



**IGF**

INTERGOVERNMENTAL FORUM  
on Mining, Minerals, Metals and  
Sustainable Development

# GUIDANCE FOR GOVERNMENTS

Improving legal frameworks  
for environmental and  
social impact assessment  
and management

**JUNE 2020**



Guidance for Governments:  
Improving legal frameworks for environmental and social impact assessment and management

June 2020

This report was developed under the supervision of H. Suzy Nikièma and Clémence Naré. It was written by Kristi Disney Bruckner, Clémence Naré, Jenifer Hill, H. Suzy Nikièma, Jill Baker, and Carolina Leseigneur Torres with significant contributions from Luke Danielson and Marina Ruete.

## RECOMMENDED CITATION

Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2020). *IGF Guidance for Governments: Improving legal frameworks for environmental and social impact assessment and management*. Winnipeg: IISD.

## DISCLAIMERS

### *Use of Examples Does Not Endorse a Jurisdiction, Court or Tribunal's Approach*

The examples in this document are based on legislation and diverse experiences of stakeholders in managing environmental and social impacts in a wide range of jurisdictions, as well as the decisions of various courts and tribunals. Presentation of legislation from a particular jurisdiction does not indicate endorsement of that jurisdiction's legislation or how it has been implemented or failed to be implemented in particular projects. However, it is useful to compare the various approaches around the world and to easily access actual language from legislation on a particular key topic. Presenting a case study from a particular jurisdiction does not indicate that the jurisdiction is managing all aspects of its mineral sector optimally. There is room for improvement in all jurisdictions; this guidance document provides opportunities to learn across different jurisdictions from different types of mining projects. Likewise, presentation of a court or tribunal's decision does not endorse the decision of the court or tribunal; these public decisions are provided as practical case studies for governments to consider as they improve their legal frameworks and implementation measures.

### *Unofficial Translations of Legal Texts*

The translations of laws and policies referenced and presented in this document are in most cases unofficial translations.

### *This Guidance Document is Not a Substitute for Legal Advice*

While this guidance document provides a range of factors and options to consider, it is not a substitute for legal advice.

### *Perceived Bias*

There are potential positive and adverse effects from mining. This document is not intended to be pro- or anti-mining. Any perceived bias is not intentional. The intention of this document is to assist governments in creating environmental and social impact assessment and management processes in order to mitigate and manage negative impacts while optimizing benefits of the mining sector.

© 2020 The International Institute for Sustainable Development  
Published by the International Institute for Sustainable Development

The International Institute for Sustainable Development (IISD) is an independent think tank championing sustainable solutions to 21st-century problems. Our mission is to promote human development and environmental sustainability. We do this through research, analysis and knowledge products that support sound policy-making. Our big-picture view allows us to address the root causes of some of the greatest challenges facing our planet today: ecological destruction, social exclusion, unfair laws and economic rules, a changing climate. IISD's staff of over 120 people, plus over 50 associates and 100 consultants, come from across the globe and from many disciplines. Our work affects lives in nearly 100 countries. Part scientist, part strategist—IISD delivers the knowledge to act.

IISD is registered as a charitable organization in Canada and has 501(c) (3) status in the United States. IISD receives core operating support from the Government of Canada, provided through the International Development Research Centre (IDRC) and from the Province of Manitoba. The Institute receives project funding from numerous governments inside and outside Canada, United Nations agencies, foundations, the private sector and individuals.



The IGF is a member-driven organization which provides national governments the opportunity to work collectively to achieve their sustainable mining goals. It is devoted to optimizing the benefits of mining to achieve poverty reduction, inclusive growth, social development and environmental stewardship. The IGF serves as a unique global venue for dialogue between its 76 member country governments, mining companies, industry associations and civil society.

Secretariat functions are provided by the International Institute for Sustainable Development, which manages the day-to-day operations of the IGF and provides logistical, administrative and strategic support for its activities. The program is undertaken with the financial support of the Government of Canada provided through Global Affairs Canada.



#### **IISD HEAD OFFICE**

111 Lombard Avenue  
Suite 325  
Winnipeg, Manitoba  
Canada R3B 0T4

[IISD.org](http://IISD.org)  
[@IISD\\_news](https://twitter.com/IISD_news)

#### **IGF/IISD OTTAWA OFFICE**

220 Laurier Avenue W.  
Suite 1100  
Ottawa, Ontario  
Canada R3B 0T4

[IGFMining.org](http://IGFMining.org)  
[@IGFMining](https://twitter.com/IGFMining)

Secretariat hosted by



Secretariat funded by



## ACKNOWLEDGEMENTS

The IGF Secretariat would like to thank the German Government for its support. The IGF received funding from the German Federal Institute for Geosciences and Natural Resources (BGR) and the German Federal Ministry for Economic Cooperation and Development (BMZ) for the development of this guidance document.

This guidance document was developed based on input from IGF members and a wide range of other stakeholders, including participants at the following international gatherings:

- October 15–19, 2018: IGF Annual General Meeting in Geneva, Switzerland, where IGF members and other stakeholders provided feedback on the *Background Document: Legal Framework of Environmental and Social Impact Assessment in the Mining Sector*.
- February 4–6, 2019: Investing in African Mining Indaba in Cape Town, South Africa, where Indaba participants from government, companies, non-profit organizations, and other sectors participated in Sustainability Roundtables led by the IGF Secretariat to discuss key themes in environmental and social impact assessment.
- October 7–11, 2019: IGF Annual General Meeting in Geneva, Switzerland, where IGF members and other stakeholders provided feedback on the *Draft IGF Guidance for Governments: Improving Frameworks for Environmental and Social Impact Assessment*.

The IGF also accepted comments on the publicly accessible October 2019 draft and executive summary of the guidance document through an open IGF webpage established for this purpose. These comments were accepted from October 7, 2019, until publication of the final guidance document. IGF appreciates all comments received through the forums and webpage noted above.

We are grateful for the expert reviews and contributions of the International Association for Impact Assessments (IAIA), the International Council on Mining and Metals (ICMM), Natural Resources Canada (NRCan), and the Secrétariat international francophone pour l'évaluation environnementale (SIFÉE) in the development of this guidance document.

IGF requested that the Netherlands Commission for Environmental Assessment (NCEA) review a March 9, 2020 draft of the guidance document. The IGF Secretariat extends its gratitude for NCEA's detailed comments on the draft, which also greatly contributed to the improvement of this final version of the guidance.

We also thank the following subject-matter experts for their review and comments on draft reports: Robert A. Bassett, Robert A. Bassett, P.C.; Nathalie Bernasconi-Osterwalder, Senior Director, Economic Law and Policy, IISD; Matthew Bliss, Deputy Director, IGF; Michel A. Bouchard, McGill-United Nations Environment Programme (UNEP) Center for Environmental Assessment; Lisa Caripis, Research and Policy Manager, Transparency International; François Cottard, Bureau de Recherches Géologiques et Minières (BRGM); Gilles Côté, Ph.D., Esq. SIFÉE; Marie-Lou Coulombe, M.Sc., Ministère de l'environnement et de la lutte contre les changements climatiques (MELCC); Dr. Georges Lanmafankpotin, Ph.D, Université du Québec à Chicoutimi; Dr. Karim Samoura, Ph.D., International Consultant; Cathryn MacCallum, Principal Consultant, Social Development and Management, SRK Consulting; Dr. Ann Maest, Vice President, Buka Environmental; Howard Mann, Senior Advisor, IGF, Senior International Law Advisor, IISD; Martin Pérusse, M.Sc., McGill University; Greg Radford, Director, IGF; Alexandra Readhead, Lead, Tax and Extractives, IISD; Jacqueline Taquiri, IISD; and Ege Tekinbas, Gender Equality Advisor, IISD.

The authors also thank Ashley Smith-Roberts, Brad Cummings, Kuzi Charamba, Catherine Meneses, and Charlotte Selix for assisting with research and collection of data.

