply additional effort on the part of the site).

4.5.3.4. GHG emissions intensity and energy intensity are calculated based on the mass of final products from the site. 650

NOTE FOR 4.5.3.4: NEW. We are proposing that intensity be calculated on an annual basis as follows:

annual tonnage of GHG equivalents (CO₂e)

(Examples include tonnes CO₂e/ounce of gold, or tonnes CO₂e/tonne of refined copper)

Energy intensity = _____total annual energy consumed (with non-electrical energy converted to MWh equiv.)

total annual mass of product produced in that year (not sold)

(Examples include MWh/ounce of gold or MWh/tonne of refined copper)

Sites, of course, would be welcome to perform additional calculations using other input and intermediate materials and output measures, such as the value of the product, but for IRMA's purposes, comparability between sites is important, and calculation of intensity using the mass of product is the most commonly used approach. For example, emissions and energy intensities may be calculated for the mass of input or intermediate materials, but these calculations would be in in addition to, rather than instead of, intensities based on the mass of final products.

Mass units would be expected to be appropriate to the typical annual product output (e.g., could be measured in tonnes, ounces or other).

See <u>Annex 4.5-A</u> for examples of intensity metrics for different mineral commodities. Comments on the content of this Annex, and also the approach taken in 4.5.2.5 are welcome.

CONSULTATION QUESTION 4.5-7: Do you agree with the proposed method(s) of reporting GHG intensity and energy intensity? If not, please suggest what metrics would be more appropriate, and why.

4.5.4. Greenhouse Gas and Energy Management

NOTE FOR 4.5.4: The name of the criterion has changed. It was 'Emissions Reduction Strategies' in the 2018 Mining Standard.

Also, we are proposing to delete requirement 4.5.3.3 from the 2018 Mining Standard, which required that the entity demonstrate that greenhouse gas reductions strategies had been investigated and documented. To get to the point of outlining actions to reduce emissions in the revised 4.5.4.1.a, below, the entity will necessarily have investigated options and IRMA is proposing to place greater emphasis on action (implementation) than the underpinning investigations.

4.5.4.1. A site-level management plan is in place and implemented that:

- a. Outlines specific measures and actions to achieve:
 - i. The site-level Scope 1, Scope 2 and Scope 3 greenhouse gas reduction targets set out in the policy;
 - ii. The site-level energy reduction targets set out in the policy; and

⁶⁵⁰ Mass units shall be appropriate to the final product (e.g., tonnes, ounces). See <u>Annex 4.5-A</u> for examples.

- iii. The site-level targets for the proportion of energy consumed at the site that comes from renewable sources;
- b. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁶⁵¹
- c. Includes an implementation schedule; and
- d. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 4.5.4.1: REVISED. This was 4.5.3.1 in the 2018 Mining Standard. We have updated this requirement to be more consistent with management plan expectations in other IRMA chapters.

4.5.4.2. On a yearly basis, the entity:

- a. Evaluates the effectiveness of its actions to reduce greenhouse gas and <u>energy consumption</u> and increase use of renewable energy;
- b. Determines if the site is on track to meet the targets in its policy; and
- c. If the site is not on track with its targets, the management plan is updated with timebound corrective actions that will enable the site to still meet its policy targets and the goals of Paris Agreement.

NOTE FOR 4.5.4.2: REVISED. This was requirement 4.5.3.2 in the 2018 Mining Standard. That requirement stipulated that progress toward emissions reduction targets be demonstrated. We have added that progress toward the (new) energy and renewables targets also be demonstrated.

Also, we have added a step to evaluate the effectiveness of the actions that are implemented (a similar step in other IRMA chapters), since that will be necessary for determining progress on targets and have added that the entity develop and implement corrective actions if current actions are not enough to meet targets.

4.5.5. Carbon Offsets

NOTE: This is a NEW criterion. Based on the literature, it appears that carbon offsets can play a valid role in the transition to a low carbon economy but should be an option of 'last resort' that is only pursued once all reasonable opportunities to reduce emissions at source have been implemented.

A range of approaches to carbon offsets is apparent in different ESG standards. Some standards are silent on the concept of offsets, others focus on transparency in the reporting of offset design, implementation and credibility, and some exclude offsets from calculations of absolute emissions or emissions intensity.

Rather than stay silent on the use of offsets, IRMA is proposing to add criterion 4.5.5 to clearly articulate expectations related to the use of offsets when developed at the site. See Consultation Question 4.5-9, below, regarding offsets purchased in the form of carbon credits (and similar mechanisms) from third party providers.

CONSULTATION QUESTION 4.5-8: Do you agree with the proposed approach to offsets? If not, what would you change and why?

CONSULTATION QUESTION 4.5-9

Background: As well as being directly involved in the design and implementation of a carbon offset (or commissioning the same) at its site or at a remote location, an entity may choose instead to purchase carbon credits to offset its emissions. Credits are certificates representing quantities of greenhouse gas emissions that have been kept out of the air or removed from it by a third party.

Different international bodies and agencies assign a range of strengths and weaknesses to the use of carbon credits and the extent to which these can effectively limit greenhouse gas emissions. For example, the Net-

⁶⁵¹ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

Zero Asset Owner Alliance convened by the UNEP's Financial Initiative considers carbon credits to be complementary to decarbonization efforts and a means of compensating for unabated emissions, but that "asset owners' immediate efforts must foster the rapid and deep cutting of GHG emissions as a priority."⁶⁵²

IRMA has not yet taken a decision on including requirements related to the use of carbon credits and is seeking guidance from stakeholders on whether and how such credits should be addressed in the revised Mining Standard, if there are appropriate limits to their application (for example, perhaps they are suitable for meeting Scope 3 targets but not Scope 1 and 2), and how credits can be verified to ensure a measurable benefit arises from their use.

Question: Should IRMA include a requirement addressing the use of carbon credits and if yes, what limits (if any) should be put in place, and what expectations are reasonable with respect to establishing the credibility of the credit issuer?

4.5.5.1. If a <u>carbon offset</u> is used to help the <u>site</u> progress towards or meet its emissions reductions targets, the site demonstrates that the <u>mitigation hierarchy</u> has been followed to avoid or minimize greenhouse gas emissions (prioritizing reduction at source) and thereby minimize the carbon offset required.

4.5.5.2. The calculation of required offsets:

- a. Follows a credible methodology; and
- b. Does not include carbon captured from site revegetation⁶⁵³ unless:
 - i. Carbon emissions arising from land use changes during site construction and operation are included in the calculation of the carbon offset required; or
 - ii. The carbon stock of rehabilitated land per unit area exceeds that of the original pre-mining (baseline) land (in which case the excess carbon stock relative to the baseline can be included).

NOTE FOR 4.5.5.2: Rehabilitation (revegetation) of disturbed areas is good practice and can be accomplished as an ongoing process and/or at closure of the facility. However, the carbon capture associated with such revegetation can only be used to reduce the size of the carbon offset required if the carbon emissions associated with the original (construction related) and ongoing (operational) site disturbance have already been accounted for. Otherwise, the situation arises where emissions from site disturbance (for example, released during soil removal and stripping of vegetation) are not quantified (in other words, assigned a zero value), while revegetation appears to create a net benefit (when in fact it may only be partially balancing the original unquantified disturbance-related carbon emissions).

Similarly, if the habitat on the rehabilitated land contains more carbon than the original habitat, the increment can be included (representing the net gain from baseline to rehabilitated conditions). Revegetation will also only be admissible if its long-term durability has been demonstrated (see 4.5.4.3) as required for other offset designs.

4.5.5.3. For a <u>carbon offset</u> project undertaken or commissioned by the <u>entity</u>, the offset design, implementation, and monitoring are:

- a. Developed by competent professionals using credible methods;
- b. Developed in consultation with potentially affected communities and Indigenous Peoples, as relevant;
- c. Validated by a credible third-party expert;
- d. Based on an existing nature-based or technical approach that has been proven at an appropriate scale relevant to the offset required;⁶⁵⁴

⁶⁵² UNEP. The Net in Net Zero: The role of negative emissions in achieving climate alignment for asset owners. p. 6. <u>https://www.unepfi.org/wordpress/wp-content/uploads/2021/09/AOA_Negative-Emissions.pdf</u>

⁶⁵³ For example, revegetation that occurs during progressive or future mine site rehabilitation.

⁶⁵⁴ Nature-based initiatives "naturally" sequester carbon in the environment (e.g., reforestation, wetland rejuvenation, soil improvement projects). Technical solutions are those that achieve either carbon avoidance (e.g., renewable power and fuels, energy efficiency) or provide

- e. Implemented with the free, prior and informed consent of affected Indigenous Peoples and the agreement of affected communities, as relevant; and
- f. Able to deliver long-term (>100 years) carbon capture.

NOTE FOR 4.5.5.3: This is NEW. The requirements are based on good practice and analysis of the potential weaknesses of carbon offset projects (that undermine their capacity to deliver real and sustained carbon capture). We have drawn from, for example, guidance developed by the Carbon Offset Research and Education initiative of the Stockholm Environment Institute and Greenhouse Gas Management Institute,⁶⁵⁵ principles developed by the Integrity Council for the Voluntary Carbon Market,⁶⁵⁶ analysis by the UN's High-Level Expert Group on the net zero emissions commitments of non-state entities,⁶⁵⁷ and climate change adaptation data collated by the Nature-based Solutions Initiative.⁶⁵⁸

4.5.6. Reporting and Disclosure on Greenhouse Gas Emissions and Energy Consumption

4.5.6.1. The greenhouse gas and energy policy (4.5.1.1) and management plan (4.5.4.1) are publicly available.

NOTE FOR 4.5.6.1: REVISED. This was 4.5.4.1 in the 2018 Mining Standard.

We are proposing to add that the greenhouse gas and energy management plan also be made publicly available. Although not required for all management plans in the IRMA chapter, there are certain plans that are required to be public, and several need to be shared with stakeholders to give them an opportunity to provide feedback on the plans (e.g., reclamation and closure plans, adaptive management plan for water, resettlement action plans).

Development and implementation of environmental management plans – including GHG management plans – are a legal requirement for industrial operations in many jurisdictions. Disclosure of GHG management plans is rarely mandatory, but voluntary publication is becoming more common as companies seek to anticipate (and remain ahead of) future requirements. For example, mining companies in Australia are taking a proactive stance, publishing detailed GHG management plans.⁶⁵⁹

CONSULTATION QUESTION 4.5-10: Do you support the proposal that GHG management plans be made publicly available? If not, why not?

4.5.6.2. The methods used to measure energy use and calculate Scope 1, 2 and (if relevant) 3 emissions, and, if relevant, to calculate offsets, are publicly available.

NOTE FOR 4.5.6.2: This is NEW. We are proposing disclosure of the methodology because there is no agreed best methodology for calculating emissions and energy use. Various other mining standards allow government-developed methodologies, while others point to internationally recognized methods like those in the GHG Protocol or ISO Standards, etc. At this point in time, rather than prescribe a particular method to be

⁶⁵⁸ Nature-based Solutions Initiative web site. Explore research projects by climate change adaptation at: <u>https://www.naturebasedsolutionsinitiative.org/research/projects/</u>

carbon removal, storage and sequestration (e.g., Carbon capture, utilization, and storage (CCUS), direct air capture (DAC) and bioenergy with carbon capture and storage (BECCS)).

⁶⁵⁵ Broekhoff, D. et al. 2019. Securing Climate Benefit: A Guide to Using Carbon Offsets. (Stockholm Environment Institute and GHG Management Institute). <u>https://www.offsetguide.org/wp-content/uploads/2020/03/Carbon-Offset-Guide_3122020.pdf</u>

⁶⁵⁵ The Integrity Council for the Voluntary Carbon Market. "The Core Carbon Principles." https://icvcm.org/the-core-carbon-principles/

⁶⁵⁷ UN's High-Level Expert Group on the net zero emissions commitments of non-state entities. 2022. Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions. <u>https://www.un.org/sites/un2.un.org/files/high-level expert group n7b.pdf</u>

⁶⁵⁹ E.g., Albemarle Kemerton Lithium Plant: <u>https://www.albemarle.com/storage/wysiwyg/greenhouse gas management plan -</u> <u>alb kemerton plant final 1.pdf;</u>

Pinjarra Alumina Refinery Efficiency Upgrade: <u>https://www.alcoa.com/australia/en/pdf/greenhouse_management_plan_final_feb_07.pdf;</u> Telfer gold-copper mine: <u>https://www.newcrest.com/sites/default/files/2021-11/Telfer%20Greenhouse%20Gas%20Management%20Plan.pdf;</u> Tomingley Gold Project: <u>https://www.alkane.com.au/wp-content/uploads/2018/02/Air-Quality-and-Greenhouse-Gas-Management-Plan-R5-final-for-approval.pdf</u>
used by all IRMA participants, IRMA is asking for transparency in the methods being used so that others can evaluate for themselves the basis for the emissions and energy use calculations.

4.5.6.3. Either the actual calculations and data behind the annual <u>energy consumption</u> and <u>Scope 1, 2</u> and, as relevant, <u>Scope 3</u> emissions and offset values reported in 4.5.6.4, or evidence of third-party verification of the data and calculations are publicly available.

NOTE FOR 4.5.6.3: This is NEW. We are proposing that in addition to the methods used, the actual calculations leading to the final annual emissions and energy use numbers are made public. Again, this enables stakeholders to review the work, so that they can have confidence in the values being publicly cited in 4.5.6.4. An acceptable alternative to publishing the actual calculations would be the verification of the data by a credible third-party noted in 4.5.6.3. Evidence of third-party verification could be a statement with the name and credentials of the verifier and date of review, or a certificate or report, etc.

Regarding offsets, this is similar to Mining Association of Canada's Climate Change Protocol, which requires that entities' annual public reporting includes: "Where offsets are used to meet targets, a calculation of offsets as a percentage of total emissions generated at the facility . . ." ⁶⁶⁰

4.5.6.4. Data on energy use and <u>Scope 1, 2 and 3</u> greenhouse gas emissions from the <u>site</u> are publicly reported on an annual basis. At minimum, this includes:

- a. The site's total energy consumption;
- b. Disaggregated energy consumption data that details at a minimum delivered energy, energy from energy minerals consumed on-site, renewable energy purchased from external <u>suppliers</u> and renewable energy generated at the site;
- c. The site's total energy intensity, and basis for the site's calculation of energy intensity;
- d. The site's Scope 1 GHG emissions as CO₂e or as the seven greenhouse gases defined in the Kyoto Protocol (CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃);
- e. The site's Scope 2 GHG emissions as CO₂e or as the seven greenhouse gases defined in the Kyoto Protocol (CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃);
- f. The site's GHG emissions intensity, and basis for the site's calculation of GHG emissions intensity;
- g. The site's estimate of Scope 3 emissions according to the greenhouse gases and relevant categories of emissions noted in 4.5.3.2.b (according to the timebound commitments noted for upstream and downstream Scope 3 emissions in 4.5.2.1.c and 4.5.2.1.d respectively);
- h. Quantified progress towards meeting targets for Scope 1, 2 and (if relevant) 3 emissions, energy reduction and the proportion of energy consumed at the site that comes from renewable sources;
- i. A description of the corrective actions required to address targets that are not on track and quantified progress toward full implementation of these actions; and
- j. The percentage of greenhouse gas emissions reductions (Scope 1, 2 and/or 3) that has been achieved through carbon offsetting (rather than source reduction).

NOTE FOR 4.5.6.4: REVISED. The 2018 Mining Standard required disclosure of site or corporate-level greenhouse gas emissions (equivalent to sub-requirements d and e, above), progress toward greenhouse gas reduction targets (similar to h, above), and efforts taken to reduce emissions (similar to i, above).

Sub-requirements 4.5.6.4 (a), (b), (c), (f), (g), and (j) are NEW.

⁶⁶⁰ Mining Association of Canada. Toward Sustainable Mining Climate Change Protocol. p. 10. <u>https://mining.ca/wp-content/uploads/dlm_uploads/2023/04/Climate-Change-Protocol-English.pdf</u>

Many standards now require site or asset level public reporting of Scope 1 and 2 greenhouse gas emissions and energy use data (integrated into sub-requirements 4.5.6.4 (a), (b), (c)), and some are beginning to refer to Scope 3 emissions (as per sub-requirement (g)).

Re: 4.5.6.4.h on reporting of progress towards targets, SBTi Net Zero criteria includes requirements that progress against targets be reported on an annual basis including emissions and removals related to Scope 1, Scope 2 and Scope 3.⁶⁶¹

And regarding offsets, 4.6.5.4.j is similar to an expectation in MAC TSM that requires public reporting of "Where offsets are used to meet targets, a calculation of offsets as a percentage of total emissions generated at the facility..."⁶⁶²

We are proposing an approach of increased data transparency, both so that stakeholders in the mineral supply chain can understand and make use of the data in their own reporting efforts, and to address 'greenwashing' concerns raised by multiple stakeholders around reporting of GHG emission targets and progress in achieving these. We do not believe that increasing transparency implies additional effort on the part of sites, as we are not requiring disclosure of information and data beyond what is necessary to calculate energy consumption and GHG emissions.

IRMA can add guidance that it expects full and transparent disclosure of energy, greenhouse gas and offset related methods and data except where redaction and/or aggregation of data are justified by reason of commercial sensitivity, competitive advantage, protection of intellectual property or related constraints.

CONSULTATION QUESTION 4.5-11: Do you support the proposed approach for greater transparency in greenhouse gas and energy data? If not, what would you change and why?

4.5.6.5. <u>Carbon offset</u> design, implementation, and monitoring activities, including third-party-verified carbon capture data, are publicly available.

NOTE FOR 4.5.6.5: NEW. We are proposing this because others are also beginning to expect greater transparency on carbon offsets. For example, the European Parliament and Council are currently considering adoption of the Carbon Removal Certification Framework (CRCF) Regulation Proposal,⁶⁶³ which contains rules to monitor, report and verify the authenticity of carbon removals taking place inside the European Union/European Economic Area and appears likely to require disclosure of information and data to demonstrate the credibility of offsets (and carbon credits). Similarly, the International Sustainability Standards Board (ISSB) confirmed that its proposed Climate-Related Disclosures⁶⁶⁴ would require a company to disclose the number of carbon offsets necessary to achieve the company's net zero goals, including certain factors required for users to understand the credibility and integrity of the offsets.

NOTES

None.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

⁶⁶¹ SBTi Corporate Net-Zero Standard Criteria. Version 1.1. 2023. p. 12. <u>https://sciencebasedtargets.org/resources/files/Net-Zero-Standard-Criteria.pdf</u>

⁶⁶² Mining Association of Canada. Toward Sustainable Mining Climate Change Protocol. p. 10. <u>https://mining.ca/wp-content/uploads/dlm_uploads/2023/04/Climate-Change-Protocol-English.pdf</u>

⁶⁶³ European Parliament and Council. 2022. Proposal for a Regulation on an EU certification for carbon removals. <u>https://climate.ec.europa.eu/document/fad4a049-ff98-476f-b626-b46c6afdded3_en</u>

⁶⁶⁴ International Sustainability Standards Board web site: "Climate-related Disclosures." <u>https://www.ifrs.org/projects/work-plan/climate-related-</u> <u>disclosures/</u>

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Carbon Offset

A carbon offset broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration or the planting of trees) – that is used to compensate for emissions that occur elsewhere. Source: https://www.offsetguide.org/understanding-carbon-offsets/what-is-a-carbon-offset/

CO₂e

A carbon dioxide equivalent or CO_2 equivalent, abbreviated as CO_2e is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same GWP.

Source: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Carbon_dioxide_equivalent

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Energy Consumption

The total use of energy from fossil fuel and non-fossil fuel sources (including renewables), whether delivered in the form of electricity, steam, heat (combustion) or cooling.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Scope 1

Direct GHG emissions that occur from sources that are owned or controlled by the site, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment.

Source: Slightly adapted text derived from GHG Protocol

Scope 2

GHG emissions from the generation of purchased electricity consumed by the site. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the site. Scope 2 emissions physically occur at the facility where electricity is generated. Source: Slightly adapted text derived from GHG Protocol

Scope 3

All other indirect emissions. Scope 3 emissions are a consequence of the activities of the site, but occur from sources not owned or controlled by the site. Some examples of Scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services. Source: Slightly adapted text derived from GHG Protocol

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

EXISTING DEFINITIONS

Affected Community

A community that is subject to risks or impacts from a project/operation.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Corporate Owner(s)

The corporation(s) or other business institution(s) including any private or state-run enterprises that have complete or partial financial interest in or ownership of a project/operation.

REVISED. Changed wording from mining project to project/operation.

Free, Prior and Informed Consent (FPIC)

Consent based on: engagement that is free from external manipulation, coercion and intimidation; notification, sufficiently in advance of commencement of any activities, that consent will be sought; full disclosure of information regarding all aspects of a proposed project or activity in a manner that is accessible and understandable to the people whose consent is being sought; acknowledgment that the people whose consent is being sought can approve or reject a project or activity, and that the entities seeking consent will abide by the decision.

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic, or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Mitigation Hierarchy

The mitigation hierarchy is a set of prioritized steps to alleviate environmental (or social) harm as far as possible through avoidance, minimization, and restoration of adverse impacts. Compensation/offsetting are only considered to address residual impacts after appropriate avoidance, minimization, and restoration measures have been applied.

Revegetation

Revegetation is the task of reseeding or replanting forbs, grasses, legumes, and other plants (sometimes including shrubs and trees) so as to provide cover to decrease erosion, provide for soil stability, and provide forage for wildlife or livestock or to otherwise return the site to a useable state.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Suppliers

Providers of goods, services, or materials to a project/operation.

ANNEXES AND TABLES

Mineral/Metal	Greenhouse Gas Intensity Metric
Aggregates	tonne of CO ₂ e/tonne of aggregate
Aluminum/Aluminium	tonne of CO_2e /tonne of aluminum
Antimony	tonne of CO_2e /tonne of antimony
Barite	tonne of CO_2e /tonne of barite
Bauxite	tonne of CO_2e /tonne of bauxite
Boron	tonne of CO_2e /tonne of boron
Chromium	tonne of CO_2e /tonne of chromium
Coal (metallurgical)	tonne of CO ₂ e /tonne of metallurgical coal
Cobalt	tonne of CO_2e /tonne of cobalt
Copper	tonne of CO_2e /tonne of copper
Diamonds	tonne of CO_2e /carat of diamonds
Gemstones	tonne of CO ₂ e /carat of gemstones
Gold	tonne of CO ₂ e/oz of gold
Iridium	tonne of CO_2e /oz of iridium
Iron	tonne of CO_2e /tonne of iron
Iron ore	tonne of CO_2e /tonne of iron ore
Lead	tonne of CO_2e /tonne of lead
Limestone	tonne of CO_2e /tonne of limestone
Lithium	tonne of CO ₂ e /tonne of lithium (industrial grade)
Lithium	tonne of CO_2e /tonne of lithium (battery grade)
Magnesium	tonne of CO_2e /tonne of magnesium
Manganese	tonne of CO ₂ e /tonne of manganese
Molybdenum	tonne of CO2e /kg of molybdenum
Nickel	tonne of CO_2e /tonne of nickel
Niobium	tonne of CO ₂ e /kg of niobium
Osmium	tonne of CO ₂ e /oz of osmium
Palladium	tonne of CO_2e /oz of palladium
Phosphates	tonne of CO_2e /tonne of phosphates
Platinum	tonne of CO_2e/oz of platinum
Potash	tonne of CO_2e /tonne of potash
Rare earth elements	tonne of CO_2e /kg of rare earth elements
Rhodium	tonne of CO_2e /oz of rhodium
Ruthenium	tonne of CO_2e /oz of ruthenium
Sand	tonne of CO_2e /tonne of sand
Silver	tonne of CO_2e /oz of silver
Tantalum	tonne of CO ₂ e /kg of tantalum
Tin	tonne of CO_2e /tonne of tin
Tungsten	tonne of CO ₂ e /tonne of tungsten
Vanadium	tonne of CO₂e /kg of vanadium
Zinc	tonne of CO_2e /tonne of zinc

ANNEX 4.5-A: Intensity metrics for different mineral/metal commodities

Chapter 4.6 Biodiversity, Ecosystem Services and Protected Areas

NOTES ON THIS CHAPTER: The proposed changes in this chapter have been informed by experiences auditing the 2018 Mining Standard, as well as necessary changes to make this chapter applicable to all stages of mineral development (from exploration through to mineral processing and mine closure).

Proposed additions and changes:

- There are numerous structural changes to this chapter. The previous criterion 4.6.1 in the 2018 Mining Standard, which included 'General Stipulations' related to use of competent professionals, stakeholder engagement, and access to information, has been deleted and the contents integrated into relevant requirements throughout the chapter.
- Also, in criteria 4.6.1 'Scoping' and 4 6.4 'Management Plans' we have separated out the biodiversity, the ecosystem services requirements and the protected area requirements. Previously, the requirements contained all three elements. During audits it was difficult to know how to rate performance if an entity did well on one element (e.g., did a thorough scoping of biodiversity issues), but did not do an assessment of ecosystem services, etc. Also, a few more expectations are being proposed as scoping elements for biodiversity and ecosystem services, including taking into consideration the risks identified in other chapters (e.g., risks from waste management, risks to water, air, soils) that could, in turn, impact protected areas, biodiversity and ecosystem services.
- We have added specific references to fungi as an aspect of biodiversity that needs to be considered (see 4.6.1.3).
- We have combined some requirements related to protected areas management (see 4.6.5) and tried to increase consistency across requirements in that section regarding protected area management plans.
- Other changes have been made to add consistency in expectations between chapters in this proposed update to the 2018 Mining Standard. For example, other chapters require that risk assessments be updated if there are changes in operations or the operating environment that may create new or increased impacts. This was a gap in Chapter 4.6 that we're proposing to fill.

