

Mining Assurance

Excerpt from the DRAFT Standard for Responsible Mining and Mineral Processing 2.0

Chapter 2.1 – Environmental and Social Impact Assessment and Management

Context & 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).

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.

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.

Associated Documents

This document is an <u>extract</u> of the full DRAFT IRMA FOR RESPONSIBLE MINING AND MINERAL PROCESSING (Version 2.0) – DRAFT VERSION 1.0, released in October 2023 for a public-comment period. The English-language full 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.

Readers should note that in addition to the DRAFT 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 website 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 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.¹

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 Stakeholder Worker

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.

¹ 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). Operations without a proposed major modification may choose to be 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 entity identifies the full scope of potential social and environmental impacts of proposed projects and operations (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);²
- b. Is completed prior to commencing proposed exploration activities; and
- c. Is repeated or updated should the exploration plan be significantly revised.

² 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.³

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;⁴ 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;⁵
 - iv. Assigns implementation of actions, or oversight of implementation, to responsible staff;⁶
 - 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?

³ 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.

⁴ The absence of a legal requirement, alone, is not sufficient justification for not doing an ESIA.

⁵ 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).

⁶ 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 project</u>⁷ 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 operation⁸ (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.

⁷ 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.

⁸ 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),⁹ 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 affected communities regarding post-closure end-uses of facilities and affected lands (as established in 2.1.3.2.d);¹⁰
- 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,

⁹ 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.

¹⁰ 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;¹¹ 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),¹² 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:¹³
 - 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" assumptions¹⁴ should not be made regarding the alternatives. The Impact Assessment stage will go into greater analysis of the potential

¹¹ This is the first opportunity to hear from stakeholders. They will also be provided the opportunity to give feedback later in the process.

¹² 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.

¹³ 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.

¹⁴ 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."¹⁵

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

¹⁵ 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-</u> <u>%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: ¹⁶

- 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.¹⁷

NOTE FOR 2.1.4.2: This was 2.1.9.2 in the 2018 Mining Standard.

¹⁶ 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.

¹⁷ 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.¹⁸

		Likelihood of occurrence				
		Very unlikely	Not expected	Likely	Almost Certain	Common
nce	Severe	Moderate	Substantial	High	High	High
	Major	Low	Moderate	Substantial	Substantial	High
seque	Medium	Low	Moderate	Moderate	Moderate	Substantial
CO	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:

¹⁸ 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;¹⁹
- 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>facilities</u>²⁰), 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;²¹
- e. Includes evaluation of strategies that:²²
 - 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.

¹⁹ 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).

²⁰ 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.

²¹ 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.

²² 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: ²³

- 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;²⁴ 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).

²³ 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.

²⁴ 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.²⁵

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.²⁶ Any stand-alone environmental and social management plan:

- a. Is developed by competent professionals;
- b. Outlines the specific <u>mitigation</u> 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;²⁷
- d. Assigns implementation of actions, or oversight of implementation, to responsible staff;²⁸
- 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.

²⁵ 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.

²⁶ 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.

²⁷ 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).

²⁸ 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.²⁹ 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 <u>entity</u> encourages and, where possible, facilitates <u>stakeholder</u> participation in the implementation of the environmental and social monitoring program.³⁰

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.³¹

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

²⁹ 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.

³⁰ 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.

³¹ 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."³² This requirement aligns

³² 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;³³ and
- c. If risks are deemed significant, mitigation strategies are developed and integrated into relevant management plans,³⁴ and monitoring programs are updated accordingly.³⁵

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>.

³³ 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).

³⁴ 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.

³⁵ 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 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.

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 surveys³⁶
- 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) ³⁷	2.2

³⁶ 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

³⁷ "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?	
	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 ³⁸	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. <u>https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11300:0::NO:11300:P11300_INSTRUMENT_ID:312314:NO</u>

³⁸ 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 create stresses on local and regional infrastructure such as housing, sanitation, water supply, public health, energy supply, roads, etc.?	3.3
	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 Rights of minorities 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 precision of thought, conscience and religion Right to precision 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? ³⁹	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 ⁴⁰ ; does the host	3.1

³⁹ For example, see: <u>https://www.bsr.org/en/primers/10-human-rights-priorities-for-the-extractives-sector</u>

⁴⁰ 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	4.2
	 Mine waste storage or disposal areas (tailings facilities, waste rock facilities) 	
	Other waste storage or disposal areas	
	 Mineral extraction areas (nits underground workings heap leach nads) 	
	 Mineral processing facilities 	
	Roads	
	Pinelines	
	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.	remediate
	• Effects due to barriers to movement of wildlife or livestock (e.g., from fences, open pits, etc.)	napital?
	• 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 activities that may lead to impacts on native species 	
	Are there potential indirect impacts on fauna such as:	4.6, 3.3,
	 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 	2.6
	Are there potential cumulative impacts on fauna? For example:	2.1, 4.6
	 What is the extent to which the proposed project/modification might exacerbate any preexisting threats/impacts from other existing or planned⁴¹ 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.)	
	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? ⁴²	4.4
Flora and Fungi ⁴³	 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

⁴¹ Those that are existing or planned or reasonably defined at the time the risks and impacts identification process is conducted.

⁴² 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>

⁴³ 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	C 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 ⁴⁴ 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).⁴⁵ 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.
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⁴⁴ Those that are existing or planned or reasonably defined at the time the risks and impacts identification process is conducted.

⁴⁵ 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.