# ABOUT THIS GUIDANCE DOCUMENT

## BACKGROUND AND PURPOSE

The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) members decided at the October 2017 Annual General Meeting to develop a new guidance document on the legal framework for environmental and social impact assessment (ESIA) and related plans in the context of granting permits and negotiating mining contracts. The IGF members selected this topic based on their awareness of the challenges in assessing and managing environmental and social impacts and their insights that improving ESIA and related management plans is a critical component of optimizing sustainable development benefits of the minerals sector.

The purpose of this document is to provide IGF member states with a summary of good international practice in legal frameworks for ESIA and related management plans for large-scale mines. Examples, strategies, and tools are included to aid in evaluating and improving legal frameworks and environmental and social aspects of resource governance. While professional organizations have published technical guides on ESIA, guidance on law and policy frameworks for ESIA and related management plans are largely lacking in the literature. This guidance document aims to fill this gap for governments and other stakeholders who would like to improve their legal frameworks and management of environmental and social impacts in their mining sectors.

## GUIDANCE FOR GOVERNMENTS

The guidance presented in this document is particularly designed for governments of IGF member states. However, the good practices and examples provided may also be useful for companies, civil society organizations, community leaders, and others who are interested in optimizing sustainable outcomes from mineral development and governance.

## GUIDANCE BASED ON COMPREHENSIVE RESEARCH

Two IGF studies inform this guidance document. One study is the *Background Document: Legal Framework of Environmental and Social Impact in the Mining Sector* published by the IGF Secretariat in January 2019 (IGF, 2019a). The background document identified trends in legal frameworks for ESIA and related management plans in the mining sector. A second study conducted by the IGF Secretariat from 2018 to 2019 involved further review of environmental and social impact assessment and management plans in legislative frameworks and mining contracts (IGF, 2017). This research looked at environmental and social impact assessment and management frameworks for large-scale mining in 10 IGF member countries and reviewed related clauses in a mining contract between the government of each country and a mining company. In sum, the IGF Secretariat has reviewed and analyzed legislation and regulations from more than 55 jurisdictions,<sup>1</sup> as well as mine

---

<sup>1</sup> Afghanistan, Argentina, Australia, Belize, Bolivia, Bhutan, Botswana, Burkina Faso, Burundi, Canada, Cameroon, Chad, Chile, Colombia, Costa Rica, the Democratic Republic of the Congo, Dominican Republic, Ecuador, Egypt, El Salvador, the European Union, Finland, France, Ghana, Guinea, India, Kenya, Mali, Mexico, Morocco, Mongolia, Mozambique, the Netherlands, Niger, Nigeria, North Macedonia, Papua New Guinea, Peru, the Philippines, Romania, Rwanda, Senegal, Sierra Leone, South Africa, South Sudan, Suriname, Tanzania, Thailand, Uruguay, the United Kingdom, the United States, and Venezuela. Legal frameworks from subnational jurisdictions have been examined in Australia, Canada, and the United States.

development agreements between companies and host governments from over 10 jurisdictions, for the development of this guidance document.

## **LIMITATIONS OF THIS GUIDANCE DOCUMENT**

This guidance document does not cover artisanal mining<sup>2</sup> or present all the unique challenges of small and medium-sized mining operations. While these are all very important areas for environmental and social impact management, they require more attention than is possible in the limited space of this guidance document. We encourage readers to refer to *IGF Guidance for Governments: Managing Artisanal and Small-Scale Mining*, published in 2017.

The guidance presented in this document, while incorporating the input of technical experts, does not set out the detailed technical aspects of conducting ESIA's. The guidance focuses on good practices in legal frameworks and key government actions over the life of a large-scale mine. This guidance document is not a substitute for the level of informed, multi-disciplinary expert guidance that is needed to address the unique characteristics of any local development project. Also, as the characteristics of any mining project and its impacts will vary from one mine site to another, this guidance document does not attempt to provide law or policy "models" but instead presents good practices, examples, and tools that governments may consider incorporating into their own legal frameworks and practices.

## **ADDITIONAL RESOURCES**

In addition to the resources provided in the Annex to this guidance document, you can find additional information in a range of languages at [www.IGFMining.org](http://www.IGFMining.org). This guidance document may lead to additional future resources, including case studies, training courses, and online materials. If you are interested in more information or would like to request additional training or materials, please contact the IGF Secretariat at [secretariat@igfmining.org](mailto:secretariat@igfmining.org).

---

<sup>2</sup> *IGF Guidance for Governments: Managing Artisanal and Small-Scale Mining* (2017) is available in English, French, and Spanish.



# EXECUTIVE SUMMARY

## **BACKGROUND AND PURPOSE**

The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) members decided at the October 2017 Annual General Meeting to develop a new guidance document on the legal framework for environmental and social impact assessment (ESIA) and related plans in the context of granting permits and negotiating mining contracts. The IGF members selected this topic based on their awareness of the challenges in assessing and managing environmental and social impacts and their insights that improving ESIA and related management plans are critical components of optimizing sustainable development benefits of the minerals sector.

The purpose of this document is to provide IGF member states with a summary of good international practice in legal frameworks for ESIA and related management plans for large-scale mines. Examples, strategies, and tools are included to aid in evaluating and improving legal frameworks and environmental and social aspects of resource governance. While professional organizations have published technical guides on ESIA, guidance on law and policy frameworks for ESIA and related management plans are largely lacking in the literature. This guidance document aims to fill this gap for governments and other stakeholders seeking to improve their legal frameworks and management of environmental and social impacts in their mining sector.

## **IMPORTANCE OF LEGAL FRAMEWORKS FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT**

When improperly regulated, mining activities have the potential to harm the environment and disrupt social and economic structures within a community, instead of capturing the many benefits that can flow from the sector. ESIA and related tools, such as Environmental and Social Management Plans (ESMPs), are thus critical components in legal frameworks for mining activities, both to minimize the negative impacts and to optimize the positive contributions of the mining sector.

With mining activities taking place in jurisdictions with varying levels of social and environmental protection, a survey of best practices for the governance of environmental and social impacts and benefits of mining through all phases of the life cycle of the mine, from exploration through the post-mining transition, is fundamental. When the legal framework adequately addresses the timing, scope, implementation, monitoring, and enforcement processes of ESIA and related management frameworks, governments and other stakeholders have a roadmap for managing impacts and optimizing social and economic benefits from the mining sector.

Unfortunately, the environmental and social impacts of mining are often not properly considered before mining activity begins. Regulatory shortcomings and procedural flaws in the ESIA process, monitoring, and enforcement can have negative repercussions: trust between mining proponents, governments, and communities can be jeopardized; mines can operate with inadequate ESMPs; and mine closure plans and related financial guarantees are often insufficient. In some cases, mines are simply abandoned, leaving an environmental and social legacy for communities and governments.

The growing number of international disputes related to unclear processes for environmental and social management of the mining sector is a testimony to the importance of a clear, transparent, and comprehensive legal framework for ESIA and environmental and social management.

## **ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS AND MANAGEMENT PLANS ARE IMPORTANT TOOLS FOR GOVERNMENTS**

ESIA is a tool used to identify and evaluate the potential environmental and social impacts of a project. ESMPs are developed during the ESIA process and propose actions to respond to and manage identified impacts and benefits.

Government review of ESIA and related management plans is a key component in a government's decision regarding whether a proposed mining project should be approved or not. The process helps governments to carefully consider how the proposed project will be implemented, to ensure that it proceeds only in a manner that protects the environment and advances the social and economic interests of current and future generations. Where a mineral development permit is granted, ESMPs then serve as a reference document for the permit holder, government monitoring agencies, communities, and other key stakeholders throughout the life of the mining project.

The legal framework should provide a clear roadmap for the environmental and social impact assessment and management process, incorporating practices that aid the government in meeting all aspects of its sustainable development objectives.

# ORGANIZATION OF THIS GUIDANCE DOCUMENT

**FIGURE ES1. ORGANIZATION OF THE GUIDANCE DOCUMENT**



This guidance document is organized into four sections and 10 chapters.