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

BACKGROUND

Biological diversity, or biodiversity, describes the variety of life on Earth. It refers to the wide variety of ecosystems and living organisms: animals, plants, fungi and their habitats and genes. Biodiversity underpins ecosystem functioning and the provision of ecosystem services essential for human well-being, it is a central component of many belief systems, world views and identities, it provides for food security, human health, clean air and water, and contributes to local livelihoods and economic development. Despite its fundamental importance, however, biodiversity continues to be lost.⁶⁶⁵

Mineral development may take place in landscapes that are already heavily modified or degraded, and therefore, pose little or no threat to global biodiversity loss. When located in areas of high biodiversity value, however, there is

⁶⁶⁵ Adopted from the Convention on Biological Diversity (CBD) Strategic Plan for Biodiversity 2011-2020. Available at: www.cbd.int/sp/

the potential that mining and associated activities may lead to a temporary or permanent loss in biodiversity and ecosystem services.

In some cases, mines may permanently remove entire ecosystems, particularly where biota have co-evolved with specific mineral substrates. In other cases, biodiversity may be unaffected by mineral development, or mining may cause less damage than alternative land uses.⁶⁶⁶ However, even where one mining or mineral processing operation does not create significant impacts on biodiversity on its own, there may be larger indirect impacts caused by its development, such as the exacerbation of deforestation,⁶⁶⁷ or a single operation may contribute to significant

impacts when considered cumulatively with other developments (either on a spatial or temporal basis).⁶⁶⁸

Globally, a network of protected areas has been put in place, offering various levels of protection for biodiversity, landscapes, and seascapes. Developments such as exploration, mining and mineral processing are expected to respect those protections and operate in manner that safeguards biodiversity and other values that led to a protected area designation (e.g., cultural, spiritual, or scenic values). In many areas of the world, however, an adequate system of protected areas has yet to be established, or where protections exist further opportunities to conserve biodiversity and other important values remain.

Through adherence to the mitigation hierarchy during the most appropriate stages in project development, mineral development can proceed in a manner that supports global biodiversity, maintains the ecosystem services

TERMS USED IN THIS CHAPTER

Additional Conservation Actions
Affected Community
Area of Influence Associated Facility Avoidance Baseline Biodiversity
Biosphere Reserves
Closure
Collaborate Competent Professionals Conservation Outcomes Conservation Values Consultation Critical Habitat Cumulative Impacts
Direct Impacts
NEW
Ecological Processes Ecosystem Ecosystem Service Enhancement Entity NEW
Exploration NEW
Habitat
Important Biodiversity Values ■ Indirect Impacts NEW ■ Key Biodiversity Areas ■ Mineral Development Life Cycle NEW ■ Mineral Processing NEW
Mining NEW
Mining-Related Activities Minimize Mitigation Mitigation Hierarchy Modified Habitat ■ Natural Habitat ■ No Net Loss and Net Gain ■ Offset ■ Operation NEW
Priority Ecosystem Services
Project NEW Protected Area Protected Area Management Categories Residual Impacts ■ Restoration ■ Scoping NEW ■ Stakeholder ■ Tentative List for World Heritage Site Inscription ■ World Heritage Site

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

that communities need to survive and thrive, and leaves behind structurally safe and functioning ecosystems upon closure. This chapter puts forward a framework for mining-related projects and operation to proactively assess and manage impacts on biodiversity and ecosystem services according to the mitigation hierarchy of avoiding and minimizing impacts early in the project life cycle, and if impacts cannot be avoided, restoring and, if necessary, offsetting or compensating for residual impacts throughout the remainder of the mine's life.

OBJECTIVES/INTENT OF THIS CHAPTER

To protect biodiversity, maintain the benefits of ecosystem services and respect the values being safeguarded in protected areas.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level

⁶⁶⁶ Mining and biodiversity: key issues and research needs in conservation science. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6283941/</u>

⁶⁶⁷ World Wildlfe Fund. 2023. Extracted Forests. pp. 22, 23. <u>https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Wald/WWF-Studie-</u> Extracted-Forests.pdf

⁶⁶⁸ Mining and biodiversity: key issues and research needs in conservation science. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6283941/

information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

The entity has carried out scoping to evaluate its potential impacts on protected areas (4.6.1.2), biodiversity (4.6.1.3), and ecosystem services (4.6.1.4), and that mitigation is developed in a manner that aligns with the mitigation hierarchy (4.6.3.1).

<u>Projects</u> are not proposed in nor will they adversely affect <u>World Heritage Sites</u> (WHS), areas on a State Party's official <u>Tentative List for WHS</u> Inscription, IUCN protected area management categories I-III, or core areas of UNESCO biosphere reserves, exploration, mining and mineral processing operations that are already located in those areas ensure that activities during the remaining life cycle will not permanently and materially damage the integrity of the special values for which the area was designated or recognized (4.6.4.2).

NOTE ON CRITICAL REQUIREMENTS: In the 2018 Mining Standard, requirement 4.6.2.1, which related to protected area, biodiversity, and ecosystem services 'screening' (now scoping), was a critical requirement. We are proposing that all three scoping-related requirements proposed in this version of the Standard remain critical (4.6.1.2, 4.6.1.3 and 4.6.1.4). One critical requirement has been deleted because 4.6.4.2 combines two requirements that were critical in the 2018 Mining Standard.

The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Biodiversity, Ecosystem Services and Protected Areas Requirements

4.6.1. Biodiversity, Ecosystem Services and Protected Areas Scoping

NOTE FOR 4.6.1: REVISED. In the 2018 Mining Standard, criterion 4.6.1.was called General Stipulations. It contained three requirements relating to use of competent professionals, consultations with stakeholders and public availability of information produced by the entity on actions taken on biodiversity, ecosystem services and protected areas. We are proposing to delete that criterion and the three requirements within, and instead add the expectations into the relevant sections in the rest of the chapter, to make it clear what the expectations are for each step in the process – when to engage stakeholders, whether the information at that stage needs to be publicly available, etc.

The new 4.6.1 was previously 4.6.2 in the 2018 Mining Standard. Previously it was called 'Biodiversity, Ecosystem Services and Protected Areas Screening'. We are changing the term screening to scoping to be more consistent with the other IRMA chapters.

We are proposing the following definition of scoping, however, if this term is confusing, we are open to reverting to screening, or adopting another term altogether:

Scoping

The interactive process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Also, there were two screening requirements in which biodiversity, ecosystem services and protected areas were all included. We are proposing to create three separate requirements so that the scoping of protected areas (4.6.2.1), the scoping of biodiversity (4.6.2.2) and the scoping of ecosystem services (4.6.2.3) are all assessed on their own merits, so that the strengths and gaps with each are more clearly reflected.

Finally, In the 2018 Mining Standard, the collection of baseline data was mentioned in the same requirement as impact assessment. We are proposing that it be included with scoping, instead, because ideally, the collection of baseline data starts early in the project development phase and feeds into the scoping of risks/impacts. The scoping process may also identify additional baseline data to be collected to inform impact assessment, and so combining the two helps to reflect that this may be an iterative process.⁶⁶⁹

CONSULTATION QUESTION 4.6-1

Background: According to the United Nations Environment Program, "Indigenous and Community Conserved Areas (ICCAs) are a globally significant type of managed area governed by local or Indigenous communities for conservation and cultural purposes."⁶⁷⁰ Since 2008, ICCAs have been recognized by the International Union for the Conservation of Nature (IUCN) as key governance actors in nature conservation.⁶⁷¹

ICCAs are defined by three characteristics:

1) There is a close and deep connection between a territory or area and an Indigenous people or local community. This relationship is generally embedded in history, social and cultural identity, spirituality and/or people's reliance on the territory for their material and non-material wellbeing.

2) The custodian people or community makes and enforces decisions and rules (e.g., access and use) about the territory, area or species' habitat through a functioning governance institution.

3) The governance decisions and management efforts of the concerned people or community contribute to the conservation of nature (ecosystems, habitats, species, natural resources), as well as to community wellbeing.

ICCAs may include lands, inland waters, coast and marine territories that overlap with protected areas, but also may encompass territories that are not recognized as "protected" by either national governments or IUCN, as the conservation of nature may not always be the primary objective of an ICCA.⁶⁷²

Question: Should mining entities be required to identify ICCAs as part of their scoping? If so, and if they are identified in the area of influence, would the next steps be: consultation with ICCA custodians to determine what values are being conserved and identify potential impacts on the ICCA, free, prior and informed consent from Indigenous Peoples for proposed activities that would affect their rights or interests, collaboration with affected local stakeholders to determine mitigation strategies as per the mitigation hierarchy, implementation, monitoring and reporting on effectiveness of mitigation (in other words, steps outlined in this chapter)?

4.6.1.1. The entity identifies and maps the proposed or actual area of influence of the project/operation, including areas that may be or are affected by associated activities.

⁶⁶⁹ Gullison. T, Hardner, J., Anstee, S. and Meyer, M. 2015. Good Practices for the Collection of Biodiversity Baseline Data. P. 13. <u>https://publications.iadb.org/en/good-practices-collection-biodiversity-baseline-data</u>

⁶⁷⁰ United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC). 2017. A handbook for the Indigenous and Community Conserved Areas Registry p. 26. <u>https://wedocs.unep.org/bitstream/handle/20.500.11822/8448/-</u> <u>A%20handbook%20for%20the%20indigenous%20and%20community%20conserved%20areas%20registry-</u> <u>2010ICCA Handbook.pdf?sequence=3&%3BisAllowed=</u>

⁶⁷¹ IUCN web site: "ICCAs for biological and cultural diversity." <u>https://www.iucn.org/news/protected-areas/201905/iccas-biological-and-cultural-</u> <u>diversity</u>

⁶⁷² Borrini-Feyerabend, G. et al. 2014. A Primer on Governance for Protected and Conserved Areas. (IUCN). See pages 10-15. https://portals.iucn.org/library/sites/library/files/documents/2014-033.pdf

NOTE FOR 4.6.1.1: NEW. This has been added so that the boundaries of proposed (or actual) development are clear, and the potential area for baseline study is defined.

4.6.1.2. (Critical Requirement)

The entity implements a protected areas scoping process (or equivalent) that:

- a. Is carried out and documented by competent professionals;
- b. Includes consultations with stakeholders, including, where relevant, affected communities and external experts; and
- c. Includes the identification of the boundaries of the following areas that are located in the vicinity of the project/operation:
 - i. <u>Protected areas with international recognition, including: World Heritage Sites</u>, and areas on a state party's official <u>Tentative List for World Heritage Site Inscription</u>; IUCN protected area management categories I-VI; United Nations Educational, Scientific and Cultural Organization (UNESCO) <u>biosphere</u> reserves; and Ramsar sites;
 - ii. Regional, national, sub-national and local legally protected areas; ⁶⁷³
- d. Includes a description of the values (e.g., ecological, biological, geological, geomorphological, cultural, spiritual, historical, scenic, etc.) being protected in the identified protected areas; ⁶⁷⁴
- e. Takes into consideration how risks related to waste management (Chapter 4.1), water management (Chapter 4.2), physical stability of facilities (proposed Chapter 4.X), air quality management (Chapter 4.3) and soil management (proposed Chapter 4.XX) may result in impacts on the values in protect areas; and
- f. Results in the identification of whether or not any protected areas, or the values for which the area was designated:
 - i. May be affected by a proposed project; and/or
 - ii. Have been affected by past mining-related activities (including exploration); and/or
 - iii. Are being affected by current operations.

NOTE FOR 4.6.1.2: REVISED. This proposed requirement combines elements from the following requirements from the 2018 Mining Standard: 4.6.1.1 (competent professionals), 4.6.1.2 (Stakeholder engagement), 4.6.2.1 (general requirement for screening), and 4.6.2.2 (identification of boundaries of legally protected areas and the values being protected). See the note that accompanies 'Critical Requirements In This Chapter,' above.

There is NEW content in 4.6.1.2.b. We are proposing that this requirement includes collection of information that will be necessary to provide evidence later in the chapter. In particular, there are several requirements that mention particular types of protected areas. If no such areas are identified during scoping, then that can be used as evidence to mark those later requirements as "not relevant".

4.6.1.2.e is NEW. It has been added so that it is clear that information related to waste, water, air and soil management be incorporated into the scoping of potential impacts on protected areas. These are all elements that if not managed well can impact the values in protected areas, and therefore, the risks identified in those chapters must feed into this scoping process.

4.6.1.3. (Critical Requirement)

The <u>entity</u> establishes a <u>biodiversity</u> baseline for the <u>project's/operation's area of influence</u>, and implements a <u>scoping</u> process (or equivalent) that:

a. Is carried out and documented by competent professionals;

⁶⁷³ Regional protected areas could include, for example, those in the European Union's Natura 2000 network. National, subnational and local areas may include parks, wilderness areas, wildlife preserves, etc.

⁶⁷⁴ NOTE: If protected areas have been designated as such to provide protection of cultural values, this needs to feed into Chapter 3.7—Cultural Heritage.

- b. Includes consultations with stakeholders, including, where relevant, affected communities and external experts;
- c. Includes the identification of:
 - i. Boundaries of Key Biodiversity Areas (KBA)⁶⁷⁵ and the important biodiversity values and ecological processes and habitats supporting those values; and
 - ii. Areas of modified habitat, natural habitat, and critical habitat within the mine's proposed or actual area of influence; ⁶⁷⁶
- d. Identifies and describes the natural habitats and species of flora, fauna, and fungi within the baseline study area, including quantitative measures of abundance, distribution and other measures of viability and/or function for each species (terrestrial and aquatic);
- e. Identifies the important biodiversity values present in the areas of modified habitat, natural habitat, and critical habitat, and provides information on the importance of the habitats and species relative to their global distribution;
- f. Takes into consideration how risks related to waste management (Chapter 4.1), water management (Chapter 4.2), the physical stability of facilities (proposed Chapter 4.X), air quality management (Chapter 4.3) and soil management (proposed Chapter 4.XX) may result in impacts on biodiversity;
- g. Results in the identification of whether or not there are any areas of potentially important global, national or local biodiversity that:
 - i. May be affected by a proposed project; and/or
 - ii. Have been affected by past mining-related activities (including exploration); and/or
 - iii. Are being affected by current operations.

NOTE FOR 4.6.1.3: REVISED. This proposed requirement combines elements from the following requirements from the 2018 Mining Standard: 4.6.1.1 (competent professionals), 4.6.1.2 (Stakeholder engagement), 4.6.2.1 (screening of biodiversity), and 4.6.2.2 (identification KBAs, modified habitat, natural habitat and critical habitat, and biodiversity values contained therein). See the note that accompanies 'Critical Requirements In This Chapter,' above.

4.6.1.3.d and e add NEW content. This content adds more detail on the baseline data that should be collected. These sub-requirements are aligned with good practice guidance prepared for the Multilateral Financing Institutions Biodiversity Working Group and Cross Sector Biodiversity Initiative, which included both finance institutions and extractive industries representatives.⁶⁷⁷

We have specified that species of flora, fauna and fungi be identified. Increasingly, fungi are being recognized for their critical role in maintaining life on earth. According to IUCN: "There would be no life on Earth without fungi: the yeasts, molds and mushrooms that are critical to decomposition and forest regeneration, mammalian digestion, carbon sequestration, the global nutrient cycle, antibiotic medication, and the bread, beer and chocolate we consume. Trees would not be able to live on land without fungi."⁶⁷⁸

⁶⁷⁵ KBAs include Alliance for Zero Extinction (AZE) sites, Important Bird and Biodiversity Areas (IBA), Important Plant Areas (IPA).

⁶⁷⁶ See glossary definitions at the end of the chapter. Modified, natural and critical habitat refers to the biodiversity value of the area as determined by species, ecosystems and ecological processes. In practice, natural and modified habitats exist on a continuum that ranges from largely untouched, pristine natural habitats to intensively managed modified habitats. Critical habitats are a subset of modified or natural habitats. (See: International Finance Corporation. 2012. Performance Standard 6, Guidance Notes. (GN26 and Para.9) https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps6

⁶⁷⁷ Gullison. T, Hardner, J., Anstee, S. and Meyer, M. 2015. Good Practices for the Collection of Biodiversity Baseline Data. p. 47. https://publications.iadb.org/en/good-practices-collection-biodiversity-baseline-data

⁶⁷⁸ International Union for the Conservation of Nature. 3 August 2021. "Re:wild and IUCN SSC become first global organizations to call for the recognition of fungi as one of the three kingdoms of life critical to protecting and restoring Earth." <u>https://www.iucn.org/news/species-survival-commission/202108/rewild-and-iucn-ssc-become-first-global-organizations-call-recognition-fungi-one-three-kingdoms-life-critical-protecting-and-restoring-earth</u>

The extent of the role that fungi plays as a global carbon sink, and potential to increase their storage capacity, is gaining increased attention. A recent peer reviewed study estimates that mycorrhizal fungi currently store more than 13 gigatons of carbon, which is more than a third of annual global fossil fuel emissions.⁶⁷⁹

4.6.1.3.f is NEW. It has been added so that it is clear that information related to waste, water, air and soil management be incorporated into the scoping of potential impacts on biodiversity. These are all elements that if not managed well can impact ecosystem health and biodiversity, and therefore, the risks identified in those chapters must feed into this scoping process.

4.6.1.4. (Critical Requirement)

The entity establishes an ecosystem services baseline for the project's/operation's area of influence, and implements a scoping process (or equivalent) that:

- a. Is carried out and documented by competent professionals;
- b. Includes consultations with stakeholders, including, where relevant, affected communities and external experts;
- c. Includes the identification of <u>ecosystems</u> or processes within the proposed or actual <u>area of influence</u> that may provide or do provide provisioning, regulating, cultural and supporting <u>ecosystem services</u>;⁶⁸⁰
- d. Identifies the beneficiaries of the ecosystem services;
- e. Takes into consideration how risks related to waste management (Chapter 4.1), water management (Chapter 4.2), the physical stability of facilities (proposed Chapter 4.X), air quality management (Chapter 4.3) and soil management (proposed Chapter 4.XX) may result in impacts on ecosystem services;
- f. Results in the identification of whether or not any ecosystem services:
 - i. May be affected by a proposed project; and/or
 - ii. Have been affected by past mining-related activities (including exploration); and/or
 - iii. Are being affected by current operations.

NOTE FOR 4.6.1.4: This proposed requirement combines elements from the following requirements from the 2018 Mining Standard: 4.6.1.1 (competent professionals), 4.6.1.2 (Stakeholder engagement), 4.6.2.1 (screening of ecosystem services), and 4.6.2.2 (identification of ecosystem services). See the note that accompanies 'Critical Requirements In This Chapter,' above.

4.6.1.4.d adds NEW content based on good practices.⁶⁸¹ Identification of beneficiaries will also aid in the identification of rights holders and stakeholders who may be affected by the project/operation.

4.6.1.4.e is NEW. It has been added so that it is clear that information related to waste, water, air and soil management be incorporated into the scoping of potential impacts on ecosystem services. These are all elements that if not managed well can impact ecosystem health and the services that these ecosystems provide to affected communities, and therefore, the risks identified in those chapters must feed into this scoping process.

4.6.2. Risk/Impact Assessment

NOTE FOR 4.6.2: REVISED. This was 4.6.3 in the 2018 Mining Standard. The title has changed to risk/impact assessment, as both risks and impacts should be assessed.

⁶⁷⁹ University of Sheffield. 5 June 2023. "Fungi stores a third of carbon from fossil fuel emissions and could be essential to reaching net zero, new study reveals." News Release. <u>https://www.eurekalert.org/news-releases/991288</u>

⁶⁸⁰ NOTE: If ecosystem services have been designated as cultural in nature, this needs to feed into Chapter 3.7 (Cultural Heritage).

⁶⁸¹ Gullison. T, Hardner, J., Anstee, S. and Meyer, M. 2015. Good Practices for the Collection of Biodiversity Baseline Data. p. 9. https://publications.iadb.org/en/good-practices-collection-biodiversity-baseline-data

4.6.2.1. When scoping identifies protected areas, or potentially important global, national, or local biodiversity or ecosystems services that have been or may be affected by a project/operation, an impact (and/or risk) assessment:

- a. Is carried out and documented by competent professionals;
- b. Includes consultations with stakeholders, including, where relevant, affected communities and external experts;
- c. Determines the potentially significant <u>direct impacts</u>, <u>indirect impacts</u>, and <u>cumulative impacts</u> of past and proposed <u>mining-related activities</u>, facilities, <u>associated facilities</u>, and infrastructure, on, as relevant:
 - i. Biodiversity;
 - ii. Ecosystem services; and
 - iii. The conservation values of protected areas.
- d. Evaluates options to mitigate potentially significant impacts on biodiversity, ecosystem services and the conservation values in protected areas in a manner that aligns with the mitigation hierarchy as follows:⁶⁸²
 - i. Prioritizing the avoidance of impacts on important biodiversity values, priority ecosystem services, and conservation values in protected areas;⁶⁸³
 - ii. Minimizing impacts to the extent possible;
 - iii. <u>Restoring biodiversity</u>, ecosystem services and the <u>ecological processes</u> and <u>habitats</u> that support them; and
 - iv. As a last resort, offsetting the residual impacts.
- e. Identifies and evaluates opportunities for partnerships and <u>additional conservation actions</u> to <u>enhance</u> the long-term sustainable management of protected areas and/or biodiversity and ecosystem services.

NOTE FOR 4.6.2.1: REVISED. This was 4.6.3.1 in the 2018 Mining Standard. This proposed requirement combines elements from the following requirements from the 2018 Mining Standard: 4.6.1.1 (competent professionals), 4.6.1.2 (stakeholder engagement), 4.6.3.1 (impact assessment).

4.5.2.1.c (was 4.6.3.1.b) adds impacts related to facilities and infrastructure in addition to impacts from mining-related activities, because the footprint of facilities and infrastructure can also impact biodiversity, ecosystem services and protected areas.

In 4.5.2.1.d (was 4.6.3.1.c), we moved the information on the mitigation hierarchy from requirement 4.6.4.1 in the 2018 Mining Standard. This is the first place where we mention mitigation hierarchy, and so it makes sense to elaborate on it here.

4.6.2.1.e was 4.6.3.1.d, but is otherwise unchanged.

4.6.2.2. Assessments are updated throughout the <u>project/operation's</u> life cycle when there are proposed changes to <u>mining-related activities</u> or changes in the operational, environmental, or social context that may create new risks to <u>biodiversity</u>, <u>ecosystem services</u> or <u>protected areas</u> or change the nature or degree of an existing impact.

NOTE FOR 4.6.2.2: NEW. This has been added to reflect that impact assessments are not a one-time thing. For example, issues such as climate change may affect the types of ecosystem services affected by the operation, or increased hunting pressures due to in-migration may warrant a re-evaluation of measures to best mitigation the impacts to important species, etc.

⁶⁸² This section is meant to align with many other standards and guidelines that address impacts on biodiversity, such as IFC's Performance Standard 6 (see Para. 10 and 14) and the KBA Partners Guidelines on Business and KBAs (KBA Partners. 2018. Guidelines on Business and KBAs: Managing Risk to Biodiversity. <u>https://portals.iucn.org/library/sites/library/files/documents/2018-005-En.pdf</u>)

⁶⁸³ This includes prioritizing avoidance of impacts on the ecological processes and habitats necessary to support the identified biodiversity, ecosystem services and conservation values.

This requirement is aligned with other IRMA chapters, which require an updating of risk assessments when there are changes in the operation or operational context.

4.6.3. Biodiversity and Ecosystem Services Mitigation and Management

NOTE FOR 4.6.3: REVISED. This was 4.6.4 in the 2018 Mining Standard. The title has changed slightly (removed the word impact, as some of the mitigation may be related to risks).

CONSULTATION QUESTION 4.6-2

Background: Currently, this chapter focuses on the conservation and management of the most important or critical areas of biodiversity (in some cases these have been designated as protected areas or Key Biodiversity Areas, in other cases they will not have been officially designated but still contain important biodiversity values) and priority ecosystem services. This is based on an assumption is that halting biodiversity loss (on the global, regional or local scale), and preserving ecosystem services that are important to affected communities deserve the priority attention.

Important Biodiversity Values are defined as:

The particular biodiversity elements or features, such as individual species, assemblages of species, particular ecological processes, etc., that trigger an area's designation as having significant biodiversity value (e.g., designation as critical habitat, a Key Biodiversity Area, a Protected Area), as well as the ecological context needed to support the maintenance of the trigger elements.

Critical Habitat is defined as:

Areas with high biodiversity value, including but not necessarily limited to: (i) habitat of significant importance to critically endangered, endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes. Other recognized high biodiversity values might also support a critical habitat designation, based on case-by-case evaluation.

Priority Ecosystem Services are defined as: "Ecosystem services are considered priority under the following circumstances: (i) Project operations are likely to result in a significant impact on the ecosystem service; the impact will result in a direct adverse impact on affected communities' livelihood, health, safety and/or cultural heritage; and the project has direct management control or significant influence over the service; or (ii) The project directly depends on the service for its primary operations; and the project has direct management control or significant influence influence over the service.

Question: Should IRMA also include specific requirements to manage and minimize impacts on plant or animal populations or species even if those plants/animals do not provide a priority ecosystem service or if impacts on them will not lead to an overall loss of biodiversity? Or should IRMA keep this chapter focused on the most critical/material impacts on biodiversity and ecosystem services?

4.6.3.1. (Critical Requirement)

Mitigation measures to address potential impacts on biodiversity and ecosystem services:

- a. Are designed and implemented by competent professionals;
- b. Are developed in consultation with affected stakeholders;
- c. Prioritize avoidance of impacts on important biodiversity values and priority ecosystem services, and, where that is not possible, prioritize minimization of impacts before restoring biodiversity and ecosystem services;
- d. Offsetting is used as a last resort, and, if required, is aligned with international best practice; and
- e. Include documentation of the entity's rationale when measures do not conform to the mitigation hierarchy.