**Section A** sets the stage for the guidance document. It consists of two chapters:

- **Chapter 1** provides an overview of the importance and key benefits of a comprehensive legal framework for environmental and social impact assessment and management. This chapter presents current trends in environmental and social impact assessment and management plans across the jurisdictions studied in the preparation of this guidance document, as well as trends in international disputes related to ESIA in the mining sector.
- **Chapter 2** explains what an ESIA is and lays out the key steps of and key stakeholders in the ESIA process. This chapter also describes the mine life cycle, common impacts across each stage of the life of the mine, and types of ESMPs to help respond to and manage these impacts.

**Section B** provides an overview of a good legal framework for environmental and social impact assessment and management. It includes two chapters:

- **Chapter 3** identifies 20 components of a comprehensive legal framework for environmental and social impact assessment and management plans for the mining sector and proceeds with a discussion of each component.
- **Chapter 4** provides an overview of key enabling factors and mechanisms of a good framework for environmental and social impact assessment and management.

**Section C** presents key government actions over four phases, each in its own chapter:

- **Chapter 5** describes the screening process and steps the government can utilize through the exploration phase to determine when a proposed mine needs a full ESIA and related government review process.
- **Chapter 6** covers the ESIA review process and related requirements through the mine planning phase, culminating in the government's decision to approve or deny the environmental authorization and transfer of any conditions of project approval to subsequent permits.
- **Chapter 7** covers monitoring, inspections, and enforcement roles through the construction and operations phases to ensure that environmental and social impacts and socioeconomic benefits are continually managed.
- **Chapter 8** describes government management of the final steps of closure, relinquishment, and post-closure, and the importance of regular review and updates of mine closure plans to ensure that social and environmental aspects of mine closure are addressed in the event of a temporary or permanent mine closure.

**Section D** covers how to improve your legal framework in practice. This section includes two chapters:

- **Chapter 9** details strategies for assessing and revising legal frameworks for ESIA and environmental and social management of the mining sector and provides actionable steps.
- **Chapter 10** provides a detailed list of assessment questions and tools to guide assessing and improving legal frameworks. The lists are aligned with each substantive chapter of this guidance document.

**The Annex** to this document provides additional tools, including a presentation of key mining issues and definitions of key concepts related to ESIA and environmental and social management, a bibliography, and a list of additional references by topic.

# KEY RECOMMENDATIONS

## COMPONENTS OF A COMPREHENSIVE LEGAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT

Governments should adopt **a comprehensive legal framework** for environmental and social impact assessment and management of the mining sector to ensure that it protects the environment and optimizes opportunities to advance sustainable development. Following a study of a wide range of jurisdictions and review of good international practice, Chapter 3 presents 20 components of a comprehensive legal framework for environmental and social impact assessment and management plans.

### Commitment to Sustainable Development

1. Commitment to sustainable development, including environmental and social protection, is stated in the legal framework.

### Consistency and Coordination

2. Consistency is maintained across all legal instruments.
3. Responsible authorities are clearly identified, along with their respective roles in review, decision-making, and monitoring processes.

### Coverage of All Phases of Mine Life

4. Social and environmental requirements are defined for all phases of the mine life, commensurate with risks.

### Public Engagement, Consultation, and Transparency

5. Requirements and guidelines for public engagement and consultation are provided, including ongoing requirements for public engagement throughout the life of the mine.
6. Requirements and guidelines regarding transparency and access to environmental and social information are provided.

### Grievance Mechanisms

7. Requirements and guidelines for grievance mechanisms are provided.

### ESIA Requirements

8. Standard requirements for the initial project proposal are clearly described.
9. Screening procedures are required to determine when a mining activity will require an ESIA and review process.
10. Requirements and procedures for scoping are provided, including requirements for stakeholder input.

11. The ESIA is part of project planning and is conducted before any decisions are made to approve a proposed large-scale mining project.
12. A reasonable timeline for the ESIA report review process is defined.

### **Environmental and Social Management Plans**

13. ESMPs are required in the review process, and guidelines are provided.

### **Mine Closure Plans and Financial Assurance**

14. Preliminary mine closure and post-mining transition plans are required in the review process, and guidelines are provided.
15. Adequate financial assurance for remediation and mine closure is required and must be maintained by the mining licence holder.

### **Permits and Approvals**

16. Permits and approvals are subject to standard terms and conditions, including reporting and updating requirements.

### **Monitoring, Inspections, and Enforcement**

17. Oversight of environmental and social impacts across the life of the mine is required through monitoring, inspections, and enforcement.
18. Sanctions for non-compliance are commensurate with the level of violation.
19. Existing permit conditions must be met prior to renewal and prior to approving a permit for large-scale mine development.
20. Clear conditions are provided for “exit tickets,” relinquishment, and management of residual risks.

This guidance document also identifies **enabling mechanisms and factors** in Chapter 4 that will support the success of implementing a comprehensive framework for ESIA and ESMPs. This includes aligning international, national, and subnational law and policy in order to ensure consistency across the legal framework. Governments should also avoid legal stabilization of environmental and social provisions in laws and contracts so that they may continue to improve and update their legal framework. Conducting a strategic environmental and social assessment (SESA) for the mining sector can also promote greater understanding and clarity for all stakeholders regarding national and subnational development plans, land-use plans, and a range of environmental and social criteria and objectives. Establishing a coordinating agency is also important to facilitate inter-ministerial collaboration and decision making. Another key enabling factor is to ensure meaningful consultation and engagement—guidelines can provide greater clarity for all stakeholders and foster positive outcomes. Finally, to ensure ongoing improvement of the legal framework and its implementation, it is also fundamental for governments to identify sources of funding and ensure that required human resources are in place.

## **KEY GOVERNMENT ACTIONS IN EACH PHASE OF THE LIFE OF THE MINE TO IMPLEMENT THE LEGAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT**

Responsible management in each phase of the life of the mine sets the stage for responsible management of subsequent phases. With this in mind, government action in the exploration phase cannot be overlooked. Likewise, government actions and decisions in the mine planning phase can set a mining project up for optimal contributions for sustainable development, from the construction phase through mine closure and post-mining transition. Chapters 5 to 8 present key government actions by mining phase.

### **THE SCREENING PROCESS THROUGH THE EXPLORATION PHASE AND DEFINING WHEN A PROJECT NEEDS AN ESIA REVIEW PROCESS**

The screening process is critical, as it determines when a proposed mining activity will need a full ESIA, based on the level of environmental and social risks. Establishing clear requirements for managing environmental and social risks in this exploration phase is very important to the responsible governance of the mining sector and often determines the “first impression” of mining for communities. Large-scale mining projects and major expansions of mines should always require an ESIA process. Governments should ensure that any issued permits and approvals are subject to standard terms and conditions, with special conditions for exploration and other mining activities where required. In some types of advanced exploration activity with higher levels of environmental or social risks, a semi-detailed or full ESIA may be required, for example, where Indigenous Peoples are present or exploration requires building a road through a potentially sensitive area. Finally, governments should require existing permit conditions to be met prior to renewal and large-scale mine development.

### **THE ESIA PROCESS THROUGH THE MINE PLANNING PHASE**

The government’s ESIA review process is critical to determine if and under what conditions the mining project will be developed, based on identified environmental and social impacts and proposed mitigation measures. The government will undertake a review of the mine development plan and set out criteria for project scoping. Government will then develop and agree to the content of the ESIA report, based on stakeholder input, through Terms of Reference (ToR). Throughout the mine planning phase, governments should also require and oversee meaningful engagement and consultation processes, including building stakeholder capacity for participation. When the ESIA report is submitted, a lead government agency should ensure that it is complete and aligned with the ToR, then coordinate the reviews of all relevant government agencies and oversee the stakeholder review process. The timeline for review should be reasonable and may take years for a large-scale mining project. The government evaluation should include a review of the ESIA report, management plans, closure plans, and other relevant plans. The review should ensure that sufficient financial assurance for remediation and mine closure are provided prior to mine development. Based on this evaluation and review process, the government will approve or deny the environmental authorization. The decision will be based on consideration of all technically feasible alternatives, including a “no project”

alternative. If approved, all conditions of project approval must be transferred to subsequent permits and monitored for compliance.

## **THE MONITORING, INSPECTIONS, AND ENFORCEMENT PROCESS THROUGH THE CONSTRUCTION AND OPERATIONS PHASES**

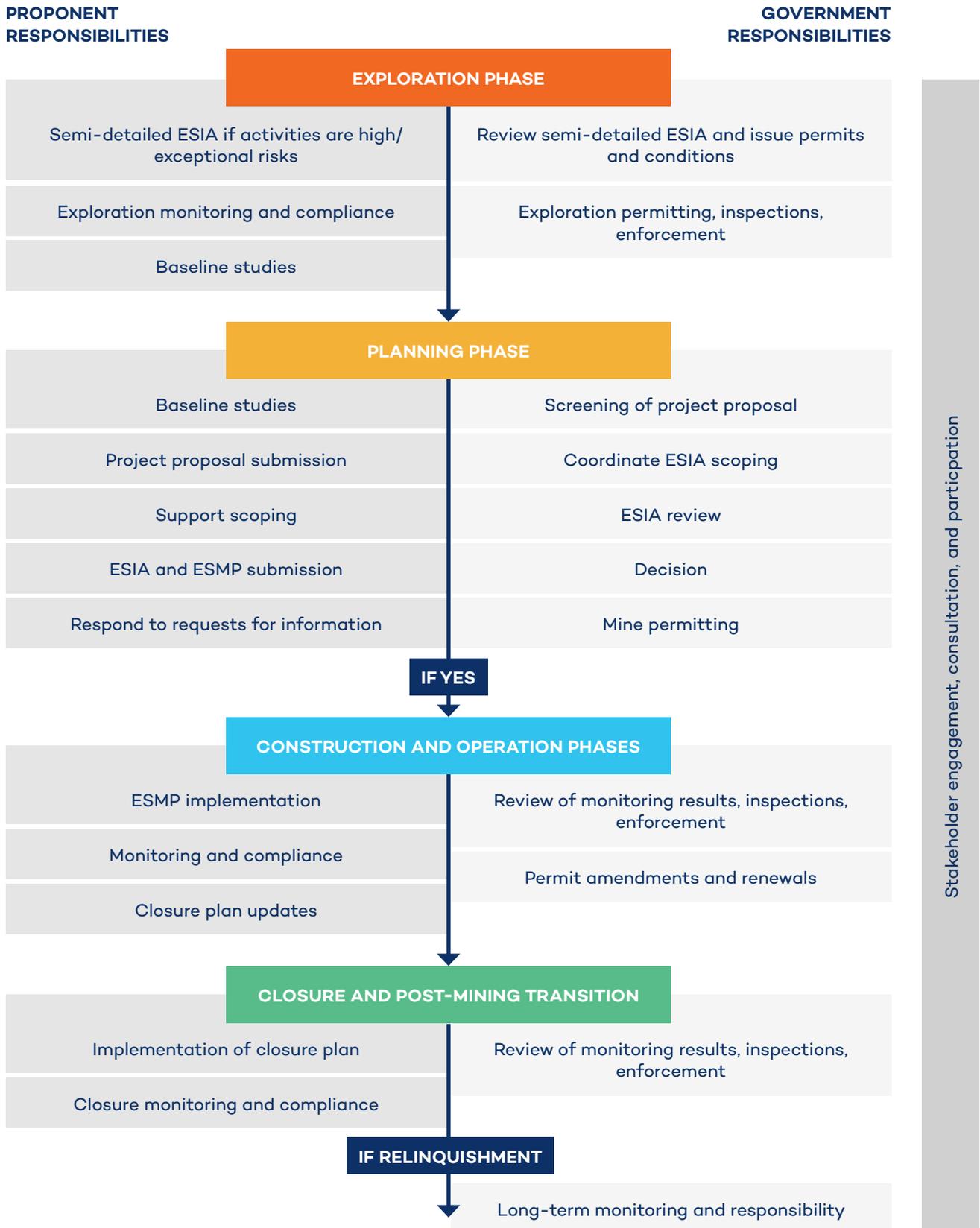
Once a mining project is approved, the government's role is to ensure that environmental and social impacts and socioeconomic benefits are continually managed through the construction and operations phases. Governments will ensure that stakeholder and community engagement and capacity building are maintained. Government will also ensure ongoing transparency in communicating the results of compliance and enforcement to communities and the public, including through clear guidelines for environmental and social reporting. Collaboration between national and local governments is particularly important at this stage, to effectively manage the impacts and benefits of the workforce. Governments must also ensure that progressive rehabilitation is undertaken throughout the life of the mine, as well as ongoing preparation for environmental and social aspects of the post-mining transition. Effective monitoring requires governments to conduct regular reviews of progress reports and monitor the implementation of management plans. Providing clear inspection requirements and adequate human resources for compliance checks and enforcement is also crucial for the monitoring process. Governments may need to enforce permit conditions and manage non-compliance. Where there are material changes to mine plans or impacts, governments may need to request updated assessments and amended management plans.

## **CLOSURE AND POST-MINING TRANSITION**

This crucial phase involves managing the final steps of closure, relinquishment, and post-mining transition. The success of this phase builds on the quality of mine closure planning, implementation, and monitoring of previous phases. Mine closure planning must address not only the environmental aspects of mine closure but also the social and economic aspects of post-mining transition. Preparation for mine closure requires ongoing action through the planning and operations phases in particular to prepare for temporary and permanent closures. Governments must regularly review mine closure plans, require updates as needed, and ensure that closure planning addresses the social, environmental, and economic aspects of mine closure. The legal framework must provide clear conditions for "exit tickets," relinquishment, and management of residual risks. Finally, governments should inspect and monitor closure and post-mining transition plan implementation and complete a final inspection prior to relinquishment.

Government and company responsibilities in environmental and social impact assessment and management by mine phase are summarized in Figure ES2.

**FIGURE ES2. GOVERNMENT AND PROPONENT RESPONSIBILITIES IN ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT BY MINE PHASE**



# PRACTICAL TOOLS AND STEPS TO IMPROVE LEGAL FRAMEWORKS FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT

Chapter 9 provides governments with practical steps to review and improve their legal framework with an aim to enhance environmental and social protection in the mining sector. The first step is to conduct a “gap analysis” that compares the legal framework to international good practice. This guidance document and its Chapter 10 Good Governance Checklists provide useful references for such an analysis.

When considering whether the time is right for reforms, the government should prepare by scanning for challenges and opportunities, identifying risks associated with an inadequate reform process, and determining what legal instruments should be changed. This guidance document then provides a process with steps for revision, including collaborating through an inter-agency platform or working group; analyzing by completing the gap analysis; planning and developing an ESIA framework that fills existing gaps; reviewing through a review committee; submitting the draft for adoption or endorsement; implementing through an implementation action plan and strategy; and checking, assessing, and monitoring to review and audit the effectiveness of the plan. Governments should put a system in place to manage change and continuously monitor, evaluate, and improve legal frameworks.

## LIMITATIONS OF THIS GUIDANCE DOCUMENT

This guidance document does not cover artisanal mining or present all the unique challenges of small and medium-sized mining operations. While these are all very important areas for environmental and social impact management, they require more attention than is possible in the limited space of this guidance document.

The guidance presented in this document, while incorporating the input of technical experts, does not set out detailed technical aspects of conducting ESIA. The guidance focuses on international good practices in legal frameworks and key government actions over the life of a large-scale mine.

## ADDITIONAL RESOURCES

In addition to the resources provided in the Annex to this guidance document, you can find additional information in a range of languages at [www.IGFMining.org](http://www.IGFMining.org). This guidance document may lead to additional future resources, including case studies, training courses, and online materials. If you are interested in more information or would like to request additional training or materials, please contact the IGF Secretariat at [secretariat@igfmining.org](mailto:secretariat@igfmining.org).