NOTE FOR 4.6.3.1: REVISED. This combines four requirements from the 2018 Mining Standard: 4.6.1.1 (mitigation developed by competent professionals), 4.6.1.2 (stakeholder engagement in development of

mitigation), 4.6.4.1.b which referred to prioritizing the avoidance of impacts on important biodiversity and ecosystem services, and 4.6.4.3 (offsetting, if required, shall be done in a manner that aligns with international best practice). In the 2018 Mining Standard requirement 4.6.4.1 was a critical requirement, so it is also designated as critical in this version (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

There is one NEW sub-requirement being proposed. In 4.6.3.1.e, we are proposing also that entities be required provide a rationale for why they are implementing measures that are lower on the mitigation hierarchy. Without this documentation, it is difficult to audit whether or not due consideration was given to options such as avoidance, or minimization of impacts, which area higher up the hierarchy.

4.6.3.2. Mitigation measures are designed and implemented:

- a. To deliver at least no net loss, and preferably a net gain, in important biodiversity values, and priority ecosystem services;
- b. On an appropriate geographic scale; and
- c. To be self-sustaining after closure.

NOTE FOR 4.6.3.2: This was 4.6.4.1.c in the 2018 Mining Standard.

CONSULTATION QUESTION 4.6-3:

Background: Previously, this requirement applied to new mines, but we have removed the distinction between new and existing mines in this revised standard. As a result, we are proposing that in all cases (for proposed projects or existing operations) that entities be required to demonstrate that their management of biodiversity and ecosystem services will lead to no net loss and preferably a net gain, at least in the <u>important</u> <u>biodiversity values</u>, and in priority ecosystem services.

Question: Do you agree that all projects and operations should be required to demonstrate no net loss and preferably a net gain in important biodiversity values, and in priority ecosystem services?

4.6.3.3. A biodiversity management plan (or equivalent) is developed and implemented. The management plan:

- a. Is developed by competent professionals;
- b. Outlines specific objectives (e.g., <u>no net loss/net gain</u>, no additional loss) with measurable <u>conservation</u> <u>outcomes</u>, timelines, locations, and activities that will be implemented to mitigate impacts on <u>biodiversity</u> (see 4.6.3.1);
- c. Identifies key indicators, and ensures that there is an adequate <u>baseline</u> for the indicators to enable measurement of the effectiveness of <u>mitigation</u> activities over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁶⁸⁴
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 4.6.3.3: REVISED. This was 4.6.4.4 in the 2018 Mining Standard. Added 4.6.3.3.c and d, as we are trying to increase consistency in expectations for all management plans across the IRMA Standard.

4.6.3.4. An ecosystem services management plan (or equivalent) is developed and implemented. The management plan:

a. Is developed by competent professionals;

⁶⁸⁴ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

- b. Outlines specific objectives (e.g., no net loss/net gain, no additional loss) with measurable conservation outcomes, timelines, locations, and activities that will be implemented mitigate impacts on ecosystem services (see 4.6.3.1);
- c. Identifies key indicators, and ensures that there is an adequate <u>baseline</u> for the indicators to enable measurement of the effectiveness of mitigation activities over time;
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁶⁸⁵
- e. Includes an implementation schedule; and
- f. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.

NOTE FOR 4.6.3.4: NEW. We have created a requirement for an ecosystem services management plan to ensure that due attention is paid and weight given to the management of ecosystem services. In reality, these elements are likely to be integrated into a single management plan with biodiversity, but the entity's performance on management of ecosystem services will be scored separately.

4.6.3.5. Biodiversity and ecosystem services management plans are reviewed and updated as necessary, for example, if new information on increased or additional risks to <u>biodiversity</u> or <u>ecosystem services</u> becomes available during the <u>mineral development life cycle</u> (see 4.6.2.2), or monitoring indicates that <u>mitigation</u> measures are not being effective (see 4.6.5.3).

NOTE FOR 4.6.3.5: REVISED. This was 4.6.4.5 in the 2018 Mining Standard. It has been revised slightly to add that updates to risk/impact assessments and monitoring results also feed into the review and update of management plans.

4.6.4. Protected Areas Mitigation and Management

- 4.6.4.1. Mining-related activities do not occur in legally protected areas unless the entity:
 - a. Demonstrates that the proposed activities are legally permitted in those areas;
 - b. Consults with protected area sponsors, managers, and relevant stakeholders on the proposed activities;
 - c. Develops and implements a protected area management plan that:
 - i. Outlines how mining-related activities will be carried out in a manner consistent with the protected area management plans developed by relevant management authorities for such areas;
 - ii. If relevant (i.e., if there is the potential that they project will impact important <u>conservation values</u> of the protected area), the plan includes activities/actions to <u>mitigate</u> those impacts, identifies key indicators, and ensures that there is an adequate <u>baseline</u> for the indicators to enable measurement of the effectiveness of mitigation activities over time;
 - iii. Includes additional conservation actions or programs to promote and enhance the conservation aims and/or effective management of the area;
 - iv. Assigns implementation of actions, or oversight of implementation, to responsible staff;686
 - v. Includes an implementation schedule; and
 - vi. Includes estimates of human resources and budget required and a financing plan to ensure that funding is available for the effective implementation of the plan.
 - d. Meets other applicable requirements in this this chapter.⁶⁸⁷

⁶⁸⁵ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

⁶⁸⁶ If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

⁶⁸⁷ Other applicable requirements include 4.6.1.1, 4.6.1.2, 4.6.2.1, and 4.6.2.2.

NOTE FOR 4.6.4.1: REVISED. This was 4.6.5.1 in the 2018 Mining Standard. Previously, this requirement said it applied to new exploration or new mines, but we have removed that distinction in this revised standard. Instead, we refer to mining-related activities generally, which in our proposed definition includes exploration, mining and mineral processing activities.

The content in 4.6.4.1.c is NEW except for c.iii. The requirement for a management plan was added because there would need to be a plan in place to demonstrate how impacts will be mitigated and additional conservation actions implemented. The elements in the management plan are consistent with other management plans in the IRMA Standard.

4.6.4.2. (Critical Requirement)

Mining-related activities:

- a. Do not take place in or adversely affect the following protected areas:
 - i. World Heritage Sites;
 - ii. Areas on a state party's official Tentative List for World Heritage Site Inscription;
 - iii. Areas classified as IUCN protected area management categories I-III; and
 - iv. Core areas of UNESCO biosphere reserves.
- b. Unless it can be demonstrated that:
 - i. The operation was in place prior to the area's official designation;
 - ii. The <u>entity collaborates</u> with protected area sponsors, managers, and relevant <u>stakeholders</u> to develop acceptable <u>mitigation</u> actions to protect, and if necessary, restore the integrity of the special values for which the area was designated or recognized;
 - iii. The entity develops and implements a protected area management plan that aligns with 4.6.4.1.c and integrates mitigation measures agreed in 4.6.4.2.b.ii; and
 - iv. The entity <u>collaborates</u> with relevant management authorities to integrate the operation's management strategies into the protected area's management plan.

NOTE FOR 4.6.4.2: REVISED. This requirement combines two requirements from the 2018 Mining Standard (4.6.5.3 and 4.6.5.4) because 4.6.5.4 was an exception to 4.6.5.3, and it makes sense to combine them and only audit a single requirement. In the 2018 Mining Standard requirement these were critical requirements, so 4.6.4.2 in this version is also designated as critical (for more on critical requirements see the note that accompanies 'Critical Requirements In This Chapter,' above).

Previously, those requirements referred to new and existing mines, but we have removed that distinction in this revised standard. Instead, we refer to mining-related activities generally, which in our proposed definition includes exploration, mining and mineral processing activities. 4.6.4.2, which previously referred to existing mines now refers to operations, which maintains the original intent.

In 4.6.4.2.b, we are proposing to REVISE the previous requirement 4.6.5.4.b, which referred to a management plan, and replace it with sub-requirements 4.6.4.2.b.ii and 4.6.4.2.b.iii. The notable changes being proposed are that the entity's management plan align with 4.6.4.1 c (so there are more consistent expectations for management plans for all types of protected areas), and rather than saying the management plans "ensure that activities during the remaining mine life cycle will not permanently and materially damage the integrity of the special values for which the area was designated or recognized," which is difficult to audit, we are proposing to require instead that entities collaborate with relevant stakeholders to develop the mitigation measures to protect or restore the integrity of the special values for which the area was designated or recognized.

4.6.4.3. Mining-related activities:

- a. Do not take place in or adversely affect the following protected areas:
 - i. IUCN protected areas designated as protected area management category IV;

- ii. Ramsar sites that are not in areas classified as IUCN protected area management categories I-III;⁶⁸⁸ and
- iii. Buffer zones of UNESCO biosphere reserves.
- b. Unless it can be demonstrated that:
 - i. Mining-related activities are legally permitted in those areas;
 - ii. An operation was in place prior to the area's official designation;
 - iii. For proposed mining-related activities, an assessment, carried out or peer-reviewed by a reputable conservation organization and/or academic institution,⁶⁸⁹ concludes that mining-related activities will not damage the integrity of the special values for which the area was designated or recognized;
 - iv. The entity collaborates with protected area sponsors, managers, and relevant <u>stakeholders</u> to develop acceptable <u>mitigation</u> actions to protect the integrity⁶⁹⁰ of the special values for which the area was designated or recognized;
 - v. The entity develops and implements a protected area management plan that aligns with 4.6.4.1.c and integrates mitigation measures agreed in 4.6.4.3.b.iii; and
 - vi. The entity collaborates with relevant management authorities to integrate the operation's management strategies into the protected area's management plan.

NOTE FOR 4.6.4.3: REVISED. This was requirement 4.6.5.2 in the 2018 Mining Standard, but it has been restructured.

Previously, this requirement referred to new mining activities. We have removed the distinction between new and existing mines in this revised standard.

We are proposing instead that the majority of these requirements apply to any mining-related activities, regardless of whether they are in the proposal stage or are already in place. The exceptions are that: 1) proposed mining activities need to carry out the study in 4.6.4.3.b (which was required in the 2018 Standard); and 2) if an operation was in place before the area received its designation, then like 4.6.4.2, then mitigation is required to be developed in collaboration with relevant stakeholders to protect, or if necessary, restore the integrity of the special values for which the areas was designated.

4.6.5. Monitoring

4.6.5.1. A program is in place to monitor the implementation of its protected areas and/or biodiversity and ecosystem services management plan(s) throughout the project/operation life cycle. Monitoring of key indicators occurs with sufficient frequency to enable evaluation of the effectiveness of mitigation strategies and progress toward the objectives of at least no net loss or net gain in biodiversity and ecosystem services over time.

NOTE FOR 4.6.5.1: This combines 4.6.6.1 and 4.6.6.2 from the 2018 Mining Standard.

4.6.5.2. Monitoring is carried out by <u>credible professionals</u> who are independent third parties, or by in-house credible professionals. If in-house staff perform the work, then the findings of monitoring program are reviewed by an independent third party.

⁶⁸⁸ If Ramsar sites are in areas classified as IUCN protected area management categories I-III, see requirement 4.6.4.2.

⁶⁸⁹ E.g., Peer review should be undertaken by an academic institution or environmental NGO with experience in biodiversity assessments. Also, the personnel responsible for carrying out the peer-review or assessment are expected to be competent professionals (i.e., in-house staff or external consultants with relevant education, knowledge, proven experience and necessary skill-sets and training to carry out the required work. Competent professionals are expected to follow scientifically robust methodologies to carry out their work).

⁶⁹⁰ For existing operations that were in place prior to the area's official designation, there may need to be efforts to restore the integrity.

NOTE FOR 4.6.5.2: REVISED. This requirement combines two requirements from the 2018 Mining Standard: 4.6.1.1 (monitoring is carried out by competent professionals), and 4.6.6.4 (findings of the monitoring program are subject to independent review).

We are proposing that this requirement be changed to also allow that the monitoring be carried out by independent third parties, and if that is done, then independent review would not be necessary.

4.6.5.3. If monitoring reveals that the entity's protected areas and/or biodiversity and ecosystem services management objectives are not being achieved as expected or mitigation strategies are not being effective, timely and effective corrective actions are developed in consultation with relevant stakeholders. and these changes are implemented and integrated into the relevant management plans.

NOTE FOR 4.6.5.3: REVISED. This was requirement 4.6.6.3 in the 2018 Mining Standard. Added that if corrective actions are necessary, that they be integrated into the management plan.

4.6.6. Reporting and Disclosure

NOTE FOR 4.6.6: NEW. This criterion has been added to provide more consistency with the structure of other IRMA Standards, but the content is not new.

CONSULTATION QUESTION 4.6-4

Background: Currently, there are no reporting requirements in this chapter. In other chapters there are expectations that entities annually report on water management, waste management, human rights due diligence, etc. Sometimes the reporting can be in the form of a published report, and in other cases it is expected that there be a meeting with stakeholders where information on management actions or progress toward various targets be verbally shared.

There is no similar requirement in this chapter.

Question: Do you think that a reporting requirement should be added to this chapter? If so, what would be some of the information that should be shared on an annual basis? And would a written report suffice, or should entities be engaging directly with stakeholders?

4.6.6.1. <u>Biodiversity</u>, ecosystem services and protected areas impact assessments, management plans and monitoring data are:

- a. Publicly available; or
- b. A publicly available access to information (or equivalent) policy that commits the entity to providing stakeholders with this information upon request is in place and shared with stakeholders.⁶⁹¹

NOTE FOR 4.6.6.1: REVISED. This was 4.6.1.3 in the 2018 Mining Standard. Previously, the requirement included both elements – i.e., that either the information was publicly available, or it would be made available to stakeholders upon request.

There were numerous places in the IRMA Standard that mentioned provision of information to stakeholders "upon request". Those requirements have proven very difficult to audit as written, because if the auditee tells auditors that there were no requests for information then the auditor has two choices – mark it as fully meets (which isn't accurate, since there is no evidence, other than perhaps a verbal guarantee, that if asked the entity would provide the information) or mark it as not relevant (which is more accurate, since there were not requests, but is problematic because if stakeholders are not aware that they can request information, then there may never be any requests).

⁶⁹¹ As per Chapter 1.2, requirement 1.2.4.3, an access to information policy is proposed for requirement in the revised IRMA Standard. It is expected that this policy could include the relevant provisions related to stakeholder access to entity-generated information and data on biodiversity, ecosystem services and protected areas.

In Chapter 1.2, we are proposing that instead of the approach in the 2018 Mining Standard, which was essentially a blanket statement saying "information shall be made available upon request," that entities have in place a publicly available "access to information" or similar policy that commits the entity to providing information to stakeholders if requests are made, and that this policy be communicated to stakeholders (see Note for requirement 1.2.4.3).

NOTES

Although presented in a different format, many of the requirements in this chapter are meant to generally align with the International Finance Corporation's (IFC) Performance Standard 6—Biodiversity Conservation and Sustainable Management of Living Natural Resources, and also the KBA Partners' Guidelines on Business and Key Biodiversity Areas (KBAs).⁶⁹²

Several requirements reference the International Union for the Conservation of Nature (IUCN) Protected Areas Management Categories. These categories are defined in the glossary definition for 'Protected Area / Protected Area Management Categories.'⁶⁹³

This chapter focuses on the conservation of the most important or critical areas of biodiversity (in some cases these have been designated as protected areas or Key Biodiversity Areas, in other cases they will not have been officially designated but still contain important biodiversity values). While the objectives of no net loss and preferably net gain are explicitly required to be planned for in the case of impacts on important biodiversity values and priority ecosystem services, it is strongly encouraged that such objectives be considered for any impacts on biodiversity or ecosystem services (e.g., IFC PS6 states that in areas of natural habitat, mitigation measures will be designed to achieve no net loss of biodiversity where feasible).

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

PROPOSED NEW DEFINITIONS

Direct Impacts

Direct impacts are those caused by activities that are undertaken and facilities that are owned and managed by an entity, and occur at the same time and in the same place that the action is occurring. See also 'Indirect Impacts'.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

⁶⁹² IFC. 2012. Performance Standard 6— Biodiversity Conservation and Sustainable Management of Living Natural Resources with Guidance Notes. Available at: <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards</u>

KBA Partners. 2018. Guidelines on Business and KBAs: Managing Risk to Biodiversity. https://portals.iucn.org/library/sites/library/files/documents/2018-005-En.pdf

⁶⁹³ For more information see Dudley, N. 2008. Guidelines for Applying Protected Area Management Categories. <u>https://portals.iucn.org/library/sites/library/files/documents/pag-021.pdf</u>

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Indirect Impacts

Impacts that are caused by a project or operation but occur later in time or are farther removed in distance than a direct impact. See also 'Direct Impacts'.

Mineral Development Life Cycle

All of the stages from cradle to grave required to produce a saleable mineral/metal product. Includes exploration, project development, permitting, construction, mining and mineral processing operations, reclamation and closure, and post-closure stages.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

EXISTING DEFINITIONS

Additional Conservation Actions

A broad range of activities that are intended to benefit biodiversity, where the effects or outcomes can be difficult to quantify.

Affected Community

A community that is subject to risks or impacts from a project/operation.

REVISED. Changed wording from project to project/operation.

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.

REVISED. Streamlined - removed examples.

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities,

construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Biodiversity/Biological Diversity

The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems.

Biosphere Reserves

Biosphere reserves are areas comprising terrestrial, marine, and coastal ecosystems. Each reserve promotes solutions reconciling the conservation of biodiversity with its sustainable use. Biosphere reserves are 'Science for Sustainability support sites' – special places for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Their status is internationally recognized.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Conservation Outcome

A conservation outcome is the result of a conservation intervention aimed at addressing direct threats to biodiversity or their underlying socio-political, cultural, and/or economic causes. Conservation outcomes are typically in the form of: (a) extinctions avoided (i.e., outcomes that lead to improvements in a species' national or global threat status); (b) sites protected (i.e., outcomes that lead to designation of a site as a formal or

informal protection area, or to improvement in the management effectiveness of an existing protected area); and (c) corridors created (i.e., outcomes that lead to the creation of interconnected networks of sites at the landscape scale, capable of maintaining intact biotic assemblages and natural processes, and, thereby, enhancing the long-term viability of natural ecosystems). Conservation outcomes would also include any other intervention that leads to conservation gains.

Conservation Values

The ecological, biological, geomorphological, geological, cultural, spiritual, scenic, or amenity values, features, processes, or attributes that are being conserved.

Critical Habitat

Areas with high biodiversity value, including but not necessarily limited to: (i) habitat of significant importance to critically endangered, endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes. Other recognized high biodiversity values might also support a critical habitat designation, based on case-by-case evaluation.

Cumulative Impacts

Additive, synergistic, interactive or nonlinear outcomes of multiple development or disturbance events that aggregate over time and space. Examples of cumulative impacts (or effects) may include reduction of water flows in a watershed due to multiple withdrawals; increases in sediment loads to a watershed over time; interference with migratory routes or wildlife movement; or more traffic congestion and accidents due to increases in vehicular traffic on community roadways.

Ecological Processes

Biophysical processes (e.g., hydrologic regimes, local climatic regimes, soil chemistry/nutrient cycling, fires, floods and other natural disturbance regimes, herbivory, predation, ecological corridors, migration routes) necessary for the habitat to persist in a landscape or seascape for the long term.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Ecosystem Services

The benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Enhancement (of biodiversity values)

The improvement of the ability of a degraded ecosystem to support biodiversity, through conservation measures such as alteration to the soils, vegetation, and/or hydrology. The term is sometimes used for a type of restoration that enhances the biodiversity present but is not couched in terms of restoring the ecosystem to some prior state.

Habitat

A terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. The place or type of site where an organism or population naturally occurs.

Important Biodiversity Values

The particular biodiversity elements or features, such as individual species, assemblages of species, particular ecological processes, etc., that trigger an area's designation as having significant biodiversity value (e.g., designation as critical habitat, a Key Biodiversity Area, a protected area), as well as the ecological context needed to support the maintenance of the trigger elements.

Key Biodiversity Areas (KBA)

Sites that contribute to the global persistence of biodiversity, including vital habitat for threatened or geographically restricted plant and animal species in terrestrial, freshwater, and marine ecosystems.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. (See also 'Mitigation Hierarchy')

Mitigation Hierarchy

The mitigation hierarchy is a set of prioritized steps to alleviate environmental (or social) harm as far as possible through avoidance, minimization, and restoration of adverse impacts. Compensation/offsetting are only considered to address residual impacts after appropriate avoidance, minimization, and restoration measures have been applied. The biodiversity mitigation hierarchy is as follows (but the steps can be applied for any environmental or social impacts, although waste management has its own hierarchy. For waste, see definition of Waste Mitigation Hierarchy):

i. Avoidance: measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure in order to completely avoid impacts on certain components of biodiversity. This results in a change to a 'business as usual' approach.

ii. Minimization: measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided, as far as is practically feasible.

iii. Restoration: measures taken to assist the recovery of ecosystems that have been degraded, damaged, or destroyed. Involves altering an area in such a way as to re-establish an ecosystem's composition, structure, and function, usually bringing it back to its original (pre-disturbance) state or to a healthy state close to the original.

iv. Offset: measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse impacts on biodiversity arising from project development after appropriate prevention and mitigation actions have been taken. The goal of biodiversity offsets is no net loss or a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function, and people's use and cultural values associated with biodiversity.

REVISED. Added reference to waste mitigation hierarchy, which is slightly different.

Modified Habitat

Areas that may contain a large proportion of plant and/or animal species of non-native origin and/or where human activity has substantially modified an area's primary ecological functions and species composition (this excludes habitat that has been converted in anticipation of the project). Modified habitats may include areas managed for agriculture, forest plantations, reclaimed coastal zones, and reclaimed wetlands.

Natural Habitat

Areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.

No Net Loss and Net Gain (of biodiversity)

Targets for development projects in which the impacts on biodiversity caused by the project are balanced or outweighed by measures taken to first avoid and minimize the impacts, then to undertake on-site rehabilitation and/or restoration, and finally to offset the residual impacts (if appropriate). No net loss, in essence, refers to the point where biodiversity gains from targeted conservation activities match the losses of biodiversity due to the impacts of a specific development project, so that there is no net reduction overall in the type, amount, and condition (or quality) of biodiversity over space and time. A net gain (sometimes referred to as net positive impact) means that biodiversity gains exceed a specific set of losses.

Offset (biodiversity)

As it relates to biodiversity, measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse impacts on biodiversity arising from project development after appropriate prevention and mitigation actions have been taken. The goal of biodiversity offsets is no net loss or a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function, and people's use and cultural values associated with biodiversity. (See also mitigation hierarchy)

Priority Ecosystem Services

Ecosystem services are considered priority under the following circumstances: (i) operations are likely to result in a significant impact on the ecosystem service; the impact will result in a direct adverse impact on affected communities' livelihood, health, safety and/or cultural heritage; and the entity has direct management control or significant influence over the service; or (ii) the operation directly depends on the service for its primary operations; and the operation has direct management control or significant influence over the service.

Protected Area/Protected Area Management Categories (IUCN)

A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. The definition is expanded by six "protected area management categories" (one with a sub-division), summarized below.

Ia *Strict nature reserve:* Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values.

Ib *Wilderness area:* Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition.

II *National park:* Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.

III *Natural monument or feature*: Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove.

IV *Habitat/species management area*: Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category.

V *Protected landscape or seascape*: Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI *Protected areas with sustainable use of natural resources:* Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims.

Residual Impacts

Impacts that remain after on-site mitigation measures (avoidance, minimization, restoration) have been applied.

Restoration

Measures taken to assist the recovery of ecosystems that have been degraded, damaged or destroyed. Involves altering an area in such a way as to re-establish an ecosystem's composition, structure and function, usually bringing it back to its original (pre-disturbance) state or to a healthy state close to the original.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Tentative List for World Heritage Site Inscription

The list of sites that relevant state parties are formally considering for nomination as a World Heritage Site in the next five to ten years.

World Heritage Site

A site/property inscribed on the World Heritage List, which has outstanding universal value and meets the conditions of authenticity and integrity. The World Heritage property includes within its borders all of the attributes that are recognized as being of outstanding universal value.

Chapter 4.XX (NEW) Land and Soil Management

NOTES ON THIS CHAPTER: This is a new chapter that was proposed in the 2021 draft IRMA Mineral Processing Standard.⁶⁹⁴ There are structural changes being proposed compared to the version of the chapter in that draft standard, and minor changes to content.

In IRMA's 2018 Mining Standard, land and soil management issues are dealt with directly and indirectly in several chapters (such as 2.1 - 'Environmental and Social Impact Assessment and Management,' Chapter 2.6 - 'Planning and Financing Reclamation and Closure,' Chapter 4.1 - 'Waste and Material Management,' and Chapter 4.3 - 'Air Quality').

This reflects the relatively limited scope for impacts on land and soil beyond the immediate footprint of a mine/processing facility. However, some mining-related activities, in particular mineral processing facilities, have air emissions that can have a significant and sustained impact in downwind areas. Also, unplanned releases of chemicals, or solid or liquid waste products (e.g., tailings) from exploration or mining operations may be dispersed downgradient and affect soils and land use capabilities.

Increasingly, attention is being paid to the potential contributions of mining to regional or global soil loss. For example, in Mongolia, the combined annual cost of land degradation is estimated at around 2.1 billion USD or 43% of the country's GDP. Soil degradation in Mongolia is known to be driven by the combined effects of climate change and anthropogenic activities including mining, (over-)grazing, agriculture, urbanization and offroad transportation, and studies are now being carried out to better understand the extent of mining-related soil losses and related air contaminant transport in that country, with the expectation that this will lead to better strategies for prevention of soil loss and remediation of land and soil quality.⁶⁹⁵

Disturbed or converted lands within a mine/processing facility footprint (e.g., open pits, waste disposal areas, land covered by facilities) are expected to be reclaimed, and soil pollution remediated and, to the extent possible this should happen during operations to help prevent additional soil loss and restore ecosystems.

Although not covered extensively in any other mining and mineral processing or related standards, several standards at least make a cursory mention of soils or land. For example, the RMI ESG standard has a section on soil erosion management,⁶⁹⁶ IFC requires entities to address potential adverse project impacts on existing ambient conditions (such as air, surface and groundwater, and soils),⁶⁹⁷ and the Aluminum Stewardship Initiative requires that entities assess the potential for spills and leakages to contaminate soils.⁶⁹⁸

Chapter 4.XX has been partly modeled after IRMA's Water Management chapter (4.2). It addresses protection of soil from mining-related contamination, minimization of soil loss (e.g., from erosion), and opportunities to minimize impacts and restore converted lands to create beneficial or productive land uses.

⁶⁹⁴ Initiative for Responsible Mining Assurance. 2021. Standard for Responsible Mineral Processing. Draft version 1.0. <u>https://responsiblemining.net/wp-content/uploads/2021/06/IRMA-Mineral-Processing-Standard-DRAFT-14June2021.pdf</u>

⁶⁹⁵ Sodnomdarjaa, E. et al. 2023. "Assessment of soil loss using RUSLE around Mongolian mining sites: a case study on soil erosion at the Baganuur lignite and Erdenet copper–molybdenum mines" Environmental Earth Sciences. 82:230, <u>https://doi.org/10.1007/s12665-023-10897-0</u>

⁶⁹⁶ Responsible Business Alliance/Responsible Minerals Initiative. 2021. Environmental, Social and Governance (ESG) Standard for Mineral Supply Chains. Requirement VI-16.

https://www.responsiblemineralsinitiative.org/media/docs/standards/RMI_RMAP%20ESG%20Standard%20for%20Mineral%20Supply%20Chains_June32021_FINAL.pdf

⁶⁹⁷ International Finance Corporation. 2012. Performance Standard 3 – Resource Efficiency and Pollution Prevention. Requirement 11. Available at: https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards

⁶⁹⁸ Aluminum Stewardship Initiative. 2023. Performance Standard. V.3.1. Requirement 6.3. <u>https://aluminium-stewardship.org/wp-content/uploads/2023/04/ASI-Performance-Standard-V3.1-April-2023.pdf</u>

Other physical changes to land (e.g., subsidence, loss of land use capability due to catastrophic failure of waste or other facilities) are covered in the proposed Chapter 4.X - 'Management of Physical Stability.'

Glossary:

• We are proposing other new/revised definitions for several glossary terms. The 'Terms Used In This Chapter' box shows which terms are new, and the proposed definitions can be found in the glossary at the end of the chapter requirements (and before the Annexes). Feedback on definitions is welcome.

CONSULTATION QUESTION 4.XX-1: Do you agree with the proposal to add a new chapter on 'Land and Soil Management'? If not, why not?

CONSULTATION QUESTION 4.XX-2

Background: This chapter focuses primarily on two elements of soil and land management: 1) prevention/remediation of soils pollution, and 2) loss of soil (and land) due to erosion or conversion of potentially usable land into unusable land (e.g., via creation of open pits or covering surfaces with waste materials).

There are other aspects of soil quality that could be included, such as biological and physical soil properties; however, at this time we are not proposing that entities fully characterize, monitor, maintain or restore the biological and physical quality of soils. While maintaining soil properties may be of critical importance for agricultural systems, maintaining or restoring the exact soil properties that existed prior to mining (e.g., the same organic matter content, diversity of soil organisms, crumb structure, etc.) does not seem realistic for highly disturbed industrial sites.

Instead, in alignment with IRMA's chapter on reclamation and closure, we are expecting that sites be maintained or restored to a stable landscape, which would mean stabilizing soils (to minimize future erosion or mass movement), that soil conditions allow for the re-establishment of vegetation and ecological processes that align with postclosure land use objectives determined by regulations and input from affected communities. To reach post-closure land use objectives, soils may need to be remediated or amendments added, but it is unlikely that the only way to achieve the objectives would be by maintaining the original biological and physical quality of soils.

Question: Do you agree that soil does not need to be maintained or restored to original (pre-mining) biological and physical quality? If you do not agree, please explain.

If you believe the chapter should have additional best practice requirements, please feel free to make suggestions, and if possible, provide examples of where your best practice suggestions are being implemented at mining or mineral processing sites.

BACKGROUND

Human activities cause dramatic changes to the Earth's surface and ecosystems. Mining activities, as with other major industrial activities, have contributed to a global loss of natural vegetation, soil erosion, soil quality decline, and the loss of ecosystem structure and function.⁶⁹⁹

The risk of negative changes to land and soil quality exists at exploration sites, as well as mines and mineral processing operations. Heavy metals, metalloids ad other contaminants associated with mining and mineral processing can accumulate in soils, plants, and water, posing threats to ecosystem health. Effects can be long-term, and can occur over large expanses of land, even after mining-related activities have ceased.⁷⁰⁰

Sources of contaminants that may lead to soil quality degradation include waste disposal facilities and dispersion of contaminants (for example via surface runoff), the discharge of effluents to water and subsequent downstream

⁶⁹⁹ Hu, Y. et al. 2020. "Influence of mining and vegetation restoration on soil properties in the eastern margin of the Qunghia-Tibet Plateau," Int. J. Environ. Res. Public Health. 17(12):4288. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7344658/</u>

⁷⁰⁰ Ibid.

contact with soil resources, and the deposition of airborne emissions and particulate matter onto land and soil resources.

Mining-related activities may also lead to a loss in future soil and land use options as a result of the physical modification of landscapes and the conversion of land uses (e.g., lands being covered in buildings or waste facilities, land deformation from dewatering or underground mining, land alteration due to excavation of pits and changes to geomorphological features) and soil erosion.⁷⁰¹ Soil erosion can occur during construction of roads and facilities,

stripping of overburden, excavation of rocks and minerals, disposal of wastes, and even during reclamation and closure. These activities may increase erosion rate up to several hundred times greater than from undisturbed areas.⁷⁰²

There are, however, actions that can be taken to both minimize land and soil degradation (e.g., loss in soil quality, erosion of soil, and modification or conversion of land) during operations, and to restore land and soils through reclamation and rehabilitation activities. Proposed stand-alone mineral processing projects have a unique opportunity to avoid converting undisturbed land to an industrial site by choosing brownfield sites (where previous mineral processing or other completely different industrial activities took place) over greenfield locations, however, some brownfield locations may have existing soil quality issues from historical activities that require management and mitigation.

TERMS USED IN THIS CHAPTER

Accidents Adaptive Management Area of Influence Background Soil Quality NEW ■ Baseline ■ Brownfield NEW ■ Closure ■ Collaborate ■ Competent Authority ■ Competent Professional
Conceptual Site Model Concurrent Reclamation NEW
Consultation Contamination NEW ■ Control ■ Credible Methodology NEW ■ Discharge NEW ■ Ecosystem ■ Entity NEW ■ Exploration NEW
Facility
Greenfield NEW Grievance
Host Country Law
Mineral Processing NEW ■ Mining NEW ■ Mining-Related Activities ■ Mitigation
Mitigation Hierarchy
Offset
Operation NEW ■ Pollution NEW ■ Post-Closure ■ Practicable ■ Project ■ NEW ■ Receptor NEW ■ Reclamation NEW ■ Release NEW ■ Restoration ■ Rights Holder ■ Scoping **NEW** Site **NEW** Soil Remediation **NEW** Stakeholder Trigger Level

OBJECTIVES/INTENT OF THIS CHAPTER

These terms appear in the text with a <u>dashed underline</u>. For definitions see the <u>Glossary of Terms</u> at the end of the chapter.

To prevent contamination, mitigate and remediate soil

pollution and address degradation of land and soil to enable current and future beneficial uses of soil and land resources.

SCOPE OF APPLICATION

RELEVANCE: This chapter is applicable to all exploration, mining and mineral processing projects and operations.

4.XX.1.1 applies only to proposed stand-alone mineral processing projects, given that mining projects need to be located where the mineral resources are located and unlike stand-alone mineral processing facilities do not have a choice to develop on brownfield sites.

4.XX.4.1 only applies to mineral processing operations that were developed on <u>brownfield</u> locations. These operations are expected to assess liability for pre-existing pollution and have a plan for soil remediation.

Existing operations (exploration, mines and mineral processing) are also expected to estimate <u>background</u> soil quality and soil and land characteristics where <u>baseline</u> conditions were not previously established (4.XX.1.2).

NOTE ON SCOPE OF APPLICATION: This proposed version of the IRMA Standard is meant to apply to exploration, mining, and mineral processing projects and operations (see definitions of project and operation), but not all requirements will be relevant in all cases. We have provided some high-level information below, but the IRMA Secretariat will produce a detailed Scope of Application for each chapter that will indicate relevancy on a requirement-by-requirement basis (and will provide some normative

⁷⁰¹ Bridge, G. 2004. Contested terrain: mining and the environment." Annu. Rev. Environ. Resource. 28-205-259. https://www.annualreviews.org/doi/pdf/10.1146/annurev.energy.28.011503.163434

⁷⁰² Ramli, M. et al. "Analysis of soil erosion on mine area," Institute of Physics Conference Series: Materials Science and Engineering. 875:012052. https://iopscience.iop.org/article/10.1088/1757-899X/875/1/012052/pdf

language where the expectations may slightly differ for proposed projects versus operations, or for mining versus mineral processing, etc.).

CRITICAL REQUIREMENTS IN THIS CHAPTER

None at this time.

NOTE ON CRITICAL REQUIREMENTS: The 2018 IRMA Standard includes a set of requirements identified as being critical. Projects/operations being audited in the IRMA system must at least substantially meet all critical requirements in order to be recognized at the achievement level of IRMA 50 and higher, and any critical requirements not fully met need a corrective action plan for meeting them within specified time frames.

INPUT WELCOME: The proposed revisions to the 2018 Standard have led to new content, as well as edits of some critical requirements in the process. Therefore, there will be a further review of the language and implications of critical requirements prior to the release of a final v.2.0 of the IRMA Standard. During this consultation period we welcome input on any existing critical requirement, as well as suggestions for others you think should be deemed critical. A rationale for any suggested changes or additions would be appreciated.

Land and Soil Management Requirements

4.XX.1. Site Selection and Baseline Characterization

4.XX.1.1. For proposed mineral processing projects:

- a. The avoidance of impacts on soils and lands is given due consideration in the selection of the project location, and the potential to locate the project on an existing <u>brownfield</u> site is evaluated; and
- b. If projects are developed on greenfield sites, a rationale is documented.

NOTE FOR 4.XX.1.1: This requirement is akin to the Technology Selection requirement in Chapter 4.5 – 'Greenhouse Gas, Energy Consumption.' As the mitigation hierarchy suggests, avoidance of impacts should always be the top priority, and when it comes land and soil, this is best achieved by locating projects on already degraded or converted land, rather than land that is being used for beneficial purposes such as agriculture, livestock grazing or that provides non-use benefits such as habitat or corridors for wildlife, etc.

As mentioned in the background section, however, if brownfield sites are selected there could be soil pollution issues that remain from historical operations. If the choice is made to develop on a brownfield site where there is existing historical pollution, we are proposing that action must be taken to assess the extent of the impacts and make progress toward remediating the soils (see requirement 4.XX.4.1, below) to restore a site's ability to be used for beneficial purposes.

CONSULTATION QUESTION 4.XX-3: Is this a reasonable requirement and would many/most new mineral processing operations be able to demonstrate that brownfield sites were considered (or explain why they were not)?

4.XX.1.2. Land and soil baseline (or background data⁷⁰³) in the project/operation's area of influence:

- a. Is collected by competent professionals; and
- b. Includes measurement of:
 - i. The chemical characteristics of soils;

⁷⁰³ For existing operations that didn't collect baseline data prior to development, background data must be collected.

- ii. Existing areas of soil <u>contamination</u> and <u>pollution</u> that are unrelated to the project/operation, including contamination and pollution that pre-date construction of an existing operation;⁷⁰⁴
- iii. Land uses;⁷⁰⁵ and
- iv. Land capability classification.

NOTE FOR 4.XX.1.2: The structure of 4.XX.1.2 is similar to requirement 4.2.1.1 in Chapter 4.2 – 'Water Management.' As with other chapters, we have integrated the expectation that data be collected by competent professionals.

As in the water chapter, we have made an allowance for collecting background data at sites that did not collect baseline data prior to commencement of the operation. While not ideal, background soil chemical characteristics can be estimated based on sampling soils collected from an area outside of the mining-related operation's influence (but preferably from nearby locations with similar climate, topography, and soil types to what is in the operation's area of influence). If there are facilities with air emissions, the background soil samples should be collected from upwind areas.

Re: 4.XX.1.2.b.iv, the Land Capability Classification (LCC) is a global land evaluation ranking that groups soils based on their potential for agricultural and other uses. LCC can help determine if land is suitable for certain uses and whether there are risks for degradation.⁷⁰⁶

4.XX.2. Scoping of Risks to Land and Soil

NOTE FOR 4.XX.2: This criterion, and the requirements within are generally aligned with the requirements in the Water chapter.

4.XX.2.1. The entity identifies land users, land rights holders, and other stakeholders with an interest in land use or soil conservation (hereafter referred to collectively as "relevant stakeholders") who may be affected by proposed mining or mineral processing activities or who have been affected by current or past mining-related activities.⁷⁰⁷

NOTE FOR 4.XX.2.1: This is similar to 4.2.3.1 in the Water Management chapter. As with other chapters, identifying the potentially affected people is important for planning stakeholder engagement on the issue/topic of concern, as those directly affected should be prioritized during engagement.

Note that the definition of mining-related activities encompasses exploration, mining, mineral processing, and all of the activities necessary to support those endeavors through post-closure.

4.XX.2.2. The <u>entity</u> conducts its own research and <u>collaborates</u> with relevant <u>stakeholders</u> to identify current and potential future uses of land that may be affected by proposed <u>mining</u> or <u>mineral processing</u> activities, or that have been affected by current or past <u>mining-related activities</u>.

NOTE FOR 4.XX.2.2: This is similar to 4.2.3.2 in the 'Water Management' chapter.

4.XX.2.3. The entity carries out a scoping process that includes collaboration with relevant stakeholders, to identify potential or actual impacts that the project may have and/or any actual impacts that the operation has had on land or soil (including soil quality, the physical stability of soil or land), and current and potential future

⁷⁰⁴ IRMA distinguishes between contamination (elevated concentration relative to the background) and pollution (concentration is high enough that it will have an adverse impact on ecosystem and/or human health). Baseline should determine if any contamination is above regulatory or other soil pollution thresholds.

⁷⁰⁵ For proposed projects, all current land uses should be documented; for operations, the uses of land prior to project development should be documented.

⁷⁰⁶ Land Potential Knowledge System (LandPKS). https://landpotential.org/knowledge/what-is-land-capability-classification/

⁷⁰⁷ Land rights holders may have been identified as part of the ESIA, or as part of Chapter 1.2 during stakeholder mapping, or Chapter 1.3 during human rights due diligence, or Chapter 2.2 if Indigenous Peoples have rights or interests in the area, or Chapter 2.4 if there was the potential for physical or economic displacement of people.

land uses).⁷⁰⁸ The <u>scoping</u> process includes consideration of the following potential sources of impacts, as relevant:

- a. Construction of mine facilities (e.g., open pits, ore heap and dump leach and waste storage facilities) and mineral processing facilities, land clearing, earthmoving, mine roads and other excavation and soil-disturbing activities;
- b. Emergencies and major accidents,⁷⁰⁹ including catastrophic failure of facilities;
- c. Waste management activities, including potential dispersion of contaminants from waste handling, storage, treatment, or disposal locations;⁷¹⁰
- d. Erosion of waste storage and disposal facilities and waste dumps; 711
- e. The planned <u>discharge</u> and unplanned <u>release</u> of contaminants (e.g., in effluent, or from storage or waste facilities that hold fluids),⁷¹² that may have subsequent downstream/downgradient contact with soil resources; and
- f. The emission, deposition and dispersion of airborne contaminants, dusts, and gases from mining-related activities.⁷¹³

NOTE FOR 4.XX.2.3: This is similar to 4.2.3.3 in the Water Management chapter.

4.XX.2.4. A conceptual site model (CSM) to determine potential impacts on soil quality is developed and shared with stakeholders.⁷¹⁴ This model:

- a. Includes a detailed description and depiction of the physiography, soil types and characteristics, hydrology, and climatology for the site as a whole;
- b. Describes all potential sources of contamination and soil erosion or loss associated with the project/operation; and
- c. Describes what is known about site-wide <u>release</u> and transport of contaminants to soil, contaminant transport due to the movement of soils, the pathways between sources and <u>receptors</u>, and the fate of contaminants/soils along pathways and to on-site and off-site receptors.

NOTE FOR 4.XX.2.4: The Water Management chapter also has a requirement to develop a CSM (requirement 4.2.3.5) and share it with stakeholders as part of scoping. A site-wide CSM is important for understanding the big picture of potential sources and fate of contaminants from mining-related activities, and to better understand the risks to human health and the environment from contaminants. Soil is both a potential receptor of contaminants (e.g., from airborne emissions or water-borne effluents), but can also be a source (if

⁷⁰⁸ Impacts on physical stability include activities that may lead to erosion (whether caused directly or indirectly by the entity's activities, or where natural erosive processes are exacerbated by such activities), or activities that may cause subsidence, mass movement of soil or land, etc. However, impacts on physical stability of soils that may lead to catastrophic failure, e.g., of waste facilities, is addressed in proposed Chapter 4.X.

Future land uses for lands affected by the operation (i.e., post-closure land uses) are included in the reclamation and closure plan (see Chapter 2.6, requirement 2.6.1.2.a). The future uses would have been determined through discussions between the entity and affected communities during the Environmental and Social Impact Assessment Process (see Chapter 2.1 requirements 2.1.3.1.h and 2.1.3.2), or subsequently, during discussions between the entity and affected communities on reclamation and closure (see Chapter 2.6, requirement 2.6.1.7).

⁷⁰⁹ These should have been identified as per Chapter 2.5 (Community Emergency Preparedness and Response) based on information in proposed Chapter 4.X (Management of Physical Stability).

⁷¹⁰ For example, contaminant transport to soils via spills, release of treated effluents, erosion of waste disposal sites, surface runoff from sites, etc. These should have been identified as per Chapter 4.1 (Waste and Materials Management) but if not, need to be done as part of this chapter.

⁷¹¹ Yellishetty, M., Mudd, G. and Shukla, R. 2012. "Prediction of soil erosion from waste dumps of opencast mines and evaluation of their impacts on the environment," International Journal of Mining, Reclamation and Environment. 27(2):1-15.

⁷¹² These should have been identified as per Chapter 4.2 (Water Management), requirement 4.2.2.5.

⁷¹³ Sources of air emissions should have been identified as per Chapter 4.3 (Air Quality), requirement 4.3.1.1

⁷¹⁴ A conceptual site model (CSM) may have been developed in Chapter 2.1 or 4.2. If the CSM doesn't identify soil sources and receptors, then that must be done as part of this chapter.

the soils contain contaminants and are transported to other receptors through erosion, wind dispersion, leaching and infiltration, etc.).⁷¹⁵ If soils are not identified as sources and receptors, then the CSM would need to be revised to include this information.

This requirement includes that the CSM be shared with stakeholders as part of scoping because it is important for them to have access to this information if they are to understand and participate in discussions on risks to soil and land.

4.XX.3. Assessment of Risks to Land and Soil

4.XX.3.1. Where risks to or impacts on land and soil are identified, a <u>credible methodology</u> is used to assess and document the level of risk and/or the actual impacts on health, safety, the environment, and current and future land uses.

NOTE FOR 4.XX.3.1: This aligns with 4.2.4.1 in the 'Water Management' chapter.

As mentioned in other chapters, we are proposing to define **credible method/methodology** as: A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

4.XX.3.2. The entity carries out the following additional analyses, as relevant, to further predict and quantify potential soil contamination and the potential for soil and land loss, and to inform the risk assessment:

- a. Modelling of the emissions, deposition, and dispersion of airborne contaminants (e.g., metals, dusts, gases, vapors, fumes) from point and non-point sources onto soil and land;⁷¹⁶
- b. Modelling of predicted soil loss/soil erosion from natural processes and mining-related activities; and
- c. Modelling of predicted loss of land (e.g., due to the increasing footprint of infrastructure and facilities, including permanent waste facilities, open pits, etc.) over the life of the <u>operation</u> (from construction through <u>post-closure</u>).

NOTE FOR 4.XX.3.2: This aligns with 4.2.4.2 in the 'Water Management' chapter. For more information see note for 4.2.4.2 in Chapter 4.2.

Not all of the models will be relevant at all sites. For example, if there are no processes that have air emissions, then modelling of the dispersion of air emissions will not be necessary.

4.XX.3.3. Any models used to inform risk or impact assessments, land and soil management strategies and reclamation and closure planning (see Chapter 2.6) are:

- a. Consistent with best industry practices/credible methodologies; and
- b. Evaluated annually and updated, as necessary, through an iterative process using operational monitoring data, as they become available.⁷¹⁷

NOTE FOR 4.XX.3.3: This aligns with 4.2.4.4 in the Water Management chapter. For more information see Note for 4.2.4.4 in Chapter 4.2.

4.XX.3.4. Risk or impact assessments are reviewed and, if necessary, updated when there are proposed changes in facilities, activities, extracted materials, processes, or when there are changes in the operational context that

⁷¹⁵ See, for example, Interstate Technology Regulatory Council (ITRC): Soil Background and Risk Assessment. "Conceptual Site Model and Data Quality Objectives." <u>https://sbr-1.itrcweb.org/conceptual-site-model-and-data-quality-objectives/#8_1</u>; and

U.S. Environmental Protection Agency. 1992. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA – Interim Final. Section 2.2.2.2. Develop a Conceptual Site Model. p. 2 - 7. <u>https://semspub.epa.gov/work/HQ/100001529.pdf</u>

⁷¹⁶ This would be done in association with modelling in Chapter 4.3 (Air Quality), requirement 4.3.3.1.

⁷¹⁷ This process includes comparing the predicted model results with actual monitoring data and set parameters for what constitutes acceptable versus unacceptable deviations between modeled and actual results. When predicted and actual results do not agree, models should be revised and predictions updated to ensure that water management practices are based on the best possible data.

have the potential to change the severity or consequences of any identified risks to land and soil, or when updates have been made to model predictions.

NOTE FOR 4.XX.3.4: This aligns with 4.2.4.5 in the Water Management chapter.

4.XX.4. Management of Risks to and Impacts on Land and Soil

4.XX.4.1. Where <u>mineral processing</u> facilities have been developed on <u>brownfield</u> sites, and <u>scoping</u>, assessment or soil quality monitoring identifies pre-existing impacts on soil quality that were not caused by the <u>entity</u>'s previous activities, the entity:⁷¹⁸

- a. Carries out due diligence to determine its legal liability for remediation of pre-existing pollution;
- b. Quantifies the extent of soil pollution (see 4.XX.5.1);
- c. Where legally liable:
 - i. Develops a <u>soil remediation</u> plan according to the process set out in <u>host country laws</u> and regulations, or where such laws and regulations do not exist, in accordance with international good practice;
 - ii. Demonstrate progress in implementation of soil remediation activities according to the plan timetable; and
 - iii. Report according to the requirements of the <u>competent authorities</u> or in the absence of a national reporting requirement, publicly report on the remediation of soil pollution at least annually.
- d. Where not legally liable:
 - i. Develops a soil remediation plan and associated targets for land and soil chemical quality in consultation with affected stakeholders;
 - ii. Demonstrates progress in implementation of soil remediation activities according to the plan timetable; and
 - iii. Publicly reports progress on the remediation of soil chemical quality at least annually.

NOTE FOR 4.XX.4.1: This requirement was proposed in the draft IRMA Mineral Processing Standard. The rationale was that mineral processing facilities such as smelters and refining sites with air emissions can emit considerable volumes of metals and metalloids over time that then get deposited on land. Some metals are more volatile and can be transported extremely long distances, but often the deposition occurs locally and downwind of the processing sites. These contaminants may then become bioavailable, affecting ecosystem and/or human health.⁷¹⁹

We are proposing that this requirement only applies to mineral processing operations located on brownfield sites, which is promoted by requirement 4.XX.1.1.a. We can add guidance on international good practice for soil remediation.

All soil contamination risks or actual impacts associated with exploration, mining or mineral processing on greenfield sites would be managed according to 4.XX.4.2, 4.XX.4.3, 4.XX.4.4, and the remaining requirements in the chapter.

CONSULTATION QUESTION 4.XX-4: Can you recommend examples of international good practice related to soil remediation as it relates to mining and/or mineral processing?

CONSULTATION QUESTION 4.XX-5: Are these requirements too onerous in cases where there is no legal liability? In such cases, does the scope of the requirements need to be narrowed? For example, should

⁷¹⁸ In other words, the historic impacts were caused by a previous owner/operator.

⁷¹⁹ Ettler, V. 2015. "Soil contamination near non-ferrous metal smelters: A review," Applied Geochemistry. 64:56-74. https://www.sciencedirect.com/science/article/pii/S088329271530055X?via%3Dihub
remediation only be required within the site boundary (as long as on-site contaminated areas are not contributing to off-site contamination or impacts)?