# TABLE OF CONTENTS

## **SECTION A: SETTING THE STAGE ..... 1**

### **1.0 The Importance of a Comprehensive Legal Framework for Environmental and Social Impact Assessment and Management ..... 2**

Key Benefits of Responsible Environmental and Social Management for Governments.....	2
Key Benefits of Responsible Environmental and Social Management for Communities in Mineral-Rich Regions .....	3
Key Benefits of Responsible Environmental and Social Management for Mining Companies.....	3
Internal and External Government Processes for Managing Environmental and Social Impacts....	4
Trends in Legal Frameworks for Environmental and Social Impact Assessment and Management Plans.....	5
Avoiding Legal Disputes Related to Environmental and Social Impact Assessment and Management .....	8

### **2.0 Key Concepts: The basics of environmental and social impact assessments and management ..10**

What Is ESIA? .....	10
Key Steps in the ESIA Process.....	11
Environmental and Social Management Plans .....	12
The Mine Life Cycle .....	15
Common Environmental and Social Impacts Across the Mine Life Cycle.....	17
Government and Company Responsibilities in Environmental and Social Management by Mine Phase.....	19
Key Stakeholders in Environmental and Social Impact Assessment and Management.....	21

## **SECTION B: GOOD LEGAL FRAMEWORK COMPONENTS AND ENABLING MECHANISMS ..... 23**

### **3.0 Components of a Comprehensive Legal Framework for Environmental and Social Impact Assessment and Management ..... 24**

Overview.....	25
Commitment to Sustainable Development.....	26
Consistency and Coordination .....	26
Coverage of All Phases of Mine Life.....	27
Grievance Mechanisms.....	28
ESIA Requirements .....	28
Environmental and Social Management Plans.....	31
Mine Closure Plans and Financial Assurance.....	31
Permits and Approvals.....	32
Monitoring, Inspections, and Enforcement.....	33

### **4.0 Enabling Factors and Mechanisms of a Good Framework for Environmental and Social Impact Assessment and Management..... 35**

Overview .....	35
Enabling Factors and Mechanisms .....	36

## **SECTION C: KEY GOVERNMENT ACTIONS BY PHASE.....49**

### **5.0 The Screening Process: Government actions through exploration and defining when a project needs an ESIA review process .....51**

Overview.....52

State of Play .....54

Key Government Actions .....54

### **6.0 Environmental and Social Impact Assessments: Government requirements through the mine planning phase..... 63**

Overview.....64

State of Play .....66

Key Government Actions .....69

### **7.0 Monitoring, Inspections and Enforcement: Ensure environmental and social impacts are continually managed through construction and operations ..... 89**

Overview.....91

State of Play .....93

Key Government Actions .....93

### **8.0 Ensure Impacts are Managed Throughout Closure, Relinquishment, and Post-Closure .....103**

Overview .....104

State of Play.....107

Key Government Actions .....107

## **SECTION D: HOW TO IMPROVE YOUR LEGAL FRAMEWORK IN PRACTICE .....117**

### **9.0 Strategies for Assessing and Revising Your Legal Framework ..... 118**

Overview.....118

1. Gap Analysis: Review your legal framework for opportunities to improve environmental and social protection in the mining sector .....119

2. Preparation: Scan for challenges and opportunities.....119

3. Risks: Identify risks associated with an inadequate reform process .....121

4. Legal Instruments: Determine the best instruments for change.....121

5. Process: The legal framework revision steps .....123

6. Continuous Improvement: Establish systems to continuously monitor, evaluate, manage change, and improve your framework .....126

<b>10.0 Good Governance Checklists.....</b>	<b>127</b>
Chapter 3 Checklist: Components of a comprehensive legal framework for environmental and social impact assessment and management.....	127
Chapter 4 Checklist: Enabling factors and mechanisms of a good framework for environmental and social impact assessment and management.....	129
Chapter 5 Checklist: The Screening Process: Government actions through exploration and defining when a proposed mine needs an ESIA review process.....	134
Chapter 6 Checklist: ESIA: Government requirements through the mine planning phase.....	136
Chapter 7 Checklist: Monitoring, Inspections, and Enforcement: Ensure environmental and social impacts are continually managed through construction and operations.....	142
Chapter 8 Checklist: Post-Mining Transition: Ensure impacts are managed throughout closure, relinquishment, and post-closure.....	147
<b>References .....</b>	<b>150</b>
<b>ANNEX.....</b>	<b>163</b>
<b>Annex 1. Investor-State Dispute Settlement Cases in the Mining Sector Involving Environmental and Social Impact Assessments, as of December 2019.....</b>	<b>164</b>
<b>Annex 2. Key Terms .....</b>	<b>166</b>
<b>Annex 3. Key Issues Related to Environmental and Social Impact Assessment and Management in Mining.....</b>	<b>174</b>
<b>Annex 4. Additional Resources .....</b>	<b>182</b>

## LIST OF FIGURES

Figure ES1. Organization of the guidance document.....	x
Figure ES2. Government and company responsibilities in environmental and social impact assessment and management by mine phase.....	xvi
Figure 1. Government and company responsibilities in environmental and social impact assessment and management by mine phase.....	20
Figure 2. Sources of environmental and social impact assessment and management legal framework.....	39
Figure 3. Screening process decision tree.....	58
Figure 4. Government ESIA review process.....	65
Figure 5. Enforcement Decision Tree.....	100
Figure 6. ESIA legal framework revision process: Key phases and steps.....	125

## LIST OF TABLES

Table 1. Trends in legal frameworks for environmental and social impact assessment and management: Strengths and gaps.....	6
Table 2. Stages of the government ESIA review process.....	11
Table 3. Potential impacts and corresponding management plans for the mining sector.....	13
Table 4. The mine life cycle: Definitions and key opportunities for responsible environmental and social management.....	16
Table 5. Key sources and potential environmental and social impacts across the mine life cycle.....	17
Table 6. Key government actions and requirements in the screening process.....	53
Table 7. Examples of screening criteria and thresholds.....	55
Table 8. Examples of typical permits and approvals issued for the exploration phase.....	59
Table 9. Examples of requirements for the exploration phase.....	60
Table 10. Example of requirements and guidance for public participation.....	72
Table 11. Example of standard ToR.....	74
Table 12. An example of a method for assessing and monitoring protection of Indigenous rights.....	80
Table 13. Additional and complementary tools for environmental and social management.....	81
Table 14. Examples of legal requirements for community development.....	83
Table 15. Key government actions and requirements for monitoring, inspection, and enforcement.....	92
Table 16. Example of legal requirements for modifications.....	102
Table 17. Mine Closure Framework: Planning, management, and monitoring across the mine life cycle.....	106
Table 18. Government strategies for closure.....	110

# ACRONYMS AND ABBREVIATIONS

<b>Aarhus Convention</b>	Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters
<b>BIT</b>	bilateral investment treaty
<b>CDA</b>	Community Development Agreement
<b>CSR</b>	corporate social responsibility
<b>EA</b>	environmental assessment
<b>EIA</b>	environmental impact assessment
<b>EIA<sub>sd</sub></b>	semi-detailed environmental impact assessment
<b>ESIA</b>	environmental and social impact assessment
<b>ESMP</b>	environmental and social management plan
<b>FET</b>	fair and equitable treatment
<b>FPIC</b>	Free, Prior and Informed Consent
<b>FTA</b>	free trade agreement
<b>GIA</b>	gender impact assessment
<b>HRIA</b>	human rights impact assessment
<b>IAIA</b>	International Association for Impact Assessment
<b>ICJ</b>	International Court of Justice
<b>ICMM</b>	International Council on Mining & Metals
<b>ICSID</b>	International Centre for Settlement of Investment Disputes
<b>IFC</b>	International Finance Corporation
<b>IGF</b>	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
<b>IISD</b>	International Institute for Sustainable Development
<b>ILO</b>	International Labour Organization
<b>ILO Convention 169</b>	International Labour Organization Indigenous and Tribal Peoples Convention 169
<b>ISDS</b>	investor–state dispute settlement
<b>NAFTA</b>	North American Free Trade Agreement
<b>NGO</b>	non-governmental organization
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PCA</b>	Permanent Court of Arbitration
<b>PEA</b>	Preliminary Economic Assessment
<b>RAP</b>	Resettlement Action Plan

<b>Rio Declaration</b>	Rio Declaration on Environment and Development (1992)
<b>SEA</b>	strategic environmental assessment
<b>SESA</b>	strategic environmental and social assessment
<b>SIA</b>	social impact assessment
<b>SLO</b>	social licence to operate
<b>ToR</b>	Terms of Reference
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>UNDRIP</b>	United Nations Declaration on the Rights of Indigenous People
<b>VSI</b>	voluntary sustainability initiative





**SECTION A:  
SETTING  
THE STAGE**

# 1.0

## THE IMPORTANCE OF A COMPREHENSIVE LEGAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT

This guidance document presents good international practice for legal frameworks for environmental and social impact assessment (ESIA) and related management plans. It is designed to aid governments in responsible management of the minerals sector in order to optimize sustainable benefits for current and future generations.