4.XX.4.2. For all other significant risks or actual impacts on soil or land identified in the assessment, mitigation measures to manage risks and impacts are:

- a. Developed and implemented by competent professionals;
- b. Developed in <u>consultation</u> with potentially affected or affected <u>stakeholders</u>, <u>taking</u> into consideration the preferred <u>post-closure</u> land uses identified by affected communities (see Chapter 2.1);⁷²⁰
- c. Are evaluated in a manner that aligns with the mitigation hierarchy as follows:
 - i. Priority is given to source <u>control</u> and other measures that prevent soil <u>contamination</u>, and prevent erosion and loss of land and soil;
 - ii. Where prevention is not <u>practicable</u> or effective, <u>controls</u> are developed to minimize the movement of contaminants to soil or lands where they can cause <u>pollution</u> (i.e., harm to human or ecosystem health), and minimize the amount of erosion and loss of land and soil;
 - iii. If necessary, soils are treated in-situ or ex-situ to remove contaminants such that soil chemical quality is sufficient for beneficial use at the site; and
 - iv. If prevention, minimization and treatment measures are not feasible or do not eliminate impacts, contaminated soils are excavated and disposed in a manner that protects human and <u>ecosystem</u> health, and compensatory actions are taken to <u>offset</u> impacts or losses;
- d. Are documented, including the entity's rationale for selection of mitigation options.

NOTE FOR 4.XX.4.2: This aligns, generally, with 4.2.5.1 in the 'Water Management' chapter. As with other chapters, the mitigation hierarchy is the framework for prioritizing mitigation strategies.

CONSULTATION QUESTION 4.XX-6: Are there other strategies that you can suggest to protect soil chemical quality and minimize erosion and loss of soil and land? If so, where would your suggestions fit in the hierarchy above?

4.XX.4.3. The entity develops and implements an adaptive management plan for land and soil (or equivalent) that:

- a. Outlines <u>mitigation</u> and other measures to be implemented concurrent with operations to prevent and minimize adverse impacts and/or remediate and <u>restore</u> land and soil as follows:⁷²¹
 - i. Measures include topsoil salvage to the maximum extent <u>practicable</u>, and topsoil storage in a manner that preserves its capability to support ecological restoration;
 - ii. Mitigation measures are specific, measurable, linked to clearly defined outcomes, relevant, and timebound;
 - iii. Key indicators are identified and linked to adequate <u>baseline</u> data, to enable measurement of the effectiveness of mitigation measures over time;
 - iv. Actions, or oversight of implementation, are assigned to responsible staff;⁷²²
 - v. An implementation schedule is included; and
 - vi. Estimates of human resources and budget are made, and a financing plan is included to ensure that funding is available for the effective implementation of the plan.

⁷²⁰ Future land uses for lands affected by the operation (i.e., post-closure land uses) are included in the reclamation and closure plan (see Chapter 2.6, requirement 2.6.1.1.a).

⁷²¹ The concurrent remediation and soil/land restoration activities may be incorporated into the concurrent reclamation plan (see Chapter 2.6— Planning and Financing Reclamation and Closure, requirement 2.6.1.2). However, if the measures are included in the concurrent reclamation plan, the entity still needs to meet all of the elements in sub-requirement 4.XX.4.3.a.

⁷²² If work is carried out by third party contractors, then there needs to be a staff employee responsible for overseeing the quality of work, timelines, etc.

- b. Outlines known measures to be taken during and final reclamation and closure to remediate and restore land and soil;⁷²³
- c. Includes trigger levels to provide early warning of soil contamination,⁷²⁴ and trigger indicators to provide early warning of erosion or loss of soil;
- d. Includes responsive (adaptive management) actions to be taken if trigger levels/indicators or exceedance of legal or other thresholds are reached, and estimated timelines for completion of actions; and
- e. Includes the following actions to be taken if an exceedance of an IRMA Soil Chemical Quality Criteria (see 4.XX.6) or a soil erosion threshold is confirmed:
 - i. Investigation of the cause/source of the exceedance;
 - ii. Determination of the areal extent and depth of the soil profile affected by the impacts;
 - iii. Implementation of the original <u>adaptive management</u> actions developed as per 4.XX.4.3.d and/or development of additional or different actions to correct an exceedance or minimize impacts, and documentation in a corrective action plan;⁷²⁵
 - iv. Development of estimated timeline and budget needed to implement the corrective action plan, and demonstration that funds are in place for effective implementation of the corrective actions; and
 - v. Creation of a report summarizing the corrective action plan, the outcome of the response measures taken, and needed changes to improve the effectiveness of mitigation measures identified in 4.XX.4.2.

NOTE FOR 4.XX.4.3: We are not proposing in this requirement that entities must immediately address <u>all</u> contamination or soil or land losses, because if operations are continuing then some earthwork to restore landforms and some remediation of soils may only be possible after operations cease and facilities are demolished and removed. However, the entity still needs to identify which measures will be addressed concurrent with operations, and which measures will be carried out as part of final reclamation and closure activities (see 4.XX.4.3.a, b and e.iii).

Any measures that will be carried out during final reclamation and closure must be included in the reclamation closure plan in Chapter 2.6, so that the costs of these activities are included in the calculation of the reclamation and closure costs that inform the amount of financial assurance that is required by the site.

The concurrent remediation and restoration mitigation measures may be incorporated into the concurrent reclamation plan (see Chapter 2.6, requirement 2.6.1.2), but if they are incorporated in that plan the it must also meet all sub-elements 4.XX.4.3.a.

Sub-requirements (c), (d), and (e) relate to actions to be taken in response to a situation (e.g., soil contaminants reach a trigger level or erosion reaches some threshold level). These are adaptive management elements.

4.XX.4.4. Annually or more frequently, if necessary (e.g., due to proposed or actual changes in operational or environmental factors):

- a. The entity reviews monitoring data and evaluates the effectiveness of adaptive management actions; and
- b. If actions are not being effective, develops new <u>mitigation</u> measures and revises the management plan to improve land and soil management outcomes.

⁷²³ These activities that will not be implemented during Reclamation and Closure, requirement 2.6.1.2) so that the costs are included in the calculation of financial assurance.

⁷²⁴ Trigger levels might include, for example, concentrations of contaminants in soils that are between baseline and a regulatory soil quality criteria.

⁷²⁵ Once an exceedance is confirmed, there may be more or different actions needed than envisioned in the original adaptive management actions, because situations may not always unfold as expected, or more may need to be done than was originally anticipated.

The actions that can be implemented during operations would be added to the corrective action plan. The actions that can only take place after operations cease (i.e., during reclamation and closure) must be added to the reclamation and closure plan, and associated costs must be included in the calculation of financial assurance (see Chapter 2.6, requirements 2.6.1.1 and 2.6.1.4).

NOTE FOR 4.XX.4.4: This is similar to 4.2.5.8 in the Water Management chapter.

4.XX.5. Monitoring

4.XX.5.1. The entity develops and implements a program to monitor impacts on land and soil on an annual basis. The program includes:

- a. Using credible methods to sample soils to determine potential contamination, including:
 - i. Sampling at a sufficient number of monitoring locations and at appropriate sites and depths to provide reliable data on chemical contamination/pollution; and
 - ii. Analyzing soil samples for all contaminants that have a reasonable potential to adversely affect identified current and future land uses, using accredited laboratories capable of measuring parameters at appropriate levels as described in the IRMA Soil Chemical Quality Criteria by End-Use Tables (see 4.XX.6); and
- b. Visual inspection of lands and facilities that may be subject to erosion; and
- c. Using credible methods to measure or estimate:
 - i. Soil erosion rates and soil loss; and
 - ii. Loss of land.

NOTE FOR 4.XX.5.1: Requirement 4.XX.3.2, earlier in the chapter, requires modelling to <u>predict</u> soil loss and land loss. The monitoring of 'actual' (estimated) soil loss and land loss over time in 4.XX.5.1.c will likely involve the continued use of models, but could also use aerial photographs to estimate changes in land,⁷²⁶ or other methods. Soil erosion rates in 4.XX.5.1.c. i can be based, at least in part, on field measurements (e.g., erosion or runoff plots), and the empirical data gathered can be used to validate models to estimate soil loss.

CONSULTATION QUESTION 4.XX-7:

Background: There are various methods that may be used in an attempt to determine soil erosion and soil loss over time. However, according to Boardman and Evans (2019), "Soil erosion is widely acknowledged as a global problem, but attempts to measure and estimate its significance are frustrated by our inability to develop reliable, cheap and easy methods of assessment."⁷²⁷ Hsieh et al. (2009) outline several methods for quantifying soil erosion, however, with every method there are challenges or conditions for which they are not well suited.⁷²⁸

Boardman and Evans (2019) have reported that, "German and Swiss researchers have assessed and monitored erosion based on visual and volumetric measurements of water erosion ... [and] although such assessments are comparatively rare in comparison with the use of model assessments of water erosion, they give much more realistic estimates of the extent of water erosion and erosion rates."⁷²⁹ Govers et al. (2017) write that models often overestimate erosion rates, and add that, "While it may indeed be difficult to quantify erosion rates correctly, it is much easier to identify those areas where intense soil erosion is indeed a problem and where action is necessary, whatever the exact erosion rates are...simple visual observations on the

⁷²⁶ See, for example, Popelkova, R. and Mulkova, M. 2016. Multitemporal aerial image analysis for the monitoring of the processes in the landscape affected by deep coal mining," European Journal of Remote Sensing. 59: 973-1009. https://www.tandfonline.com/doi/pdf/10.5721/EuJRS20164951

⁷²⁷ Boardman, J. and Evans, R. 2019. The measurement, estimation and monitoring of soil erosion by runoff at the field scale: Challenges and possibilities with particular reference to Britain," Progress in Physical Geography: Earth and Environment. Vol.44, Issue 1. https://journals.sagepub.com/doi/10.1177/0309133319861833

⁷²⁸ Hsieh, et al. 2009. "A field method for soil erosion measurements in agricultural and natural lands," Journal of Soil and Water Conservation. Vol. 64, No. 6. <u>https://www.srs.fs.usda.gov/pubs/ja/2009/ja_2009_hsieh_001.pdf</u>

⁷²⁹ Boardman, J. and Evans, R. 2019. The measurement, estimation and monitoring of soil erosion by runoff at the field scale: Challenges and possibilities with particular reference to Britain," Progress in Physical Geography: Earth and Environment. Vol.44, Issue 1. https://journals.sagepub.com/doi/10.1177/0309133319861833

presence of rills and gullies or wind deflation areas are clear indications that the implementation of conservation measures is necessary."⁷³⁰

Questions: Do you believe it critical to quantify soil erosion rates, or should monitoring focus on qualitative visual inspections to recognize the signs of erosion and prioritize affected areas for mitigation and restoration?

If you believe that soil erosion measurements are needed, are there particular methods that you would recommend?

Is knowing the actual volume of soil or land loss important? Or should these numbers not be a concern as long as actions are taken to effectively return land to a productive, beneficial use?

4.XX.6. Comparison of Monitoring Results to Soil Chemical Quality Criteria

4.XX.6.1. The entity demonstrates that the level of contaminants in soils are:⁷³¹

- a. Consistent with concentrations measured in baseline or background soil quality samples; or
- b. Are being maintained at a level that protects current and potential future use of land and soil resources (see IRMA Soil Chemical Quality Criteria by End Use Tables).

NOTE FOR 4.XX.6.1: For 4.XX.6.1, soil chemical quality criteria tables will be developed using a similar approach to the water quality tables in Chapter 4.2. Many jurisdictions have soil chemical quality standards or guidelines for different land uses. So, for example, there may be different allowable concentrations of certain metals, minerals or organic constituents in residential areas versus non-residential, or depending if areas are zoned or designated for agriculture, commercial or industrial uses, natural areas, etc.

IRMA will draft some proposed Soil Chemical Quality Criteria by End Use Tables based on an evaluation of standards from various jurisdictions. We will draw from standards listed in the ESDAT system, unless commenters know of other good sources of data for soil chemical quality standards: https://esdat.net/environmental-standards/

4.XX.7. Reporting and Disclosure on Land and Soil Management

NOTE FOR 4.XX.7: The requirements below are consistent with other IRMA chapters.

4.XX.7.1. The entity discusses land and soil management strategies, monitoring results and performance with relevant stakeholders on an annual basis, or more frequently if requested by stakeholders.

4.XX.7.2. An access to information (or equivalent) policy that allows <u>stakeholders</u> to access soil quality monitoring and other soil- and land-related data upon request is in place and shared with stakeholders.

NOTES

To be developed if chapter supported by stakeholders and approved by IRMA Board.

CROSS REFERENCES TO OTHER CHAPTERS

This table will be added when the new content for all chapters is finalized and approved.

GLOSSARY OF TERMS USED IN THIS CHAPTER

⁷³⁰ Govers G, Merckx R, van Wesemael B, Van Oost, K. 2017. "Soil conservation in the 21st century: Why we need smart agricultural intensification," SOIL 3: 45–59. <u>https://soil.copernicus.org/articles/3/45/2017/soil-3-45-2017.pdf</u>

⁷³¹ Note that if this requirement is not met, this then new mitigation actions would be developed as part of the land and soil management plan.

PROPOSED NEW DEFINITIONS

Accident

An event that results in injury, ill health, fatality or damage to property or the environment.

Background (Soil Quality)

Established after an operation has commenced, it is the soil quality in an area with similar soil characteristics that is outside of the operation's influence.

Brownfield

Land which has previously been developed for industrial use and where disturbance, degradation and/or pollution have not been effectively addressed through rehabilitation or restoration.

Concurrent Reclamation

Concurrent reclamation, also termed progressive or contemporaneous reclamation, means a reclamation activity that is undertaken concurrent with mining and/or mineral processing activities, prior to the end of the operation's life, that contributes to the final reclamation and closure goals, and the post-closure land use objectives.

Contamination

The presence of a substance where it should not be or at concentrations above background, but not necessarily high enough to have an adverse impact on ecosystem and/or human health. See also 'Pollution'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

Discharge

A permitted release of treated mine-influenced water or compliant water to surface water, groundwater, or the land. See also 'Release'.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

Greenfield

Land that has not previously been developed for industrial use or land previously developed for industrial use where disturbance, degradation and/or contamination have been effectively addressed through rehabilitation or restoration.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

Operation

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'. Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

Project

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

Receptor

Any human, plant, animal, or structure which is, or has the potential to be, affected by the release or migration of contaminants.

Reclamation

The process of achieving stability, hydrologic balance and converting disturbed land and/or water resources to a productive post-mining (or post-mineral processing) land use, or establishing the potential for productive use. Components of reclamation may include: removal or isolation of hazardous material and waste, decommissioning and removal of buildings and other structures, removal and disposal of polluted soils, adjustment and stabilization of landforms (e.g., earthwork including backfilling, grading, recontouring, stormwater controls), creation of suitable conditions for the introduction of desired flora and fauna (topsoil placement, revegetation, ecological restoration), and any other planned mitigation (e.g., wetlands construction, water diversion, other).

Release

An unintentional, unpermitted emission of mine-influenced water to the environment. See also 'Discharge'.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

Soil Remediation

The treatment of contaminated soils to remove contaminants or convert them to harmless products using physical, chemical and biological processes. Ex-situ and in-situ remediation of soils are both commonly applied methods.

EXISTING DEFINITIONS

Adaptive Management

Adaptive Management is a structured, iterative process of robust decision-making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. It includes the development of management practices based on clearly identified outcomes, and monitoring to determine if management actions are meeting desired outcomes. If outcomes are not being met, the process requires development and implementation of management changes to ensure that outcomes are met or re-evaluated.

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.

REVISED. Streamlined - removed examples.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified.

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Competent Authority

The government department or other authority having power to issue and enforce regulations, orders or other instructions having the force of law in respect of the subject matter of the provision concerned.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Consultation

An exchange of information between a company and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a

decision is made. In principle, the company should take into account the concerns and views expressed by stakeholders in the final decision.

Control

An act, object (engineered), or system (combination of act and object) intended to prevent or mitigate an unwanted event.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, country or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Mitigation Hierarchy

The mitigation hierarchy is a set of prioritized steps to alleviate environmental (or social) harm as far as possible first through avoidance, then minimization (or reduction), followed by restoration of adverse impacts. Compensation/offsetting are only considered to address residual impacts after appropriate avoidance, minimization and restoration measures have been applied.

Offset

An activity undertaken to counterbalance a significant residual impact.

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Practicable

Practicable means giving equal weight to environmental, social, and economic benefits and costs. This is not a technical definition. It is the discussion between the affected parties on the balance between these interrelated costs and benefits that is important.

Restoration

Measures taken to assist the recovery of ecosystems that have been degraded, damaged or destroyed. Involves efforts to re-establish an ecosystem's composition, structure and function, intended to bring it back to its original (pre-disturbance) state or to a healthy state close to the original.

Rights Holder

Individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected or protected.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Trigger Level

A concentration between baseline or background values and IRMA water or soil quality criteria or other applicable compliance limits that can warn of mining or mineral-processing-related effects to water or soil quality and trigger adaptive management or corrective actions to improve water or soil quality.

REVISED. Now also references soil quality and mineral processing.

Full Glossary of Terms

The IRMA Glossary of Terms is not intended to be a complete set of terms associated with mineral development. However, in drafting the IRMA Standard it was sometimes necessary to develop or adopt rigorous terminology to ensure consistent interpretation and application of the Standard. These terms were added to this Glossary of Terms.

Α

Adaptive Management

Adaptive Management is a structured, iterative process of robust decision-making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. It includes the development of management practices based on clearly identified outcomes, and monitoring to determine if management actions are meeting desired outcomes. If outcomes are not being met, the process requires development and implementation of management changes to ensure that outcomes are met or re-evaluated.

Source: Adapted from US Forest Service. 2008. National Forest System Land Management Planning. Final Rule. Federal Register. Vol. 73, No. 77, §219.16.

Accessible

In reference to grievance mechanism or engagement processes, accessible means these mechanisms or processes being known to all stakeholder groups for whose use they are intended, and providing adequate assistance for those who may face particular barriers to access.

Source: Ruggie, J. 2011. Guiding Principles on Business and Human Rights.

Accident

An event that results in injury, ill health, fatality or damage to property or the environment.

NEW. Added to Chapters 2.5 and 3.2

Accountable Executive

One or more executive (s) who is/are directly answerable to the CEO on matters related to this chapter, communicates with the Board of Directors, and who is accountable for the safety of critical facilities and for minimizing the social and environmental consequences of a potential critical facility failure. Accountable executive(s) may delegate responsibilities but not accountability.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Acid Rock Drainage (ARD)

The drainage produced when rocks with sulfide or other acid-producing minerals are under oxidizing conditions (exposed to water and oxygen) and generate an acidic water stream. Acid rock drainage generally contains elevated concentrations of metals, sulfate, and other constituents and has a pH < 6. The terms acid mine drainage and acid and metalliferous drainage (both AMD) are sometimes used as synonyms for ARD.

Actual Human Rights Impact

An adverse impact that has already occurred or is occurring.

Additional Conservation Actions

A broad range of activities that are intended to benefit biodiversity, where the effects or outcomes can be difficult to quantify.

Source: Biodiversity A to Z website. http://www.biodiversitya-z.org/themes/terms

Adverse Human Rights Impact

When an action removes or reduces the ability of an individual to enjoy his or her human rights.

Affected Community

A community that is subject to risks or impacts from a project/operation.

Source: Adapted from IFC. IFC Policy & Performance Standards and Guidance Notes. Glossary of Terms.

REVISED. Changed wording from project to project/operation.

Air Quality Modeling

Mathematical and numerical techniques used to simulate the physical and chemical processes that affect air pollutants as they disperse and react in the atmosphere. These include, for example: air dispersion models, which are used to predict concentrations of pollutants at selected downwind receptor locations; and receptor models, which use observational techniques and chemical and physical characteristics of gases and particles measured at source and receptor and to identify the presence of and to quantify source contributions to receptor concentrations.

Source: USEPA website: "Air Quality Models." https://www3.epa.gov/scram001/aqmindex.htm

Alien/Non-Native Species

Animals, plants or other organisms introduced by humans, either intentionally or accidentally, into areas outside their natural range. Some of these species become established and negatively impact native biodiversity. These species are classified as invasive alien species.

Source: IUCN. https://www.iucn.org/resources/issues-brief/invasive-alien-species-and-sustainable-development

NEW. Added to Chapter 2.6.

Ambient Air Quality

The concentrations of pollutants (e.g., chemicals, particulate matter) in air (for IRMA's purposes, outdoor air).

Area of Influence

The area likely to be affected by the project/operation and facilities, including associated facilities, that are directly owned, operated or managed by the entity, as well the area affected by any unplanned but reasonably foreseeable developments induced by a project/operation and cumulative impacts from the project/operation.

Source: Adapted from IFC 2012. Performance Standard 1. <u>https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards and USAID. 2017</u>. Construction Sector Environmental Guidance. Glossary. <u>https://2017-2020.usaid.gov/sites/default/files/documents/1860/SectorEnvironmentalGuidelines_Construction_2017.pdf</u>

REVISED. Streamlined - removed examples.

Artisanal and Small-Scale Mining (ASM)

Formal or informal operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labor-intensive technology. ASM can include men and women working on an individual basis as well as those working in family groups, in partnership or as members of cooperatives or other types of legal associations and enterprises involving hundreds or thousands of miners. For example, it is common for work groups of 4-10 individuals, sometimes in family units, to share tasks at one single point of mineral extraction (e.g., excavating one tunnel). At the organizational level, groups of 30-300 miners are common, extracting jointly one mineral deposit (e.g., working in different tunnels), and sometimes sharing processing facilities.

Source: OECD. 2016. OECD Due Diligence Guidance on Responsible Mineral Supply Chains from Conflict Affected and High Risk Areas.

As Low As Reasonably Practicable

All reasonable measures are taken with respect to 'tolerable' or acceptable risks to reduce them even further until the cost and other impacts of additional risk reduction are grossly disproportionate to the benefit.

Source: Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Associated Facility

Any facility owned or managed by the entity that would not have been constructed, expanded or acquired but for the project/operation and without which the project/operation would not be viable. Examples include but are not limited to stationary physical property such as power plants, port sites, roads, railroads, pipelines, borrow areas, fuel production or preparation facilities, parking areas, shops, offices, housing facilities, construction camps, storage facilities, etc. Associated facilities may be geographically separated from the area hosting the project/operation (i.e., the site). See also 'Facility'.

REVISED. Revised to indicate that a mineral processing facility could be an associated facility for a mining operation if not co-located with the mine.

В

Background Water Quality

Established after an operation has commenced, it is the water quality in a similarly mineralized area outside of the operation's influence (e.g., surface water quality upstream of the mine site or upgradient for groundwater).

REVISED. Changed wording from mining to operation.

Background (Soil Quality)

Established after an operation has commenced, it is the soil quality in an area with similar soil characteristics that is outside of the operation's influence.

NEW. Added to Chapter 4.XX.

Baseline

A description of existing conditions to provide a starting point (e.g., pre-project condition) against which comparisons can be made (e.g., post-impact condition), allowing the change to be quantified. Source: Adapted from the Business and Biodiversity Offsets Programme. 2012. Glossary.

Baseline Air Quality

Ambient air quality at the site and in the area surrounding a proposed project, before mining-related activities have occurred.

Source: Adapted from BC Ministry of Environment. 2008. Guidelines for Air Quality Dispersion Modelling in British Columbia.

Baseline (Ambient Noise Levels)

Ambient noise level is the total noise from all sources at a given location and time. For the purposes of this chapter, baseline ambient noise is the background sound pressure level at a given location without the presence of noise sources of interest (in this case, sources of interest would be noise related to a mining and/or mineral processing operation).

NEW. Added to Chapter 4.4.

Baseline Water Quality

The water quality at the site and in the area surrounding a proposed project, before mining-related activities have occurred.

Beneficial Owner

The natural person(s) who ultimately owns or controls a company and/or on whose behalf a company is owned. It includes those people who exercise ultimate effective control over a legal person or arrangement. Reference to "ultimately owns or controls" and "ultimate effective control" refer to situations in which ownership/control is exercised through a chain of ownership or by means of control other than direct control. Source: Adapted from FATF Guidance: Transparency and Beneficial Ownership. 2014. Chapter III.

Best Available Techniques (BAT)

Techniques that can most effectively achieve a high level of environmental protection and allow implementation in relevant sectors under economically and technically viable conditions. "Techniques" includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned; "Available" techniques means those techniques that are accessible to the operator and that are developed on a scale that allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages; and "Best" means most effective in achieving a high general level of protection of the environment as a whole.

Source: Adapted from the Stockholm Convention. 2009.

Best Available Technology (BAT)

Site-specific combination of technologies and techniques that are economically achievable and that most effectively reduce risks (e.g., physical, geochemical, ecological, social, financial, and reputational) to an acceptable level during all stages of operation and closure, and support an environmentally and economically viable mining operation.

Source: Adapted from Mining Association of Canada. 2017. A Guide to the Management of Tailings Facilities (3rd Ed).

Best Available/Applicable Practice (BAP)

Encompasses management systems, operational procedures, techniques and methodologies that, through experience and demonstrated application, have proven to reliably manage risk and achieve performance objectives in a technically sound and economically efficient manner. BAP is an operating philosophy that embraces continual improvement and operational excellence, and which is applied consistently throughout the life of a facility, including the post-closure period.

Source: Adapted from Mining Association of Canada. 2017. A Guide to the Management of Tailings Facilities (3rd Ed).

Best Environmental Practices (BEP)

The application of the most appropriate combination of environmental control measures and strategies. Source: *The Stockholm Convention*. 2009.

Best Practice(s)

In the context of the drafting of the IRMA Standard, this has been interpreted to mean that the Standard should consist of a set of auditable requirements that reflects agreement of the multi-stakeholder IRMA process on the most effective way to achieve the agreed social and environmental objectives of each chapter of the IRMA standard, given the current state of knowledge. The IRMA Standard is intended to specify levels of performance such that a mine that is operating according to best practice could reasonably be expected to conform with all the specified requirements of every chapter.