As discussed further below, responsible management of environmental and social aspects of mining optimizes benefits not only for host governments but also for mining communities, companies, and other stakeholders. Such responsible management can also help governments avoid international legal disputes.

### KEY BENEFITS OF RESPONSIBLE ENVIRONMENTAL AND SOCIAL MANAGEMENT FOR GOVERNMENTS

A comprehensive legal framework for environmental and social impact assessment and management of environmental and social impacts of the mining sector can help governments:

- Understand the potential environmental and social impacts of mining activity (both positive and negative) before making decisions on mining licences and permits, and other key decisions for the minerals sector.
- Responsibly manage the potential impacts of mining sector activities on the natural environment and people.
- Support long-term socioeconomic development.
- Provide for appropriate and meaningful engagement and participation of all stakeholders, including national and subnational governments, mining companies, local communities, Indigenous Peoples, and others.
- Avoid or reduce the risk of litigation and international arbitration.
- Ensure that future generations are not left with a legacy of abandoned or otherwise improperly closed mines.
- Improve the reputation of the country for responsible environmental and social management, attracting responsible investors.

## **KEY BENEFITS OF RESPONSIBLE ENVIRONMENTAL AND SOCIAL MANAGEMENT FOR COMMUNITIES IN MINERAL-RICH REGIONS**

A robust legal framework for environmental and social management is particularly important to communities in mineral-rich regions and can help these communities:

- Share knowledge and experience, concerns, expectations, and objectives, and otherwise engage in and inform assessments, management plans, and decision-making processes related to the mining sector.
- Access information related to potential and active mining activity, including plans, material changes to plans, opportunities to engage, and potential impacts and benefits.
- Readily share and address grievances related to mining activities.
- Participate in monitoring, inspection, and enforcement of environmental and social management plans (ESMPs) for the mining sector.
- Obtain training, employment, and economic benefits from mining activities.
- Prepare for and contribute to plans for mine closure and the post-mining transition.
- Avoid negative environmental and social legacies from mining and instead optimize environmental protection and socioeconomic benefits for future generations.
- Improve access to government and company decision-makers and exercise greater influence in decision-making processes for the minerals sector and its environmental, social, and economic impacts.

## **KEY BENEFITS OF RESPONSIBLE ENVIRONMENTAL AND SOCIAL MANAGEMENT FOR MINING COMPANIES**

A government's good legal framework for environmental and social impact assessment and management of environmental and social impacts of the minerals sector also provides many benefits to mining companies, including:

- Clarity regarding company obligations and the role of ESIA and environmental and social management in permitting processes.
- Enhanced understanding of how and when to engage with communities and greater understanding of community perspectives, concerns, knowledge, skills, and objectives.
- The ability to identify and minimize environmental and social harm, while optimizing opportunities for social and economic development based on local objectives.
- Opportunities to share and discuss information regarding proposed mine developments with communities and seek their input.
- Overall resource efficiency.
- Avoidance of costly social conflicts, work stoppage, and litigation.
- Developing the company's reputation as a responsible actor.

## **INTERNAL AND EXTERNAL GOVERNMENT PROCESSES FOR MANAGING ENVIRONMENTAL AND SOCIAL IMPACTS**

It is important to recognize that a good legal framework for ESIA and the management of environmental and social impacts clarifies both internal and external government processes.

**Internally**, it is important to coordinate laws and procedures across ministries and across levels of government. Coordination of this type requires a clear structure and understanding of the roles and responsibilities outlined for all aspects of the project throughout the life cycle of the mine.

**Externally**, governments need to provide clear procedures and expectations for mining companies and communities with respect to:

- Where mining activities are permitted or not within the country
- Public engagement and consultation
- Local, traditional, and Indigenous knowledge to inform assessments and management plans
- The type and level of detail of studies that should be conducted (environmental, socioeconomic, health, etc.)
- The evaluation process and criteria used to assess mine permit applications (from exploration through mine closure and the post-mining transition)
- Permit approvals and denials, renewals, suspensions, withdrawals and appeals, and other permit-related actions.

## **BOX 1. THE SOCIAL “LICENCE” TO OPERATE: CLARIFYING LINKAGES BETWEEN SOCIAL SUPPORT, SOCIAL OBLIGATIONS, AND THE MINE PERMIT**

A good legal framework lays the foundations for the meaningful engagement and effective contributions of local communities. It provides participatory mechanisms and promotes access to needed support to utilize these mechanisms throughout the ESIA process and the life of the mine. This is critical to ensuring that communities have a voice in and benefit from the mining project. It ensures that their concerns, needs, and objectives are taken into account, thus contributing to social support for the project. This support is widely referred to as the “social licence to operate” (SLO)<sup>3</sup> although it is currently not an actual “licence” under domestic legal frameworks reviewed for this guidance document. However, social support for a project, or lack thereof, can certainly impact legal relationships and obligations, as well as a government’s ability to optimize the contributions of mining to sustainable development.

The concept of SLO involves getting the acceptance and ongoing support (and the approval and consent when Indigenous People are involved) of local communities for a mining project and its operation. While the SLO is not a formal “licence,” it is important to integrate these concepts into the legal framework—for example, through requirements and guidelines for engagement, consultation, and reporting—and promote greater clarity for stakeholders. The mining permit, however, is a legal title. The legal framework should ensure that the mining permit is issued based on ESIA, engagement, consultation, and other clearly stated legal requirements before mine construction and operations are allowed to begin.

## **TRENDS IN LEGAL FRAMEWORKS FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT PLANS**

In the IGF Secretariat’s research for the *Background Document: Legal Framework of Environmental and Social Impact Assessment in the Mining Sector* (2019) and its further research to prepare this guidance document, the Secretariat reviewed ESIA legislation and related frameworks from more than 55 jurisdictions<sup>4</sup> as well as mine development agreements between companies and host governments from over 10 jurisdictions.

<sup>3</sup> On the origin and meaning of SLO and its relationship with other concepts, see Heffron, R. J. et al. (2018). The emergence of the ‘social licence to operate’ in the extractive industries? *Resources Policy*. <https://doi.org/10.1016/j.resourpol.2018.09.012>

<sup>4</sup> Afghanistan, Argentina, Australia, Belize, Bolivia, Bhutan, Botswana, Burkina Faso, Burundi, Canada, Cameroon, Chad, Chile, Colombia, Costa Rica, the Democratic Republic of the Congo, Dominican Republic, Ecuador, Egypt, El Salvador, the European Union, Finland, France, Ghana, Guinea, India, Kenya, Mali, Mexico, Morocco, Mongolia, Mozambique, the Netherlands, Niger, Nigeria, North Macedonia, Papua New Guinea, Peru, the Philippines, Romania, Rwanda, Senegal, Sierra Leone, South Africa, South Sudan, Suriname, Tanzania, Thailand, Uruguay, the United Kingdom, the United States, and Venezuela. Legal frameworks from subnational jurisdictions have been examined in Australia, Canada, and the United States.

These background studies reviewed a wide range of jurisdictions, including federal and unitary systems; common law and civil law countries; developed and developing countries; countries with a long history in mineral development; countries with a relatively young mining sector; and countries that negotiate mining contracts, as well as those that govern the sector predominantly or exclusively through permits and authorizations. The background research identified trends across the legal frameworks of these diverse jurisdictions. Both strengths and gaps were identified by the review. These strengths and gaps are summarized in Table 1.