Biodiversity/Biological Diversity

The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems.

Source: Convention on Biological Diversity. 1992, Article 2.

Biological Exposure Indices (BEI)

The concentration of chemicals in the body that would correspond to inhalation exposure at a specific concentration in air.

Source: International Labour Organization (ILO) website. "Chemical exposure limits."

Biosphere Reserves

Biosphere reserves are areas comprising terrestrial, marine, and coastal ecosystems. Each reserve promotes solutions reconciling the conservation of biodiversity with its sustainable use. Biosphere reserves are 'Science for Sustainability support sites' – special places for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Their status is internationally recognized. Source: UNESCO. https://www.unesco.org/en/biosphere/wnbr/about

Breach Analysis

A study that assumes a failure of a critical facility and estimates its impact. Breach analyses must be based on credible failure modes. The results should determine the physical area impacted by a potential failure, flow arrival times, depth and velocities, duration of flooding, and depth of material deposition. The breach analysis is based on scenarios which are not connected to probability of occurrence. It is primarily used to inform emergency preparedness and response planning and the consequence of failure classification. The classification is then used to inform the external loading component of the design criteria.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X, 2.5

Brine

Groundwater, surface water or sea water that contains valuable dissolved minerals at sufficient concentrations to be economically extractable.

NEW. Added to 4.1, 4.2, others.

Broad Community Support (BCS)

A collective expression by the community in support of the mining project. Support may be demonstrated through credible (i.e., transparent, inclusive, informed, democratic) local government processes or other processes/methods agreed to by the community and entity. There may be BCS even if some individuals or groups object to the business activity.

Source: Adapted from IFC. 2012. IFC Sustainability Framework. p. 7.

REVISED. Changed company to entity.

Brownfield

Land which has previously been developed for industrial use and where disturbance, degradation and/or contamination have not been effectively addressed through rehabilitation or restoration.

NEW. Added to Chapter 4.XX.

Business Relationships

Relationships a business enterprise has with business partners, entities in a value chain, and any other non-state or state entity directly linked to its business operations, products, or services. They include indirect business relationships in its value chain, beyond the first tier, and minority as well as majority shareholding positions in joint ventures.

Source: UN Office of the High Commissioner for Human Rights. 2012. *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*. p. 5.

С

Carbon Offset

A carbon offset broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g., through land restoration or the planting of trees) – that is used to compensate for emissions that occur elsewhere.

Source: https://www.offsetguide.org/understanding-carbon-offsets/what-is-a-carbon-offset/

NEW. Added to Chapter 4.5.

Certification Body

Also known as a conformity assessment body, is an entity that performs auditing and conformity assessment services to determine if specified requirements are fulfilled (in this case conformity with the IRMA *Standard for Responsible Mining*).

Source: Adapted from ISO/IEC 17000:2005.

Chance Find (Procedure)

A chance find procedure is a project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered.

Source: IFC. 2012. Performance Standard 8. Footnote 2.

REVISED. Changed term from 'Chance Find' to 'Chance Find (Procedure)'.

Child Labor

Work that deprives children of their childhood, their potential, and their dignity, and that is harmful to physical and mental development. In most jurisdictions - and for the purposes of the IRMA Standard - child labor meeting this definition is all labor by children under the age of 15, and all labor by children between 15 and 18 years old that does not meet certain conditions (i.e., is not hazardous work - see definition below, does not occur during school hours, does not total more than 10 hours / day between work and school, etc.).

Source: Various, including International Labour Organization (ILO) website: "What is child labour."; International Labour Organization (ILO). C182, Worst Forms of Child Labour Convention, 1999 (No. 182) and R190 - Worst Forms of Child Labour Recommendation, 1999 (No. 190).

Closure

Refers to the post-reclamation activities that are required to close and secure a site to maintain compliance with environmental and health and safety regulations. It includes interim fluid and site management in addition to post-reclamation monitoring and maintenance during the period when the success of reclamation measures to achieve site-safety, stability, revegetation, and water quality as well as other reclamation objectives is measured and maintained. The closure period is finite and typically no more than ten years in duration.

REVISED. Changed term from 'Mine Closure' to 'Closure', as the term can also apply to stand-alone mineral processing facilities, and some language changed to be less mining-specific.

Collaboration

The process of shared decision-making in which all stakeholders constructively explore their differences and develop a joint strategy for action. It is based on the premise that, through dialogue, the provision of appropriate information, collectively defined goals, and the willingness and commitment to find a solution acceptable to all parties, it is possible to overcome the initially limited perspectives of what is achievable and to reach a decision which best meets the interests of the various stakeholders. At this level, responsibility for decision-making is shared between stakeholders.

Source: Adapted from South Africa Dept. of Env. Affairs and Tourism. Stakeholder Engagement.

Company Union

A workers' organization that is dominated or controlled by an employer.

Competent Authority

The government department or other authority having power to issue and enforce regulations, orders, or other instructions having the force of law in respect of the subject matter of the provision concerned. Source: International Labour Organization (ILO). *Maritime Labour Convention, 2006*.

Competent Professionals

In-house staff or external consultants with relevant education, knowledge, proven experience, and necessary skills and training to carry out the required work. Competent professionals would be expected to follow scientifically robust methodologies that would withstand scrutiny by other professionals. Other equivalent terms used may include: competent person, qualified person, qualified professional.

REVISED. Deleted reference to Chapter 4.1.

Comprehensible

In forms and languages that are easily understood by workers and/or other stakeholders. Source: International Labour Organization (ILO). Code of Practice. *Ambient Factors in the Workplace*.

REVISED. This used to be 'Comprehensible Manner'. Changed to make applicable to more situations.

Conceptual Site Model (CSM)

A qualitative description, based on site measurements and observations, of what is known about the release, transport, and fate of contaminants at a site. A CSM includes a schematic or diagram and an accompanying narrative description.

Concurrent Reclamation

Concurrent reclamation, also termed progressive or contemporaneous reclamation, means a reclamation activity that is undertaken concurrent with mining and/or mineral processing activities, prior to the end of the operation's life, that contributes to the final reclamation and closure goals, and the post-closure land use objectives.

NEW. Added to Chapter 2.6.

Confidential Business Information

Material that contains trade secrets or commercial or financial information that has been claimed as confidential by its source. The information must be secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to people within the circles that normally deal with the kind of information in question; it must have commercial value because it is secret; and it must have been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Sources: US EPA Terms and Acronyms Search, and World Intellectual Property Organization: "What is the international legal framework of trade secret protection?"

Conflict Analysis

The systematic study of the profile, issues, and stakeholders that shape an existing or potential conflict, as well as factors in the interaction between the three. It helps companies gain a better understanding of the environment in which they operate and their role in that context.

Source: Adapted from International Alert. 2005. Conflict-sensitive Business Practice: Guidance for extractive industries.

Conflict-Affected and High-Risk Area

Areas identified by the presence of armed conflict, widespread violence, including violence generated by criminal networks, or other risks of serious and widespread harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars. High-risk areas are those where there is a high risk of conflict or of widespread or serious abuses of human rights as defined in paragraph 1 of Annex II of the OECD Due Diligence Guidance Area on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk (see source of definition, below). Such areas are often characterized by political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure, widespread violence, and violations of national or international law.

Source: OECD. 2016. Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Conflict Risk

The assessed potential consequences of any conflicts that may emerge or be exacerbated because of an entity's presence, activities, or relationships; and the probability that such conflicts will occur. Conflicts may arise within or between communities and/or stakeholder groups, or between the company and communities/stakeholders.

REVISED. Added that risk is based on an assessment of potential consequences and probability of conflicts.

Conservation Outcome

A conservation outcome is the result of a conservation intervention aimed at addressing direct threats to biodiversity or their underlying socio-political, cultural, and/or economic causes. Conservation outcomes are typically in the form of: (a) extinctions avoided (i.e., outcomes that lead to improvements in a species' national or global threat status); (b) sites protected (i.e., outcomes that lead to designation of a site as a formal or informal protection area, or to improvement in the management effectiveness of an existing protected area); and (c) corridors created (i.e., outcomes that lead to the creation of interconnected networks of sites at the landscape scale, capable of maintaining intact biotic assemblages and natural processes, and, thereby, enhancing the long-term viability of natural ecosystems). Conservation outcomes would also include any other intervention that leads to conservation gains.

Source: Business and Biodiversity Offsets Programme. 2012. Glossary.

Conservation Values

The ecological, biological, geomorphological, geological, cultural, spiritual, scenic, or amenity values, features, processes, or attributes that are being conserved.

Construction Versus Design Intent Verification

Intended to ensure the design intent is implemented and still being met if the site conditions vary from the design assumptions. The CDIV identifies any discrepancies between the field conditions and the design assumptions, such that the design can be adjusted to account for the actual field conditions.

Source: Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Consultation

An exchange of information between an entity and its stakeholders that provides an opportunity for stakeholders to raise concerns and comment on the impacts and merits of a proposal or activity before a decision is made. In principle the entity should take into account the concerns and views expressed by stakeholders in the final decision.

Source: Adapted from South Africa Department of Environmental Affairs and Tourism. Stakeholder Engagement.

Contaminant of Potential Concern (COPC)

Contaminants that may pose a risk to human health or non-human biological receptors (e.g., flora, fauna, fungi).

NEW. Added to Chapter 4.1 and others.

Contamination

The presence of a substance where it should not be or at concentrations above background, but not necessarily high enough to have an adverse impact on ecosystem and/or human health. See also 'Pollution'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

NEW. Added to Chapter 2.6, 4.1, 4.2, 4.3, 4.XX.

Contractor

An individual, company, or other legal entity that carries out duties related to a project/operation that are subject to a contractual agreement that defines, for example, work, duties or services, pay, hours or timing, duration of agreement, and that remains independent for employment, tax, and other regulatory purposes. This includes subcontractors. It also includes contracted workers hired through third party contractors (e.g., brokers, agents, or intermediaries) who are performing mining-related activities at the project/operation site or associated facilities at any point during the project/operational life cycle (including prior to or during construction phase). See also 'Mining-Related Activities.'

Source: IFC. 2012. Performance Standard 2. Guidance Notes.

REVISED. Added contracted worker as a type of contractor. Changed wording from mining project to project/operation.

Control

An act, object (engineered), or system (combination of act and object) intended to prevent or mitigate an unwanted event.

Source: ICMM. 2015. Health and Safety Critical Control Management: Good Practice Guide.

Corporate Owner(s)

The corporation(s) or other business institution(s) including any private or state-run enterprises that have complete or partial financial interest in or ownership of a project/operation.

REVISED. Changed wording from mining project to project/operation.

Corruption

Any unlawful or improper behavior that seeks to gain a private advantage through illegitimate means. Any kind of bribery is a form of corruption; but corruption also includes abuse of power, extortion, fraud, deception, collusion, cartels, embezzlement, and money laundering.

Source: Adapted from Responsible Jewellery Council 2019. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf</u>

NEW. Added to Chapter 1.5

CO₂e

A carbon dioxide equivalent or CO_2 equivalent, abbreviated as CO_2e is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same GWP.

Source: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Carbon dioxide equivalent

NEW. Added to Chapter 4.5.

Credible Failure Mode

Refers to technically feasible failure mechanisms given the materials present in a facility's structure and its foundation, the properties of these materials, the configuration of the structure, drainage conditions and surface water control at the facility, throughout its life cycle. Credible failure modes can and do typically vary during the life cycle of a facility as the conditions vary. A facility that is appropriately designed and operated considers all of these credible failure modes and includes sufficient resilience against each. Different failure modes will result in different failure scenarios. Credible catastrophic failure modes do not exist for all facilities. The term 'credible failure mode' is not associated with a probability of this event occurring and having credible failure modes is not a reflection of facility safety.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Credible Method/Methodology

A method/methodology that is widely recognized, accepted, and used by experts and practitioners in a particular field of study.

NEW. Added to multiple chapters.

Critical Control

An action, object (engineered) or system (combination of action and object) put in place to prevent or reduce the likelihood of an unwanted event, or to minimize or mitigate the negative consequences if an unwanted event occurs, in particular for high-consequence risks.

Sources: Adapted from ICMM. 2015. Health and Safety Critical Control Management: Good Practice Guide, and Mining Association of Canada. 2017. A Guide to the Management of Tailings Facilities (3rd Ed).

Critical Cultural Heritage

Consists of: (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes, (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation; or (iii) natural areas with cultural and/or spiritual value such as sacred groves, sacred bodies of water and waterways, sacred trees, and sacred rocks. Source: Adapted from IFC. 2012. *Performance Standard 7.* Para. 16; and *Performance Standard 8,* Para. 13.

Critical Facility

A facility that has a high, very high or extreme failure consequence classification, or a significant consequence classification that includes potential loss of life. See also 'Non-Critical Facility'.

NEW. Added to 4.X

Critical Habitat

Areas with high biodiversity value, including but not necessarily limited to: (i) habitat of significant importance to critically endangered, endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes. Other recognized high biodiversity values might also support a critical habitat designation, based on case-by-case evaluation.

Source: Adapted from IFC. 2012. Performance Standard 6, Para. 13 and GN55, GN56, 57.

Cultural Heritage

Refers to (i) tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and

(iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles. Source: Adapted from IFC Performance Standard 8.

NEW. Added to Chapter 3.7 and others.

Culturally Appropriate

Refers to methods, formats, languages, and timing (e.g., of communications, interactions, and provision of information) being aligned with the cultural norms, practices, and traditions of affected communities, rights holders, and stakeholders.

NEW. Added to Chapter 1.2 and other chapters.

Cumulative Impacts

Additive, synergistic, interactive or nonlinear outcomes of multiple development or disturbance events that aggregate over time and space. Examples of cumulative impacts (or effects) may include reduction of water flows in a watershed due to multiple withdrawals; increases in sediment loads to a watershed over time; interference with migratory routes or wildlife movement; or more traffic congestion and accidents due to increases in vehicular traffic on community roadways.

Source: Adapted from International Association for Impact Assessment. 2005. *Biodiversity Impact Assessment*. Special Publication Series No. 3, with examples from IFC. 2012. *Performance Standard 1*, page 4, footnote 16.

Cumulative Impacts (on biodiversity)

Cumulative impacts refer to the incremental impacts of the mining project on biodiversity values, when also considering other current and reasonably foreseeable future stressors affecting a biodiversity value in the landscape. Cumulative impacts can be similar in type (e.g., emissions to air from multiple projects) or distinct (e.g., the cumulative effect of habitat loss, habitat fragmentation, and vehicular mortality on wildlife). Source: Adapted from Gullison et al. 2015. *Good Practices for the Collection of Biodiversity Baseline Data*.

Customary Law (or Traditional Law)

The law and related customs of Indigenous and Tribal Peoples and local communities, increasingly recognized by courts, lawmakers, and public administrative bodies. Even where national or subnational legislation is available that aims to protect Indigenous Peoples and local communities, their rights are frequently denied in practice. Recognition of customary traditional law can aid in fair and effective administration of justice that is necessary to foster reconciliation, peace, stability and development among Indigenous Peoples and local communities.

Source: UN Economic and Social Council Commission on Human Rights. 2004. Human Rights and Indigenous Issues. pp. 2-3, https://documents-dds-ny.un.org/doc/UNDOC/GEN/G04/105/28/PDF/G0410528.pdf?OpenElement and World Intellectual Property Assoc. 2016. Customary Law and Traditional Knowledge. https://www.wipo.int/publications/en/details.jsp?id=3876

NEW. Added to Chapter 1.X.

Customary Rights

Rights that arise from a behavior or act that is repeated over time under the belief that it is obligatory, and due to repetition and acceptance acquire the force of law within a geography or society. Such rights may be based on patterns of long-standing land and resource usage in accordance with Indigenous Peoples' and local communities' customary laws, values, customs, and traditions. Such rights apply to the lands, resources, and territories that Indigenous Peoples and local communities have traditionally owned, occupied, or otherwise used. They do not apply to lands, territories, and resources that these groups have acquired in other ways, such as by purchase or part of a compensation package. These rights are a collective human right of Indigenous Peoples and local communities that exists whether or not a title from the State has been issued.

Source: Accountability Framework. https://accountability-framework.org/the-framework/contents/definitions/

NEW. Added to Chapter 2.2.

Design Basis Report

Provides the basis for the design, operation, construction, monitoring and risk management of a critical facility.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-</u>content/uploads/2020/08/global-industry-standard EN.pdf

NEW. Added to 4.X

Dewatering (of mines)

The extraction of water to lower the water table to a level lower than the deepest point of the mine, thereby keeping the mine dry.

Direct Impacts

Direct impacts are those caused by activities that are undertaken and facilities that are owned and managed by an entity, and occur at the same time and in the same place that the action is occurring. See also 'Indirect Impacts'.

NEW. Separated out the constituent parts of 'Direct/Indirect Impacts'.

Discharge

A permitted release of treated mine-influenced water or compliant water to surface water, groundwater, or the land. See also 'Release'.

NEW. Added to Chapter 4.2.

Displacement (Economic and / or Physical)

A process by which the development of a project or operation causes people to lose land or other assets, or access to resources. This may result in physical and / or economic displacement, defined below. See also 'Involuntary Displacement' and 'Voluntary Displacement'.

- *Economic Displacement:* the loss of assets or access to assets that leads to a loss of income sources or other means of livelihood (i.e., the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering). Economic displacement results from an action that interrupts or eliminates people's access to jobs or productive assets, whether or not the affected people must move to another location.
- *Physical displacement:* the relocation or loss of shelter (i.e., residential housing) as a result of project- or operation-related land acquisition and/or restrictions on land use.

Source: Adapted from IFC. 2012. Performance Standard 5.

REVISED. We are proposing to combine definitions of physical and economic displacement under the broader category of 'displacement' as we more often refer to it in this general sense in the text.

Displacement Remediation Plan

Remediation refers to both the processes of providing remedy for an adverse impact and the substantive outcomes that can counteract, or make good, the adverse impact. Referring to historical land acquisition and displacement, this means a plan designed to remediate (through whatever means are most appropriate in the context) the adverse impacts of displacement caused by historical land acquisition processes. This plan should, to the extent possible, endeavor to achieve the objectives of a Resettlement Action Plan or Livelihoods Restoration Plan (see respective definitions).

NEW. Added to Chapter 2.4. This concept was not part of the 2018 IRMA Mining Standard.

D

Disposition

The process of selling, donating, or recycling all or part of a facility or equipment once it has been decommissioned.

NEW. Added to Chapter 2.6.

Ε

Ecological Processes

Biophysical processes (e.g., hydrologic regimes, local climatic regimes, soil chemistry/nutrient cycling, fires, floods and other natural disturbance regimes, herbivory, predation, ecological corridors, migration routes) necessary for the habitat to persist in a landscape or seascape for the long term.

Source: Adapted from IFC. 2012. Performance Standard 6. Guidance Note.

Ecosystem

A dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit.

Source: United Nations Environment Programme, Convention on Biological Diversity 1992, Art. 2. Available at https://www.cbd.int/convention/

Ecosystem Services

The benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.

Source: Business and Biodiversity Offsets Programme. 2012. Glossary.

Emergency Scenario

A description of a possible unwanted event or emergency situation that could pose an immediate risk to health, safety, life, property, or environment.

NEW. Added to Chapter 2.5, 3.2

Emergency Situation

Any situation arising from a sudden and unexpected event that poses an immediate risk to health, safety, life, property, or environment and requires immediate corrective action to restore normal operation.

NEW. Added to Chapter 2.5, 3.2

Engineer of Record

The qualified engineer responsible for confirming that a facility is designed, constructed, and decommissioned with appropriate concern for integrity of the facility, and that it aligns with and meets applicable regulations, statutes, guidelines, codes, and standards. The engineer of record may delegate responsibility but not accountability.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Energy Consumption

The total use of energy from fossil fuel and non-fossil fuel sources (including renewables), whether delivered in the form of electricity, steam, heat (combustion), or cooling.

NEW. Added to Chapter 4.2.

Enhancement (of biodiversity values)

The improvement of the ability of a degraded ecosystem to support biodiversity, through conservation measures such as alteration to the soils, vegetation, and / or hydrology. The term is sometimes used for a type of restoration that enhances the biodiversity present but is not couched in terms of restoring the ecosystem to some prior state.

Source: Business and Biodiversity Offsets Programme. 2012. Glossary.

Entity

A company, corporation, partnership, individual, or other type of organization that is effectively in control of managing an exploration, mining or mineral processing project or operation.

NEW. Added to multiple chapters.

Environmental Flows

The water provided within a river, wetland, or coastal zone to maintain ecosystems and their benefits where there are competing water uses and where flows are regulated.

Source: IUCN. 2003. Flow: the essentials of environmental flows. <u>https://www.iucn.org/resources/publication/flow-essentials-environmental-flows</u>

NEW. Added to Chapter 4.2.

Equitable

In reference to grievance mechanisms, means seeking to ensure that aggrieved parties have reasonable access to sources of information, advice, and expertise necessary to engage in a grievance process on fair, informed, and respectful terms.

Source: Ruggie, J. 2011. Guiding Principles on Business and Human Rights.

Exploration

A process or range of activities undertaken to find commercially viable concentrations of minerals to mine and to define the available mineral reserve and resource. May occur concurrent with and on the same site as existing mining operations.

NEW. Replaces 'Exploration Activity.'

Expropriation

The legal (according to host country laws) taking of land without the consent of the owner by an expropriating authority (often the host government) for the purposes of using said land for public interest. Definitions of public interest vary by country, but typically mining is considered to be in the public interest.

NEW. Added to Chapter 2.4.

F

Facilitation Payment

Sums of money paid to get preferential treatment for something the receiver is otherwise still required to do—for example, paying an official to speed up, or 'facilitate', an authorization process.

Source: Responsible Jewellery Council. 2019. Code of Practices Guidance. <u>https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-Guidance-April-2019.pdf</u>

NEW. Added to 1.5

Facility

Refers to any land, building, installation, structure, equipment, conveyance, or area that alone or together serve a particular purpose. In the IRMA Standard, the term may be associated with a specific type of facility that is self-

described (e.g., tailings facility), but other examples of facilities are open pits, access roads, water dams, waste disposal sites, underground mine workings, beneficiation plants, brine ponds, slag piles, etc. See also 'Associated Facility'.

REVISED. Updated to be more descriptive.

Failure Consequence Classification

A rating or ranking (e.g., low, significant, high, very high, extreme) based on losses, damages or impacts on downstream populations, the environment, the economy, cultural values, property and infrastructure if there were to be a loss of stability or integrity in a facility or its appurtenances that leads to an uncontrolled release of all or part of its contents. Failure consequence classifications are carried out for all credible failure modes.

Source: Adapted from various, including British Columbia Government. 2017. Downstream Consequence of Failure Classification Interpretation Guideline. <u>https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/dam-safety/con_class_guidelines_for_owners-2017.pdf</u> and Global Industry Standard on Tailings Management. https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf

NEW. Added to 4.X

Financial Assurance

A financial mechanism or instrument to ensure that sufficient funds are available for a regulatory authority (or functional equivalent) to ensure that the required reclamation, decommissioning, monitoring, cleanup or other activities at a specific facility or site are undertaken if the responsible entity is unable or unwilling to perform required actions. Acceptable mechanisms or instruments for financial assurance are limited to forms of cash (commercial deposits, trusts), irrevocable letters of credit from an established bank, surety bonds and insurance policies from bonded insurers, and trust funds.

NEW. Added to Chapter 2.6.

Forced Eviction

The permanent or temporary removal against their will of individuals, families, and/or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. For the purposes of this Standard, there is the potential that forced eviction could occur when efforts at good faith negotiations and arbitration with project-affected people whose lands a project or operation intends to acquire fail, triggering a legal expropriation process which ultimately ends in the state approving the land acquisition and clearing and the removal of the land occupants. See also 'Trafficking in People'.

Source: United Nations Committee on Economic, Social and Cultural Rights. 1997. Basic Principles and Guidelines on Development-Based Evictions and Displacement.

REVISED. Added language concerning when forced eviction could occur.

Forced Labor

Any work or service not voluntarily performed that is exacted or coerced from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements required to pay off a debt, or slavery or slavery-like practices. It also includes requirements of excessive monetary deposits, excessive limitations on freedom of movement, excessive notice periods, substantial or inappropriate fines, and loss or delay of wages that prevent workers from voluntarily ending employment within their legal rights.

Source: Adapted from IFC. 2012. Performance Standard 2. Guidance Note 2, GN67.

Free, Prior and Informed Consent (FPIC)

Consent based on: engagement that is free from external manipulation, coercion and intimidation; notification, sufficiently in advance of commencement of any activities, that consent will be sought; full disclosure of information regarding all aspects of a proposed project or activity in a manner that is accessible and

understandable to the people whose consent is being sought; acknowledgment that the people whose consent is being sought can approve or reject a project or activity, and that the entities seeking consent will abide by the decision.

G

Gender

Gender refers to the norms, responsibilities, and social structure enforcing pre-defined roles for women, men, girls, boys, and gender-diverse people. As a social construct, gender varies from society to society and can change over time. Regarding mineral development (i.e., exploration, mining, mineral processing), issues of gender equality often focus on women in particular because they face a heightened risk to adverse effects from mining-related activities, due in large part to patriarchal gender norms and differences in women's access to and control over resources relative to men.

Source: Adapted from World Health Organization, Health Topics: Gender, <u>https://www.who.int/health-topics/gender#tab=tab_1</u>

NEW. Added as part of content in proposed chapter on Gender Equality and Gender Protections.

Gender Diverse

People whose gender identity, including their gender expression, is at odds with the gender norm, including those who do not place themselves in the male/female binary (non-binary) and people who identify with a different sex than the one assigned to them at birth (transgendered).

Source: Adapted from United Nations Human Rights Office of the High Commissioner, The Struggle of Trans and Gender-Diverse Persons: Independent Expert on Sexual Orientation and Gender Identity, <u>https://www.ohchr.org/en/special-procedures/ie-sexual-orientation-and-gender-identity/struggle-trans-and-gender-diverse-persons#:~:text=The%20term%20%22gender%2Ddiverse%22,binary%3B%20the%20more%20specific%20term</u>

Gender Equality

The equal rights, responsibilities, and opportunities of women, men, and gender-diverse individuals. Equality does not mean that women and men will become the same, but that rights, responsibilities, and opportunities will not depend on a person's sex at birth. Gender equality implies that the interests, needs, and priorities of women, men, and gender-diverse individuals are taken into consideration. Gender equality is not a women's issue; it is an issue that should concern and fully engage men, women, and gender-diverse individuals. Equality between women, men, and gender-diverse individuals is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centered development.

Source: Adapted from UN Women, Gender Mainstreaming Concepts and Definitions, available at https://www.un.org/womenwatch/osagi/conceptsandefinitions.htm.

NEW. Added as part of content in proposed chapter on Gender Equality and Gender Protections.

Gender Mainstreaming

Integration of gender concerns into the design and management of business operations in order to improve business outcomes and identify areas where benefits, risks and impacts may be experienced differently for men, women, and gender-diverse individuals. This may include intersectional gender analysis, intersectional gender impact assessments, and consultation with gender experts.

Gender mainstreaming can better enable the successful development, implementation and ongoing monitoring of gender-responsive strategies and measures designed to address issues of gender equality.

NEW. Added as part of content in proposed chapter on Gender Equality and Gender Protections.

Gender Protections

Addressing and keeping people safe from gender-based discrimination, violence, and harm, e.g., sexual and gender-based violence (SGBV).

Source: Adapted from International Federation of Red Cross and Red Crescent Societies (IFRC), Protection, Gender and Inclusion, <u>https://www.ifrc.org/our-work/inclusion-protection-and-engagement/protection-gender-and-inclusion#:~:text=Protection%20means%20addressing%20violence%20and,excluded%20people%20in%20our%20work</u>

NEW. Added as part of content in proposed chapter on Gender Equality and Gender Protections.

Greenfield

Land that has not previously been developed for industrial use or land previously developed for industrial use where disturbance, degradation and/or contamination have been effectively addressed through rehabilitation or restoration.

NEW. Added to Chapter 4.XX

Grievance

A perceived injustice evoking an individual's or a group's sense of entitlement, which may be based on law, contract, explicit or implicit promises, customary practice, or general notions of fairness of aggrieved communities. For the purposes of the IRMA Standard, the words grievances and complaints will be used interchangeably.

Source: Ruggie, J. 2011. Guiding Principles on Business and Human Rights.

REVISED. Added that IRMA Standard uses grievances and complaints interchangeably.

Grievance Mechanism

Any routinized, state-based or non-state-based, judicial or non-judicial process through which project- or operation-related complaints or grievances, including business-related human rights abuses, stakeholder complaints, and/or labor grievances, can be raised and remedy can be sought. An operational- or project-level grievance mechanism is a formalized means through which individuals or groups can raise concerns about the impact of a specific project/operation on them—and can seek remedy.

Source: Ruggie, J. 2011. Guiding Principles on Business and Human Rights.

REVISED. Changed wording from mining project to project- or operation-related, and added operation-level grievance mechanism to this definition., and added operation-level grievance mechanism to this definition.

Ground Vibration

The level of vibration (peak particle velocity) measured in millimetre/second in the ground. The measurement point should be at least the longest dimension of the foundations of a building or structure away from the building or structure, if possible. If this is not possible, the measurement point should be as far from the building or structure as is practical.

Source: Adapted from Victoria (Australia) State Government. Ground Vibration and Airblast Limits for Blasting in Mines and Quarries.

Groundwater Remediation

The treatment of polluted groundwater to remove contaminants of concern or convert them to harmless products. Ex-situ groundwater remediation is the most commonly used approach (with the remediated water being replaced underground following treatment), but in-situ treatment may be possible in some cases.

NEW. Added to Chapter 4.2

Habitat

A terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. The place or type of site where an organism or population naturally occurs.

Sources: IFC. 2012. Performance Standard 6; Convention on Biological Diversity, Article 2.

Hazard (in relation to the workplace)

A potential source of harm or adverse health effect on something or someone under certain conditions at work. Source: Canadian Centre for OHS website: "Hazard and Risk."

Hazard

A potentially dangerous phenomenon, substance, human activity or condition. It may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Source: International Federation of Red Cross and Red Crescent Societies. https://www.ifrc.org/document/hazard-definitions

NEW. Added to Chapter 2.5 and 4.X.

Hazardous Materials

Chemicals and materials with properties or characteristics that make them a physical, health, or environmental hazard.

NEW. Added to Chapter 4.1 and others.

Hazardous Wastes

Wastes with properties or characteristics that make them a physical, health, or environmental hazard.

NEW. Added to Chapter 4.1 and others.

Hazardous Work (in relation to child labor)

Work that, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children.

Source: ILO. 1999. Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour. No. 182. Article 3 (d).

Health Surveillance

Procedures and investigations to assess workers' (or others') health in order to detect and identify an abnormality. The results of surveillance should be used to protect and promote health of the individual, collective health at the workplace, or the health of exposed working population. Health assessment procedures may include, but are not limited to, medical examinations, biological monitoring, radiological examinations, questionnaires, or a review of health records.

Source: Adapted from ILO. 1997. Technical and Ethical Guidelines for Workers Health Surveillance. OSH No. 72.

REVISED. Added to Chapter 3.3, and revised to be applicable to the workplace and communities.

Heap Leach/Heap Leaching

An industrial mining process to extract precious metals, copper, and other compounds from ore. Typically, mined ore is crushed and heaped on an impermeable leach pad, and chemicals (reagents) are applied that percolate through the ore and absorb specific minerals and metals. The solution is collected and target metals are recovered from the solution.

531

Η

Hierarchy of Controls

A step-by-step approach to eliminating or reducing workplace hazards that ranks controls from the most effective level of protection to the least effective level of protection as follows: Elimination (physically remove the hazard), Substitution (replace the hazard with something safer), Engineering Controls (use equipment or other means to isolate people from the hazard), Administrative Controls (change the way people work via procedures), Personal Protective Equipment (protect the worker using personal protective equipment).

Source: WorkSafe BC. https://www.worksafebc.com/en/health-safety/create-manage/managing-risk/controlling-risks

NEW. Added to Chapter 3.2.

Holding Costs

The costs that would be incurred by a regulatory agency immediately after bankruptcy of a company responsible for maintaining a mine site and before reclamation begins. Examples of such costs include continuing water treatment, routine maintenance, and the other operating costs involved with holding a piece of severely disturbed land.

Host Community

With respect to resettlement, any community receiving displaced people. Source: IFC. 2012. *Performance Standard 5*.

Host Country Law

May also be referred to as national law, if such a phrase is used in reference to the laws of the country in which a project or operation is located. Host country law includes all applicable requirements, including but not limited to laws, rules regulations, and permit requirements, from any governmental or regulatory entity, including but not limited to applicable requirements at the federal/national, state, provincial, county or town/municipal levels, or their equivalents in the country where the project/operation is located. The primacy of host country laws, such as federal versus provincial, is determined by the laws of the host country.

REVISED. Changed wording from mining project to project or operation.

Human Rights Defenders

Any person or group of persons working to promote human rights and contributing to the effective elimination of all violations of human rights and fundamental freedoms of peoples and individuals. Defenders can be of any gender, of varying ages, from any part of the world and from all sorts of professional or other backgrounds, i.e., not only found within NGOs and intergovernmental organizations but might also, in some instances, be government officials, civil servants or members of the private sector, and individuals working within their local communities.

Source: Adapted from UN Office of the High Commissioner for Human Rights website: "Who is a defender."

Human Rights Risks

Human rights risks are understood to be a business enterprise's potential adverse human rights impacts. (May also be referred to as potential human rights impacts).

Source: Ruggie, J. 2011. Guiding Principles on Business and Human Rights. Commentary on Principle 17.

L

Important Biodiversity Values

The particular biodiversity elements or features, such as individual species, assemblages of species, particular ecological processes, etc., that trigger an area's designation as having significant biodiversity value (e.g., designation as critical habitat, a Key Biodiversity Area, a protected area), as well as the ecological context needed to support the maintenance of the trigger elements.

Source: Adapted from IUCN.

In-Kind Compensation

In the context of resettlement, in-kind compensation refers to compensating project-affected people for lost assets with similar or equivalent assets (e.g., offering replacement land for lands acquired by a project / operation, rather than simply paying cash compensation for land value).

In-Kind Payments

Payments made to a government (e.g., royalty) in the form of the actual commodity (oil, gas, or minerals) instead of cash.

Source: Extractives Industries Transparency Initiative (EITI) Glossary.

Inclusive

In the context of stakeholder engagement, means that engagement includes men, women, gender diverse, the elderly, youth, displaced people, and other potentially vulnerable, marginalized, or disadvantaged people or groups

Source: Adapted from IFC. 2012. Performance Standard 1.

REVISED. Added the term gender-diverse.

Independent Dam Safety Review (DSR)

Independent review of the safety of a critical facility covering technical, operational and governance aspects, conducted by an independent technical specialist according to established best practices. It is conducted at intervals based on the failure consequence classification and the complexity of its condition or performance. It is regulatory requirement in many jurisdictions.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Independent Review

Independent, objective, expert commentary, advice, and, potentially, recommendations to assist in identifying, understanding, and managing risks associated with critical facilities.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Independent Review Board (IRB)

A board of at least three members that provides independent technical review of the design, construction, operation, closure and management of critical facilities. The independent reviewers are third-parties who are not, and have not been directly involved with the design or operation of the particular critical facility. The expertise of the ITB members reflects the range of issues relevant to the facility and its context and the complexity of these issues.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Independent Senior Technical Reviewer

A professional who is either an in-house employee or an external party with in-depth knowledge and at least 15 years' experience in the specific area of the review requirements, e.g., tailings design, operations and closure, environmental and social aspects or any other specific topic of concern.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Indigenous Peoples

An official definition of 'Indigenous' has not been adopted by the UN system due to the diversity of the world's Indigenous Peoples. Instead, a modern and inclusive understanding of 'Indigenous' includes peoples who: identify themselves and are recognized and accepted by their community as Indigenous; demonstrate historical continuity with pre-colonial and/or pre-settler societies; have strong links to territories and surrounding natural resources; have distinct social, economic ,or political systems; maintain distinct languages, cultures, and beliefs; form non-dominant groups of society; and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities. In some regions, there may be a preference to use other terms such as tribes, first peoples/nations, aboriginals, Adivasi, and Janajati. All such terms fall within this modern understanding of 'Indigenous'.

Source: Adapted from United Nations Permanent Forum on Indigenous Issues, Fifth Session, "Fact Sheet 1: Indigenous Peoples and Identity."

REVISED. Removed the term "ethnic groups" as this is broadly applicable to other populations that are not considered Indigenous Peoples and could make it challenging to audit.

Indigenous Peoples Living in Initial Contact

Indigenous Peoples or segments of Indigenous Peoples who maintain intermittent or sporadic contact with the majority non-Indigenous population, generally used in reference to peoples or segments of peoples who have initiated a process of contact recently. However, "initial" should not necessarily be understood as a temporal term, but as a reference to the scant extent of contact and interaction with the majority non-Indigenous society.

Indigenous Peoples in initial contact are peoples who were previously in voluntary isolation and who for some reason, voluntary or otherwise, came into contact with members of the surrounding population, and although they maintain a certain level of contact, they are not fully familiar with nor do they share the patterns and codes of social relations of the majority population.

Source: Inter-American Commission on Human Rights. Rapporteurship on the Rights of Indigenous Peoples. "Indigenous Peoples in voluntary isolation and initial contact in the Americas: Recommendations for the full respect of their human rights." <u>https://www.oas.org/en/iachr/indigenous/docs/pdf/Report-Indigenous-Peoples-Voluntary-Isolation.pdf</u>

NEW. Added to Chapter 2.2.

Indigenous Peoples Living in Voluntary Isolation

Indigenous Peoples or segments of Indigenous Peoples who do not maintain sustained contacts with the majority non-Indigenous population, and who generally reject any type of contact with persons not part of their own people. They may also be peoples or segments of peoples previously contacted and who, after intermittent contact with the non-Indigenous societies, have returned to a situation of isolation and break the relations of contact that they may have had with those societies.

Source: Inter-American Commission on Human Rights. Rapporteurship on the Rights of Indigenous Peoples. "Indigenous Peoples in voluntary isolation and initial contact in the Americas: Recommendations for the full respect of their human rights." https://www.oas.org/en/iachr/indigenous/docs/pdf/Report-Indigenous-Peoples-Voluntary-Isolation.pdf

NEW. Added to Chapter 2.2.

Indigenous Peoples' Rights

These include traditional rights, which are defined as "Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit." It also encompasses the rights of Indigenous and Tribal Peoples established by the United Nations Declarations of the Rights of Indigenous Peoples (UNDRIP).

Source: Adapted from Forest Stewardship Council.

NEW. Added to Chapter 2.2.

Indirect Impacts

Impacts that are caused by a project or operation but occur later in time or are farther removed in distance than a direct impact. See also 'Direct Impacts'.

NEW. Separated out the constituent parts of 'Direct/Indirect Impacts'.

Inform

The provision of information to inform stakeholders of a proposal, activity, or decision. The information provided may be designed to help stakeholders in understanding an issue, alternatives, solutions or the decision-making process. Information flows are one-way. Information can flow either from the company to stakeholders or vice versa.

Source: Adapted from South Africa Dept. of Env. Affairs and Tourism. Stakeholder Engagement.

Intangible Cultural Heritage

Knowledge, innovations and/or practices, including oral expressions of folklore, performing arts, rituals, and festivals that are inherited from past generations, maintained in the present, and bestowed for the benefit of future generations.

Interim Fluid and Site Management

The management of process fluids and associated facilities and management of the site to ensure it remains in a safe and stable condition during unanticipated periods of temporary closure such as a suspension of operations, and for periods of anticipated seasonal closure where there is potential to recommence operations in the future. Also may be referred to as 'care and maintenance'.

NEW. Added to Chapter 2.6.

International Accounting Standards

Several accounting standards are commonly recognized as an international accounting standard; for example, the International Financial Reporting Standards (IFRS), which are set by the International Accounting Standards Board (IASB).

Source: Extractives Industries Transparency Initiative (EITI) Standard. 2013.

Intersectional

Discrimination based on one factor such as gender may intersect with other factors of discrimination such as ethnicity, socioeconomic status, disability, age, geographic location, gender identity and sexual orientation, among others.

Source: World Health Organization, Health Topics: Gender, <u>https://www.who.int/health-topics/gender#tab=tab_1</u>.

NEW. Added as part of content in proposed chapter on Gender Equality and Gender Protections.

Involuntary Displacement

Displacement is considered involuntary when affected people or communities do not have the right to refuse land acquisition or restrictions on land use that result in physical or economic displacement. This occurs in cases of (i) lawful expropriation or temporary or permanent restrictions on land use (see also 'Forced Eviction') and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail. See also definition for 'Voluntary Displacement.

Source: IFC. 2012. Performance Standard 5.

REVISED. We are proposing to change this definition from 'Involuntary Resettlement' to 'Involuntary Displacement' in recognition that resettlement - particularly historically - is a process by which displaced households are physically moved to another location, which may or may not have occurred following displacement.

Κ

Key Biodiversity Areas (KBA)

Sites that contribute to the global persistence of biodiversity, including vital habitat for threatened or geographically restricted plant and animal species in terrestrial, freshwater, and marine ecosystems. Source: IUCN.

L

Lagging Indicators

Measure outcomes and occurrences (e.g., the extent of harm that has occurred in the past). Reactive, tells you whether you have achieved a desired result (or when a desired safety result has failed) and provides historical information about health and safety performance.

Source: Adapted from OECD 2008. https://doi.org/10.1787/9789264221741-en

NEW. Added to Chapter 3.2.

Landscape

A geographical mosaic composed of interacting ecosystems resulting from the influence of geological, topographical, soil, climatic, biotic, and human interactions in a given area. Source: IUCN.

Leading Indicators

Measure precursors to harm (e.g., conditions, events or measures that precede an undesirable event, whether it is an accident, near-miss incident, or undesirable safety state), and are associated with proactive activities that identify hazards and assess, eliminate, minimize, and control risk in order to achieve a desired outcome or avoid unwanted outcomes.

Source: Adapted from Grabowski. 2006. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=23b29d1d38d57b741e65a371b0854c43d1c40e29

NEW. Added to Chapter 3.2.

Legitimate Artisanal and Small-Scale Mining (ASM)

ASM conducted in a manner that is consistent with applicable laws, or, in the absence of a legal framework or if the legal framework is not enforced, where ASM entities can demonstrate 'good faith efforts' to work within the legal framework (i.e., obtaining permits where available) and pursue formalization.

Source: Adapted from OECD. 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. (3rd Ed.) p. 69. <u>https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf</u>

NEW. Added to Chapter 3.6.

Leverage

Leverage is an advantage that gives power to influence. In the context of Chapter 1.3, it refers to the ability to effect change in the wrongful practices of the party that is causing or contributing to an adverse human rights impact.

Source: UN Office of the High Commissioner for Human Rights. 2012. *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide.*

Lin Peak/Linear Peak

The maximum level of air pressure fluctuation measured in decibels without frequency weighting.

Livelihood

The full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering. Source: IFC. 2012. *Performance Standard 5*.

Livelihood Restoration Plan

A plan that establishes the entitlements (e.g., compensation, other assistance) of affected people and/or communities who are economically displaced, in order to provide them with adequate opportunity to reestablish their livelihoods.

Living Wage

Remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and their family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs including provision for unexpected events.

Source: Social Accountability International. 2014. SA8000 Standard.

Long-Term Water Treatment

Long-term water treatment is defined as any water treatment that requires active water treatment after mine closure. After mine closure long-term water treatment is assumed to be required until it can be empirically demonstrated that water treatment is no longer needed.

Μ

Major Modification

A proposed change in an existing operation that could create new risks or change the scale or scope of existing adverse impacts on the health or safety of workers or communities, human rights, the rights or interests of Indigenous Peoples, cultural heritage, livelihoods, or the environment.

NEW. Added to Chapter 2.1 and others.

Material Payments

If not defined in a mandatory transparency regime or through an Extractives Industries Transparency Initiative (EITI) country-specific multi-stakeholder process, material payments are those that exceed US\$100,000 (or its equivalent in other currencies). Payments may occur as a single installment or be the aggregate of a series of related payments that are made in the same fiscal/financial year. Material payments may be monetary or in-kind.

Mercury Emission Control System

Any system that will limit mercury emissions (either designed specifically for mercury, or mercury capture is a co-benefit), including sorbent technologies that can remove mercury from the gas stream during processing, or oxidation technologies that will increase the percentage of particulate-bound mercury removed by particulate scrubbers.

Mercury Waste

Wastes consisting of, containing, or contaminated with mercury (i.e., elemental mercury [Hg(0)] or mercury compounds.

Source: Basel Convention. Technical Guidelines.

Metals Leaching

The release of metals by contact with solvents. Leaching may be natural or induced (e.g., related to mining operations). Mining commonly accelerates metal leaching. Metals leaching can also be referred to as "contaminant" leaching.

Mine-Influenced Water (MIW)

Any water whose chemical composition has been affected by mining or mineral processing. Also referred to as mining influenced waters or mine-impacted waters. Includes acid rock drainage (ARD), acid mine drainage or acid and metalliferous drainage (AMD), neutral mine drainage, saline drainage, and metallurgical process waters of potential concern. A key characteristic of most mining impacted waters (also known as mining influenced waters) is that they contain elevated metals that have leached from surrounding solids (e.g., waste rock, tailings, mine surfaces, or mineral surfaces in their pathways). This fact is commonly acknowledged by the phrase "metals leaching" (ML), frequently resulting in acronyms such as ARD/ML.

REVISED. Previously 'Mining Impacted Waters'. Previously focused on waters influenced by mining wastes. Now includes more examples of mine-influenced waters.

Mineral Development Life Cycle

All of the stages from cradle to grave required to produce a saleable mineral/metal product. Includes exploration, project development, permitting, construction, mining and mineral processing operations, reclamation and closure, and post-closure stages.

NEW. Added to 2.1, others.

Mineral Processing

Activities undertaken to separate valuable and non-valuable minerals and convert the former into an intermediate or final form required by downstream users. In IRMA this includes all forms of physical, chemical, biological and other processes used in the separation and purification of the minerals.

Mining

Activities undertaken to extract minerals, metals and other geologic materials from the earth. Includes extraction of minerals in solid (e.g., rock or ore) and liquid (e.g., brine or solution) forms.

NEW. Replaces 'Mining Project'.

Mining-Related Activities

Any activities carried out during any phase of the mineral development life cycle for the purpose of locating, extracting and/or producing mineral or metal products. Includes physical activities (e.g., land disturbance and clearing, road building, sampling, drilling, airborne surveys, field studies, construction, ore removal, brine extraction, beneficiation, mineral or brine processing, transport of materials and wastes, waste management, monitoring, reclamation, etc.) and non-physical activities (e.g., project or operational planning, permitting, stakeholder engagement, etc.).

REVISED. Added reference to mineral development life cycle, project/operation, brine.

Mitigation (including in relation to human rights impacts)

Actions taken to reduce the likelihood of the occurrence of a certain adverse impact. The mitigation of adverse human rights impacts refers to actions taken to reduce their extent, with any residual impact then requiring remediation.

Source: Adapted from UN Office of the High Commissioner for Human Rights. 2012. *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide.*

Mitigation Hierarchy

The mitigation hierarchy is a set of prioritized steps to alleviate environmental (or social) harm as far as possible through avoidance, minimization, and restoration of adverse impacts. Compensation/offsetting are only considered to address residual impacts after appropriate avoidance, minimization, and restoration measures have been applied. The biodiversity mitigation hierarchy is as follows (but the steps can be applied for any environmental or social impacts, although waste management has its own hierarchy. For waste, see definition of Waste Mitigation Hierarchy):

- i. *Avoidance:* measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure in order to completely avoid impacts on certain components of biodiversity. This results in a change to a 'business as usual' approach.
- ii. *Minimization:* measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided, as far as is practically feasible.
- iii. Restoration: measures taken to assist the recovery of ecosystems that have been degraded, damaged, or destroyed. Involves altering an area in such a way as to re-establish an ecosystem's composition, structure, and function, usually bringing it back to its original (pre-disturbance) state or to a healthy state close to the original.
- iv. Offset: measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse impacts on biodiversity arising from project development after appropriate prevention and mitigation actions have been taken. The goal of biodiversity offsets is no net loss or a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function, and people's use and cultural values associated with biodiversity.

REVISED. Added reference to waste mitigation hierarchy, which is slightly different.

Mixing Zone

A volume of surface water or groundwater containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters or groundwaters has been afforded and where water quality is allowed to exceed otherwise specified standards.

Source: Adapted from US Environmental Protection Agency.

Modified Habitat

Areas that may contain a large proportion of plant and/or animal species of non-native origin and/or where human activity has substantially modified an area's primary ecological functions and species composition (this excludes habitat that has been converted in anticipation of the project). Modified habitats may include areas managed for agriculture, forest plantations, reclaimed coastal zones, and reclaimed wetlands. Source: IFC. 2012. *Performance Standard 6.*

Multi-Criteria Alternatives Analysis

Generally, a process to identify and objectively and rigorously assess the potential impacts and benefits (including environmental, technical and socio-economic aspects) of different options so that an informed decision regarding a final option can be made. For IRMA purposes, it refers to a process to assess options for locating tailings or other waste facilities, and for selecting the site-specific best available technologies and practices for managing wastes throughout the life cycle. Technologies and practices may need to be reassessed during different stages of the life cycle, for example if there is a proposed expansion that requires additional waste storage and processing.

Sources: Adapted from: Environment Canada, 2016. *Guidelines for the Assessment of Alternatives for Mine Waste Disposal*, Chapter 2; and Mining Association of Canada. 2017. *Guide to the Management of Tailings Facilities*.

REVISED. Changed term from 'Alternatives Assessment' to 'Multi-Criteria Alternatives Analysis' to align with the Global Industry Standard for Tailings Management.

Natural Habitat

Areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition. Source: IFC. 2012. *Performance Standard 6.*

Natural Seep/Spring

A natural seep is a moist or wet place where water reaches the earth's surface from an underground aquifer. Seeps are usually not of sufficient volume to be flowing much beyond their above-ground location. A natural spring is a discharge of water formed when the side of a hill, a valley bottom or other excavation

intersects a flowing body of groundwater at or below the local water table, below which the subsurface material is saturated with water. A natural spring is differentiated from a seep in that water flows at a greater rate from an aquifer to the earth's surface.

Source: Adapted from USGS and others.

Near-Miss Incident

An unexpected event that disrupts regular work activity and there was the potential for injury, ill health, fatality or damage to property or the environment, but no actual harm occurred. Also known as a 'close calls', 'injury-free event', 'near accident'.

NEW. Added to Chapter 3.2.

No Net Loss and Net Gain (of biodiversity)

Targets for development projects in which the impacts on biodiversity caused by the project are balanced or outweighed by measures taken to first avoid and minimize the impacts, then to undertake on-site rehabilitation and/or restoration, and finally to offset the residual impacts (if appropriate). No net loss, in essence, refers to the point where biodiversity gains from targeted conservation activities match the losses of biodiversity due to the impacts of a specific development project, so that there is no net reduction overall in the type, amount, and condition (or quality) of biodiversity over space and time. A net gain (sometimes referred to as net positive impact) means that biodiversity gains exceed a specific set of losses.