**TABLE 1. TRENDS IN LEGAL FRAMEWORKS FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT: STRENGTHS AND GAPS**

<b>KEY ISSUES IN LEGAL FRAMEWORKS</b>	<b>STRENGTHS</b>	<b>GAPS</b>
Alignment of requirements across the legal framework	Most contracts reviewed require the mining company to comply with national law.	Lack of alignment in laws and regulations across some legal frameworks leads to contradictions that may cause confusion or limit effective implementation.  Lack of alignment may occur between national and subnational levels; between legislative requirements issued by different ministries (e.g., mining and environmental ministries) or within the same ministry when new laws or regulations are adopted; or when one or more provisions in a mining contract are not aligned with current legislation.
Comprehensive coverage of the legal framework	Many jurisdictions reviewed and addressed gaps in their ESIA requirements or related management frameworks through regulations and/or guidance documents.	Some laws and regulations governing ESIA and related management frameworks for the mining sector are missing key components of a comprehensive framework, such as regular reporting requirements, requirements for progressive rehabilitation, or ongoing requirements for public engagement.  Most frameworks do not directly require climate change mitigation and adaptation considerations in assessments, management plans, and reports.
General commitment to environmental protection and sustainable development	The legal frameworks reviewed note government commitment to environmental protection and/or sustainable development.	While national constitutions, ESIA laws, mining laws, and mining contracts typically refer to a commitment to environmental protection and sustainable development, detailed requirements are often lacking.
Environmental law prevails in most circumstances of conflict of laws	Where there is an inconsistency between environmental law and mining law (or other laws, other than the Constitution), the legal frameworks typically state that environmental law prevails.	In some legislation and contracts, the conflict of laws statement does not explicitly prioritize environmental law or it was silent on the matter.

KEY ISSUES IN LEGAL FRAMEWORKS	STRENGTHS	GAPS
Requirements for an ESIA	The legal frameworks require an assessment of environmental impacts.	While environmental impact assessments (EIAs) are typically required, an assessment of social impacts is not always required. Detailed requirements for ESIA are not provided in all jurisdictions.
Requirements for management plans	Most legal frameworks require companies to provide an environmental management plan.	While environmental management plans are typically required, not all frameworks require a social management plan or integrated ESMP.
Requirements for rehabilitation and closure plans and related financial assurance	Most legal frameworks require a mine closure plan with financial assurance provided by the company.	While a mine closure plan is required, the timing of the required plan and related financial assurance is often at or near the end of the life of the mine, which is often too late to maximize sustainable outcomes. Detailed requirements for closure, financial assurance, and relinquishment are often lacking.
Timing of environmental and social impact assessment and management plans in the permit approval process	Most legal frameworks require an EIA study from mining proponents prior to permit approval. Many also require environmental management plans prior to permit approval.	While an EIA is typically required prior to permit approval, it does not always take into consideration social impacts. Furthermore, while environmental management plans are often required prior to permit approval, social management plans (or integrated ESMPs) are often not required at this stage.
Reporting requirements	Many legal frameworks require annual or semi-annual reporting on environmental monitoring and compliance.	Some legal frameworks do not specify reporting requirements. Others require reports on an annual or semi-annual basis but do not detail the format of the report, the process of government review of the report, or revision of management plans based on the report.
Transparency, local community, and public engagement requirements	Most legal frameworks broadly require public engagement during the ESIA process before a project may be implemented. Most frameworks also specify that the ESIA report should be made public.	Most frameworks do not require ongoing engagement with local communities throughout the life of the mine, including on developing and implementing ESMPs, and developing and implementing mine closure plans. Reports on progress implementing management plans are not always made public or readily accessible to local communities.
Monitoring and enforcement	Some legal frameworks establish monitoring systems as well as systems of imposing reasonable fines and penalties in cases of companies' failure to meet environmental or social obligations.	In several jurisdictions, regular review and amendment of ESMPs are not required.  Many legal frameworks do not specify the role of national and subnational governments in monitoring and compliance. In some jurisdictions, penalties for violations of environmental and social obligations are not commensurate with the impacts of such violations.

## **AVOIDING LEGAL DISPUTES RELATED TO ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT**

A clear and robust legal framework on ESIA and environmental and social management for the mining sector could help governments prevent and mitigate legal disputes. Disputes have arisen under international agreements such as investment treaties, domestic legal frameworks, and mining contracts.

Legal disputes between foreign mining investors and host states involving environmental and social issues have arisen in at least 12 international arbitration cases. This arbitration between investors and host states is known as “investor–state dispute settlement” (ISDS).

The United Nations Conference on Trade and Development (UNCTAD) has recorded 1,023 publicly known ISDS cases as of December 31, 2019, among which the extractives sector, excluding mining support service activities and investments in crude petroleum and natural gas, accounts for 88 cases. Environmental and social issues were relevant in at least 12 mining cases, most either initiated or decided as recently as 2014. Environmental and social issues could be involved in additional ISDS cases, including undisclosed settlements or pending cases for which limited information is publicly available.

Six of these ISDS cases involved the ESIA process before an operating permit was issued. In these cases, the investor claim arose directly from the host government’s rejection of an ESIA report or the denial of an environmental authorization or exploitation permit. The governments’ decisions were challenged under various allegations by the project proponents, including:

- Contradictions in decision making within and between government departments, such as:
  - Formal letters from senior government officials alleged as creating a “legitimate expectation” that (1) an environmental certificate is forthcoming or (2) an exploitation permit will be granted when ultimately the anticipated certificate or permit was not granted.
  - A senior government official’s “preliminary” approval of an environmental certificate, alleged as creating an expectation that the “final approval is certain and imminent,” while the exploitation permit was already approved, with a final decision not to grant the environmental certificate.
- Lack of clear procedures and guidelines for the ESIA process and government review of the ESIA report.
- Irregularities in the ESIA report review and permitting process, such as:
  - Lack of transparency or violation of national laws in government review of the ESIA report.
  - Lack of responsiveness or improper conduct of government officials during the ESIA process.

- Political interference during the ESIA report review process, such as:
  - Delay in the review due to inappropriate political interference.
  - Denial of the environmental certificate after government officials confirmed that all their technical queries had been satisfied and despite subsequent annulment of the denial by a national court.

Another six ISDS cases involve the management of social and environmental impacts after the exploitation permit was granted. In these arbitration cases, governments, through executive, legislative, or judicial measures, limited or revoked mining permits or cancelled contracts on the grounds of non-compliance with environmental obligations, some associated with social unrest (see Burnett & Bret, 2017).

A list of these ISDS cases is provided in Annex 1 of this guidance document.

## 2.0

# KEY CONCEPTS: THE BASICS OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS AND MANAGEMENT

## WHAT IS ESIA?

ESIA is a tool used to identify and assess the potential environmental and social impacts of a project. ESIA is used iteratively with engineering design and planning to avoid, minimize, and mitigate adverse environmental and social impacts. ESIA is also used by governments as a tool for deciding whether a proposed project should be approved and defining the details of how the project will be implemented to minimize environmental and social impacts and meet sustainability goals.

An ESIA review process is a legal process that provides complete information about all development impacts, includes legitimate stakeholder engagement, and functions appropriately within decision making and planning to contribute to proactive environmental management and enhance the benefits of development (Arnold & Hannah, 2017). It is the process of identifying, predicting, evaluating, and planning to mitigate the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made (International Association for Impact Assessment [IAIA], 1999).