Noise Receptor

A point of reception or (human) receptor may be defined as any point on the premises occupied by people where extraneous noise and/or vibration are received. Examples of receptor locations may include permanent or seasonal residences; hotels/motels; schools and daycares; hospitals and nursing homes; places of worship; and parks and campgrounds, and similar public spaces and commons. For wildlife, receptor locations may include wildlife habitat for sensitive animal species.

Source: Adapted from IFC. 2007. Environmental, Health, and Safety Guidelines. Section 1.7. Noise Management.

Non-Critical Facility

A facility that, if a physical stability failure of the facility were to occur, would not lead to the loss of life, and would have only low or significant impacts that could be mitigated within a short period of time (e.g., 1-5 years) at a reasonable cost (e.g., <10 Million \$US). See also 'Critical Facility'.

NEW. Added to 4.X

Non-Replicable Cultural Heritage

Cultural heritage that (i) is unique or relatively unique for the period it represents, or (ii) unique or relatively unique in linking several periods in the same site.

Source: IFC. 2012. Performance Standard 8. Guidance Note.

NEW. Added to Chapter 3.7.

Ν
Occupational Exposure Limit (OEL)

An upper limit on the acceptable concentration of a hazardous substance in workplace air for a particular material (e.g., gases, vapors and particles). It is typically set by competent national authorities and enforced by legislation to protect occupational safety and health.

Sources: ILO and others.

Offset

An activity undertaken to counterbalance a significant residual impact.

Offset (biodiversity)

As it relates to biodiversity, measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse impacts on biodiversity arising from project development after appropriate prevention and mitigation actions have been taken. The goal of biodiversity offsets is no net loss or a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function, and people's use and cultural values associated with biodiversity. (See also mitigation hierarchy)

Operation(s)

The set of activities being undertaken for the purpose of extracting and/or processing mineral resources, including the running and management of facilities and infrastructure required to support the activities, and the ongoing legal, environmental, social and governance activities necessary to maintain the business endeavor.

NEW. Added to Chapter 2.1, all others.

Ρ

Peak Particle Velocity

The instantaneous sum of the velocity vectors (measured in millimetres per second) of the ground movement caused by the passage of vibration from blasting.

Pit Lake

Lake formed in a mine pit when mine dewatering pumpage ceases.

Point of Compliance

For IRMA purposes, is the physical location where water quality must meet IRMA used-based standards (See IRMA Water Quality By End-Use Tables 4.2.a – 4.2.h). The location will vary based on the following scenarios: *Surface water compliance points* are located where point source discharges enter surface waters. Points of compliance for non-point-source discharges are located downstream of but as close as practicable to known mine-related nonpoint sources.

Groundwater compliance points are located outside the groundwater capture zone (which extends from the land surface to the depth at which groundwater is not affected by mining activities) or area of hydrologic control for mine facilities or sources but as close as practicable to those sources.

Stormwater compliance locations in industrial stormwater collection impoundments when water is present.

If a mixing zone is used, the point of compliance is at the downstream or downgradient edge of the mixing zone. The edge of the mixing zone is where the diluted plume meets background water quality. In no case shall mine-related contaminants extend beyond the mine boundary, unless a mixing zone authorized by a regulatory agency extends beyond the boundary.

If a mine is providing water to another entity for a designated use, the water must meet IRMA use-based standards, or legal documentation must be received from the entity verifying that they will be responsible for treating water to meet use-based standards.

0

Pollution

Contamination that results in or can result in adverse biological effects to human or ecosystem health. All pollutants are contaminants, but not all contaminants are pollutants. See also 'Contamination'.

Source: Chapman, P. 2006. "Determining when contamination is pollution," Environ. Int. https://doi.org/10.1016/j.envint.2006.09.001

NEW. Added to Chapter 2.6, 4.2, 4.XX.

Potentially Affected Indigenous Peoples

Indigenous Peoples who have traditionally owned, occupied, or otherwise used or acquired lands, territories, and/or resources that may be affected by mining-related activities.

NEW. Added to Chapter 2.2

Post-Closure

The period after reclamation and closure activities have been completed, and long-term management activities (e.g., ongoing monitoring and maintenance, and, if necessary, water management and treatment) are occurring to ensure that a site remains stable and ecological restoration objectives continue to be achieved. This phase continues until final sign-off of site responsibility and relinquishment of post-closure financial assurance can be obtained from the regulator.

REVISED. Changed to be less focused on financial assurance and provide more description of the activities that are taking place.

Potential Human Rights Impact

An adverse impact on human rights that may occur but has not yet done so. (May also be referred to as human rights risk).

Source: Adapted from UN Office of the High Commissioner for Human Rights. 2012. *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide.*

Practicable

Practicable means giving equal weight to environmental, social, and economic benefits and costs. This is not a technical definition. It is the discussion between the affected parties on the balance between these interrelated costs and benefits that is important.

Predictable

In reference to grievance mechanism, means providing a clear and known procedure with an indicative time frame for each stage, and clarity on the types of process and outcome available and means of monitoring implementation.

Source: Ruggie, J. 2011. Guiding Principles on Business and Human Rights.

Preliminary Design

A design performed to a level of detail sufficient to determine the differences between viable designs that adopt different external loading design criteria in terms of required footprints, volumes and drainage requirements.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Priority Ecosystem Services

Ecosystem services are considered priority under the following circumstances: (i) operations are likely to result in a significant impact on the ecosystem service; the impact will result in a direct adverse impact on affected communities' livelihood, health, safety and/or cultural heritage; and the entity has direct management control

or significant influence over the service; or (ii) the operation directly depends on the service for its primary operations; and the operation has direct management control or significant influence over the service. Source: IFC. 2012. *Performance Standard 6.*

Process Water

Water that is used to process ore using hydrometallurgical extraction techniques. It commonly contains process chemicals.

Source: Lottermoser, B. 2010. Mine Wastes: Characterization, Treatment and Environmental Impacts.

Project(s)

The development phases before a mining or mineral processing operation can begin (e.g., exploration, prefeasibility, feasibility, conceptual design, planning, permitting). Includes all desk-top and field-based activities, including exploration activities, needed to inform and develop a project proposal, support the environmental and social impact assessment of a proposal, generate information necessary to fulfill regulatory and permitting requirements, engage with stakeholders and rights holders, and maintain the entity's business endeavor.

NEW. Added to Chapter 2.1 and all other chapters.

Protected Area / Protected Area Management Categories (IUCN)

A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. The definition is expanded by six "protected area management categories" (one with a sub-division), summarized below.

Ia *Strict nature reserve:* Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values.

Ib *Wilderness area:* Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition.

II *National park:* Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also have environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.

III *Natural monument or feature*: Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove.

IV *Habitat/species management area*: Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category.

V *Protected landscape or seascape*: Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI *Protected areas with sustainable use of natural resources:* Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims.

Source: Dudley. 2008. Guidelines for Applying Protected Area Management Categories. IUCN.

Psychosocial Hazard

Hazards that can have an impact on the psychological health or mental or emotional wellbeing of a person.

NEW. Added to Chapter 3.2.

R

Receptor

Any human, plant, animal, or structure which is, or has the potential to be, affected by the release or migration of contaminants.

NEW. Added to Chapter 4.2 and 4.XX

Reclamation

The process of achieving stability, hydrologic balance and converting disturbed land and/or water resources to a productive post-mining (or post-mineral processing) land use, or establishing the potential for productive use. Components of reclamation may include: removal or isolation of hazardous material and waste, decommissioning and removal of buildings and other structures, removal and disposal of polluted soils, adjustment and stabilization of landforms (e.g., earthwork including backfilling, grading, recontouring, stormwater controls), creation of suitable conditions for the introduction of desired flora and fauna (topsoil placement, revegetation, ecological restoration), and any other planned mitigation (e.g., wetlands construction, water diversion, other).

NEW. Added to Chapter 2.6 and others.

Release

An unintentional, unpermitted emission of mine-influenced water to the environment. See also 'Discharge'.

NEW. Added to Chapter 2.6, 4.1, 4.X, 4.2, 4.XX

Remediation/Remedy (including in relation to human rights impacts or grievances)

Remediation and remedy refer to both the processes of providing remedy for an adverse impact and the substantive outcomes that can counteract, or make good, the adverse impact. These outcomes may take a range of forms, such as apologies, restitution, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), as well as the prevention of further harm through, for example, injunctions or guarantees of non-repetition.

REVISED. Added reference to grievances.

Remediation (Groundwater)

See Groundwater Remediation.

NEW. Added to Chapter 4.2

Remediation (Soil)

See Soil Remediation.

NEW. Added to Chapter 2.6, 4.1, 4.XX.

Replacement Cost

In the context of land acquisition, the market value of assets acquired or affected by a project / operation plus transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. Market value is defined as the value required to allow affected communities and people to replace lost assets with assets of similar value.

Source: IFC. 2012. Performance Standard 2.

Replicable Cultural Heritage

Tangible forms of cultural heritage that can themselves be moved to another location or that can be replaced by a similar structure or natural features to which the cultural values can be transferred by appropriate measures.

Archeological or historical sites may be considered replicable where the particular eras and cultural values they represent are well represented by other sites and/or structures.

Source: IFC. 2012. Performance Standard 8. Guidance Note.

Resettlement

Resettlement is the "comprehensive process of planning for and implementing the relocation of people, households and communities from one place to another for some specific reason, together with all associated activities, including: (a) the provision of compensation for lost assets, resources and inconvenience; and (b) the provision of support for livelihood restoration and enhancement, re-establishment of social networks, and for restoring or improving the social functioning of the community, social activities and essential public services."

Source: Vanclay, F. 2017. "Project-induced displacement and resettlement: from impoverishment risks to an opportunity for development?" Impact Assessment and Project Appraisal, 35:1, 3.

REVISED. We are proposing to alter this definition which, previously, was more accurately defining the act and experience of *displacement* (voluntary or involuntary transfer of land / assets to a purchaser resulting in a need for reestablishment of these assets elsewhere, if relevant [see definition above]) rather than *resettlement* (which is a potential but not automatic or inherent strategy to mitigate the impacts of displacement). We are proposing this in recognition of the fact that resettlement - particularly historically - is a process of planning through which displaced households are physically moved to another location which may or may not have occurred following displacement.

Resettlement Action Plan

A plan designed to mitigate the adverse impacts of displacement by providing for the relocation of people. These plans typically involved: identifying livelihood restoration opportunities; developing a resettlement budget and schedule; and establishing the entitlements of all categories of affected people (including host communities). Such a plan is required when resettlement involves physical displacement of people.

Source: Adapted from IFC. 2012. Performance Standard 5, paragraph 19.

REVISED. We are proposing to add some details concerning what is typically included in a RAP to better align with relevant requirements within the Standard.

Residual Impacts

Impacts that remain after on-site mitigation measures (avoidance, minimization, restoration) have been applied. Restoration

Measures taken to assist the recovery of ecosystems that have been degraded, damaged or destroyed. Involves efforts to re-establish an ecosystem's composition, structure and function, intended to bring it back to its original (pre-disturbance) state or to a healthy state close to the original.

Responsible Critical Facility Engineer (RCFE)

An engineer appointed by the entity to be responsible for the critical facility. The RCFE must be available at all times during construction, operations and closure. The RCFE has clearly defined, delegated responsibility for management of the critical facility and has appropriate qualifications and experience compatible with the level of complexity of the critical facility. The RCFE is responsible for the scope of work and budget requirements for the critical facility, including risk management. The RCFE may delegate specific tasks and responsibilities for aspects of critical facility management to qualified personnel but not accountability.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Restoration

Measures taken to assist the recovery of ecosystems that have been degraded, damaged or destroyed. Involves efforts to re-establish an ecosystem's composition, structure and function, intended to bring it back to its original (pre-disturbance) state or to a healthy state close to the original.

Retrenchment

The elimination of a number of work positions or the dismissal or layoff of a number of workers by an employer, generally by reason of plant closing or for cost savings. Retrenchment does not cover isolated cases of termination of employment for cause or voluntary departure. Retrenchment is often a consequence of adverse economic circumstances or as a result of a reorganization or restructuring.

Source: IFC. 2012. Performance Standard 2, Guidance Note GN 48.

Revegetation

Revegetation is the task of reseeding or replanting forbs, grasses, legumes, and other plants (sometimes including shrubs and trees) so as to provide cover to decrease erosion, provide for soil stability, and provide forage for wildlife or livestock or to otherwise return the site to a useable state.

Rights Holder

Rights holders are individuals or social groups that have particular entitlements in relation to specific duty bearers (e.g., state or non-state actors that have a particular obligation or responsibility to respect, promote and realize human rights, and abstain from human rights violations). In general terms, all human beings are rights-holders under the Universal Declaration of Human Rights. In particular contexts, there are often specific social groups whose human rights are not fully realized, respected, or protected.

Source: Adapted from UNICEF. Gender Equality, UN Coherence & You. Glossary.

Risk Control

An action, object (engineered), or system (combination of action and object) put in place to prevent or reduce the likelihood of an unwanted event, or to minimize or mitigate the negative consequences if an unwanted event occurs.

Source: See Critical Control definition.

Root Cause Analysis

Root cause analysis seeks to identify the primary cause of a problem that allowed a NC to occur. By identifying the root cause, a NC can be effectively addressed and recurrence can be avoided.

Source: Adapted from Aluminum Stewardship Initiative Glossary. <u>https://aluminium-stewardship.org/wp-content/uploads/2022/05/ASI-Glossary-V1-May2022.pdf</u>

NEW. Added to Chapter 1.5, 3.2, others.

S

Safety Data Sheet

A document giving information on the properties of hazardous chemicals and how they affect health and safety in the workplace.

Source: RJC. https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-2019-V1.2-Standards.pdf

NEW. Added to Chapters 3.2 and 4.1.

Salient Human Rights

Those human rights that are at risk of the most severe adverse impacts through an entity's activities or business relationships. They therefore vary from company to company.

Source: UN Guiding Principles Reporting Framework website. Glossary.

Scope 1

Direct GHG emissions that occur from sources that are owned or controlled by the site, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment.

Source: Slightly adapted text derived from GHG Protocol

NEW. Added to Chapter 4.5.

Scope 2

GHG emissions from the generation of purchased electricity consumed by the site. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the site. Scope 2 emissions physically occur at the facility where electricity is generated.

Source: Slightly adapted text derived from GHG Protocol

NEW. Added to Chapter 4.5.

Scope 3

All other indirect emissions. Scope 3 emissions are a consequence of the activities of the site, but occur from sources not owned or controlled by the site. Some examples of Scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services. Source: Slightly adapted text derived from GHG Protocol

NEW. Added to Chapter 4.5.

Scoping

The process of determining potential issues and impacts and producing information necessary to inform decision-making regarding whether additional evaluation and actions are necessary.

NEW. Added to multiple chapters.

Secondary Containment

Requires that areas be designed with appropriate containment and/or diversionary structures to prevent a release in quantities that may be harmful.

Serious Human Rights Abuses

Includes: i) any forms of torture, cruel, inhuman and degrading treatment; ii) any forms of forced or compulsory labor, which means work or service which is exacted from any person under the menace of penalty and for which said person has not offered himself voluntarily; iii) the worst forms of child labor (as per ILO Convention 182); iv) other gross human rights violations and abuses such as widespread sexual violence; v) war crimes or other serious violations of international humanitarian law, crimes against humanity, or genocide.

Source: OECD. 2016. Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Site

An area that is owned, leased, or otherwise controlled by the entity and where mining-related activities are proposed or are taking place.

NEW. Added to multiple chapters.

Soil Remediation

The treatment of polluted soils to remove contaminants or convert them to harmless products using physical, chemical and biological processes. Ex-situ and in-situ remediation of soils are both commonly applied methods. Soil remediation may also include removal and deposition in repository.

NEW. Added to Chapter 2.6, 4.XX.

Stakeholders

Individuals or groups who are directly or indirectly affected by a project/operation, such as rights holders, as well as those who may have interests in a project/operation and/or the ability to influence its outcome, either positively or negatively.

Source: Adapted from IFC. 2007. Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets.

REVISED. Changed wording from persons to individuals, and from project to project/operation.

Stormwater

Industrial stormwater (also known as contact water) is runoff of rainfall, snow, or snowmelt that has contacted mined or mineral processing materials (e.g., waste rock, tailings, mine openings, mine processing facilities, and associated mining roads). Non-industrial stormwater (also known as non-contact water) is runoff of rainfall, snow, or snowmelt from land and impervious surface areas that do not contain mined or mineral processing materials.

REVISED. Now also references mineral processing.

Subsidence

Subsidence is a sinking of the ground surface that results in a fracture of the surface which could change surface water hydrology, or pose a threat to human health or property.

Suppliers

Providers of goods, services, or materials to a project/operation.

Т

Tailings

The waste stream resulting from milling and mineral concentration processes that are applied to ground ore (i.e., washing, concentration, and/or treatment). Tailings are typically sand to clay-sized materials that are considered too low in mineral values to be treated further. They are usually discharged in slurry form to a final storage area commonly referred to as a tailings storage facility (TSF) or tailings management facility (TMF). Source: Global Acid Rock Drainage Guide and others.

Tangible Cultural Heritage

A unique and often non-renewable resource that possesses cultural, scientific, spiritual, or religious value, and are considered worthy of preservation for the future. Includes moveable or immovable objects, sites, structures, groups of structures, natural features, or landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural value.

Temporary Transitional Resettlement

Temporary transitional resettlement occurs when entities permanently acquire lands and clear people from those lands before providing them with replacement lands and/or residential structures, thus requiring them to move to a transitional temporary location until their permanent location and/or assets are ready.

NEW. Added to Chapter 2.4.

Tentative List for World Heritage Site Inscription

The list of sites that relevant state parties are formally considering for nomination as a World Heritage Site in the next five to ten years.

Threatened (and Endangered) Species

Species that meet the IUCN (2001) criteria for vulnerable, endangered, or critically endangered, and are facing a high, very high or extremely high risk of extinction in the wild. These categories may be re-interpreted for IRMA purposes according to official national classifications (which have legal significance) and to local conditions and population densities (which should affect decisions about appropriate conservation measures). Source: Adapted from IUCN. 2001. *IUCN Red List Categories and Criteria: Version 3.1*.

Traditional Knowledge

A cumulative body of knowledge, innovations, practices, and representations maintained and developed by peoples with extended histories of interaction with the natural environment.

Trafficking in People

The recruitment, transportation, transfer, harboring, or receipt of a person by means of the threat or use of force or other means of coercion, or by abduction, fraud, deception, abuse of power or of a position of vulnerability, or by the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation includes, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs. Women and children are particularly vulnerable to trafficking practices. See also 'Forced Labor'.

Source: UN Convention against Transnational Organized Crime and the Protocols. Article 3(a).

Trigger Action Response Plan (TARP)

A tool to manage risk controls, including critical controls. TARPs provide pre-defined trigger levels for performance criteria that are based on the risk controls and critical controls of the critical facility. The trigger levels are developed based on the performance objectives and risk management plan for the critical facility. TARPs describe actions to be taken if trigger levels are exceeded (performance is outside the normal range), to prevent a loss of control. A range of actions is predefined, based on the magnitude of the exceedance of the trigger level.

Source: Adapted from Global Industry Standard on Tailings Management. <u>https://globaltailingsreview.org/wp-content/uploads/2020/08/global-industry-standard_EN.pdf</u>

NEW. Added to 4.X

Trigger Level

A concentration between baseline or background values and IRMA water quality criteria or other applicable compliance limits that can warn of mining- or mineral-processing-related effects to water quality and trigger adaptive management or corrective actions to improve water or soil quality.

REVISED. Now also references soil quality and mineral processing.

U

Unwanted Event

A situation or condition where there may be or is a loss of control of a hazard that leads to harm.

Source: Adapted from the Government of Western Australia, Department of Mines, Industry Regulation and Safety. https://www.dmp.wa.gov.au/Safety/What-is-a-hazard-and-what-is-4721.aspx

NEW. Added to Chapter 3.2 and others.

Voluntary Displacement:

Displacement that occurs as a result of voluntary land transactions (i.e., market transactions in which the seller is not obliged to sell, and the buyer cannot resort to expropriation or other compulsory procedures sanctioned by the legal system of the host country if negotiations fail) that lead to the relocation of willing sellers.

NEW. We are proposing this definition to complement a new requirement in the Standard (2.4.7.8) dealing with voluntary land transactions and displacement.

Vulnerable Group

A group whose resource endowment is inadequate to provide sufficient income from any available source, or that has some specific characteristics that make it more susceptible to health impacts or lack of economic opportunities due to social biases or cultural norms (e.g., may include households headed by women or children, people with disabilities, the extremely poor, the elderly, at-risk children and youth, ex-combatants, internally displaced people and returning refugees, HIV/AIDS-affected individuals and households, religious and ethnic minorities, migrant workers, and groups that suffer social and economic discrimination, including Indigenous Peoples, minorities, lesbian, gay, bisexual, transgender, queer or questioning (LGBTQ+) and gender-diverse individuals, and in some societies, women).

Sources: Adapted from IFC. 2002. Handbook for Preparing a Resettlement Action Plan, FAO, and World Bank: "Vulnerable Groups."

REVISED. Proposing to add reference to LGBTQ+ and gender-diverse individuals in the list of examples.

CONSULTATION QUESTION 1.X-2 (From proposed Chapter 1.X on Gender Equality and Protection): References to women and gender-diverse individuals as potentially "vulnerable" or as "vulnerable groups" may sound disempowering and/or otherwise not aligned with the objectives of this chapter to advance gender equality. Are there other widely recognized terms or phrases we could use that recognize the potential susceptibility of women and gender-diverse individuals to adverse impacts such as health impacts or lack of economic opportunities due to social biases or cultural norms?

W

Waste Mitigation Hierarchy

A ranking of waste management options according to what is best for the environment. The priority order is to prevention, reduction, reuse, recycling (including composting), recovery (e.g., of energy from waste) and disposal, with prevention being the most preferred option and the disposal at the landfill being the least preferred option.

NEW. Added to Chapter 4.1.

Waste Rock

Barren or mineralized rock that has been mined but is of insufficient value to warrant treatment and, therefore, is removed ahead of the metallurgical processes and disposed of on site. The term is usually used for wastes that are larger than sand-sized material and can be up to large boulders in size; also referred to as waste rock dump or rock pile.

Water Balance

An accounting of the inflow to, outflow from, transfers and storage changes of water over a fixed period. Source: Adapted from *Global Acid Rock Drainage Guide* Glossary.

Water Quality Criteria

Numerical concentrations or a narrative statement recommended to support and maintain a designated water use. Criteria are based on scientific information about the effects of water pollutants on a specific water use.

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Source: Adapted from UNEP. 2015. Compendium of Water Quality Regulatory Frameworks: Which Water for Which Use?

Water Quantity

For IRMA purposes, water quantity refers generally to the amount of water present or passing a certain location in water bodies that exist on the earth's surface, such as lakes, ponds, rivers, streams, etc., (i.e., referred to as surface waters) and water present in water bodies that exist underground (i.e., groundwaters). It also includes the amount of water that originates underground but expresses itself at the surface (e.g., natural springs or seeps). Water quantity measurements may be expressed as volumes, however, for IRMA's purposes measurements for rivers, streams and natural springs/seeps maybe expressed as a flow (in ft³/sec or m³/sec), while measurements for lakes and groundwater may be expressed as a level or elevation (e.g., feet or meters above a reference point such as sea level).

Whistleblower

A person who raises concerns regarding the unlawful or unethical activity or behavior of a person or organization.

NEW. Added to Chapter 1.5, 3.1 and others.

Whole Effluent Toxicity

The aggregate toxic effect to aquatic organisms from all pollutants contained in an effluent.

World Heritage Site

A site/property inscribed on the World Heritage List, which has outstanding universal value and meets the conditions of authenticity and integrity. The World Heritage property includes within its borders all of the attributes that are recognized as being of outstanding universal value. Source: UNESCO.

Worker

All non-management personnel directly employed by the entity.

REVISED. Added that personnel are directly employed by the entity.

Workers' Health and Safety Representative

A worker chosen to facilitate communication with senior management on matters related to occupational health and safety, and to participate in and/or have access to information on health and safety risk assessments, monitoring, inspections and investigations. A representative is selected by other workers, or in unionized facilities may be selected by recognized trade union.

NEW. Added to 3.1 and 3.2.

Workers' Organizations

Typically called trade unions or labor unions, these organizations are voluntary associations of workers organized on a continuing basis for the purpose of maintaining and improving their terms of employment and workplace conditions.

Source: Adapted from SA8000 Guidance and IFC. 2012. Performance Standard 2.

Workers' Representative

A worker chosen to facilitate communication with senior management on matters related to working conditions or other workers' concerns. A representative is selected by other workers, or in unionized facilities may be selected by a recognized trade union.

Source: Adapted from SA8000 Guidance.

REVISED. Removed reference to occupational health and safety, as that is now covered by workers' health and safety representative, and revised second sentence.

TERMS REMOVED FROM PROPOSED UPDATED STANDARD

Alternatives Assessment Basin/Catchment/Watershed Avoidance Certificate Holder Conceptual Flow Model (CFM) Contracted Workers Economic Displacement **Existing Mine Exploration Activity Financial Surety** Hyporheic Zone Legitimate Mine Waste Facility Mining Project New Mine **Operating Company** Operational-Level Grievance Mechanism **Rights-Compatible** Should/Should Not Significant Changes to Mining-Related Activities Source of Continuous Learning Transparent