Some jurisdictions continue to use the term “environmental impact assessment” (EIA) and may have a separate “social impact assessment” (SIA) process. Because mining developments can have a wide range of effects on the natural environment as well as on the communities that live near the mining project, impact assessment in this sector has evolved from the early assessments focused more exclusively on the environment to now include much more attention to social, health, cultural, and economic aspects. This guidance document will use the term “ESIA” to recognize the growing importance of and expectation for managing socioeconomic impacts along with environmental impacts. ESIA is a common and well-accepted process for ensuring mining projects are not conducted at the expense of sustainable development.<sup>5</sup> ESIA incorporates the reality that environmental, social, and economic impacts are often inextricably linked. The wider value of the environmental assessment process is the process of engagement with stakeholders and the dialogue it creates (Owens et al., 2004; Sheate & Partidario, 2010). A comprehensive legal framework for ESIA promotes informed government decision making that takes into account environmental, social and economic factors while clarifying expectations for all stakeholders. This is particularly important in an

---

<sup>5</sup> For example the UN General Assembly Rio Declaration on Environment and Development, 1992. Principle 17 states: “Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.” See also, International Institute for Environment and Development, 2002, pp. 248–249.

era when governments face escalating political, economic, and other pressures from a wide range of individuals and groups (Lawrence, 2010; Nilsson & Dalkmann, 2010; Sheate & Partidario, 2010).

## KEY STEPS IN THE ESIA PROCESS

The basic steps of an ESIA review process are listed below. Legal frameworks related to these steps are further discussed throughout this guidance document.

**TABLE 2. STAGES OF THE GOVERNMENT ESIA REVIEW PROCESS<sup>6</sup>**

<p><b>1. Proposal</b></p>	<p>The proposal is a basic description of the proposed activity. Based on this description, the government can decide whether or not the project will require a full ESIA. The proposal should include the project locations, a physical description of proposed project facilities and activities over the life of the mine, a preliminary description of possible impacts, and consideration of alternatives.</p>
<p><b>2. Screening</b></p>	<p>The screening phase determines if the proposal will be subject to an ESIA review and what level of detail will be required. This process should proceed with regulations or guidelines that define criteria, clarify procedures, and ensure an appropriate level of rigour for the type and scale of the project while avoiding unnecessary delays and costs. The type and scale of mining activity and impacts on Indigenous Peoples are examples of possible indicators of the level of assessment needed for the project. Large-scale mining projects should be screened as projects large enough to warrant an ESIA process. The screening may also indicate that a public hearing is needed if there is an exceptionally high level of public interest.</p>
<p><b>3. Scoping</b></p>	<p>For projects requiring an ESIA, the scoping step will determine what topics the ESIA will cover. In some jurisdictions, the Terms of Reference (ToR) are outlined in the legal framework, typically in a regulation or guideline; in others, it is developed on a case-by-case basis in consultation with regulators and key stakeholders. In yet others, it is a hybrid approach that starts with a basic framework that can be supplemented by the particular circumstances and stakeholder input. The ToR should focus the assessment on key issues and impacts. The scoping process should include public participation—including those most likely to be affected by the project; consideration of possible alternatives; availability of baseline data; key social, economic, and biophysical indicators; cumulative impacts; mitigation options; assessment methodology; and the time frame for the assessment.</p>
<p><b>4. Assessment</b></p>	<p>The assessment process is a stage of “advanced data collection, impact prediction, [and] evaluation of impacts and possible mitigation measures” (Arnold &amp; Hanna, 2015, 2017). The assessment captures both adverse and beneficial impacts but should focus on assessing, mitigating, and managing the adverse impacts. Baseline data describes the current biophysical, economic, and social conditions in the area, providing a foundation for assessment and impact prediction. This phase of the assessment is a rigorous scientific and technical study informed by public participation and key stakeholders. In this phase, the ESMP and preliminary mine closure plan are presented as part of mitigating measures. The ESIA results are analyzed and presented in an ESIA report.</p>

<sup>6</sup> Based on Arnold & Hanna (2017).

<b>5. Review</b>	The ESIA report, including assessment data and analysis of the data, is provided to the relevant agencies and/or independent bodies for review. The review process must be transparent and provide opportunities for stakeholder input. The review should follow specific criteria that ensure “completeness, accuracy, adherence to the terms of reference, compliance with regulated requirements and other criteria” (Arnold & Hanna, 2017).
<b>6. Decision</b>	The review results in a decision, which may be a recommendation to approve the proposal, to approve the proposal with conditions, or to reject the proposal. The decision may be made at both the national and subnational levels of government. In such cases, the reviews should be harmonized.
<b>7. Operational monitoring and compliance</b>	This phase includes all monitoring, inspections, and modifications as needed to assess material changes in the project and ensure that the ESMPs and mine closure plans are being implemented and the terms and conditions of the approval are met. Ongoing stakeholder engagement and engaging members of the local community in the monitoring process can improve environmental and social management during operations as well as in the mine closure and post-mining transition phases.

## ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS

The development of ESMPs is part of the ESIA process. These plans allow the mining operator to devise actions, based on stakeholder input, that will enable it to respect the regulatory framework applicable to the project; mitigate the negative impacts of the project on the biophysical and human environments; monitor activities and project impacts; make any necessary corrections or improvements as appropriate; and maximize the project’s benefits (Benabidès, 2011). ESMPs provide an understanding of how potential impacts will be mitigated and addressed (Canadian Environmental Assessment Agency, 2018). The ESMP serves as a reference document for the permit holder, government monitoring agencies, communities, and other key stakeholders.

An ESMP should include as a minimum:

- Mitigation plans
- Environmental and social monitoring programs
- Emergency response plans
- Stakeholder engagement and capacity-building plans
- Budgets
- The process by which the ESMP will be integrated into the mining project.

Depending on the results of the impact assessment, stakeholder input, and the standard requirements of the legal framework, management plans could include a wide range of types of plans. Examples of potential impacts and related management plans for the mining sector are presented in Table 3.

**TABLE 3. POTENTIAL IMPACTS AND CORRESPONDING MANAGEMENT PLANS FOR THE MINING SECTOR**

INFRASTRUCTURE SHARING PLAN	POTENTIAL IMPACTS	MANAGEMENT PLANS
<b>Physical</b>	Water quality changes from contaminant release	Water management plan
	Erosion and sediment release	Erosion and sediment control plan
	Tailings and mine rock storage	Tailings operations, maintenance, and surveillance management plan Mine rock management plan
	Hazardous materials transport, storage, use and disposal	Hazardous materials management plan Emergency response and spill contingency plan
	Non-hazardous and putrescible waste generation	Waste management plan
	Dust emissions	Dust control plan
	Greenhouse gas emissions	Energy and greenhouse gas emissions management plan
	Noise and vibrations	Noise and vibration management plan
	Construction phase intensive land clearing and activity causing sediment release and loss of habitat	Construction management plan
<b>Biological</b>	Direct and indirect habitat loss for all species and species of conservation concern	Biodiversity management plan Biodiversity offset plan
	Influx of invasive species of plants and wildlife affecting the local biodiversity	Invasive species control plan
	Direct mortality of wildlife from equipment and vehicles	Wildlife management plan Traffic management plan
	Increased harvest of natural vegetation and wildlife from increased access	Access management plan
<b>Indigenous Peoples</b>	Effects on rights and title to lands and resources	Impact benefit agreements
	Loss of cultural heritage	Cultural protection policies and programs Cross-cultural training

<b>INFRASTRUCTURE SHARING PLAN</b>	<b>POTENTIAL IMPACTS</b>	<b>MANAGEMENT PLANS</b>
<b>Communities</b>	Effects on potable water sources	Community protection and development plan
	Influx of workers increasing pressure on local infrastructure and community services	Community development plan
	Influx of money and workers leading to increased prostitution, drugs, alcohol, and corruption and reduced community safety	Company policies Community support plan
	Risks from increased vehicles and equipment in communities	Traffic management plan
	Increased risks from infrastructure and changes in landform stability	
<b>Workers</b>	Risks to worker health and safety from work around heavy equipment and vehicles and hazardous materials	Emergency response plan Health and safety management plan Mine rescue plan
<b>Heritage</b>	Disturbance of artifacts	Archaeology and paleontology recovery plan Chance find procedure
<b>Other</b>	Project risks from underground and open pit mining, tailings dams, and/or chemical spills	Emergency response plans
	External risks from political instability, pandemics, weather, and/or seismic events	Crisis management plan

## THE MINE LIFE CYCLE

The life cycle of a mine is generally comprised of five main phases, which are strongly interrelated:

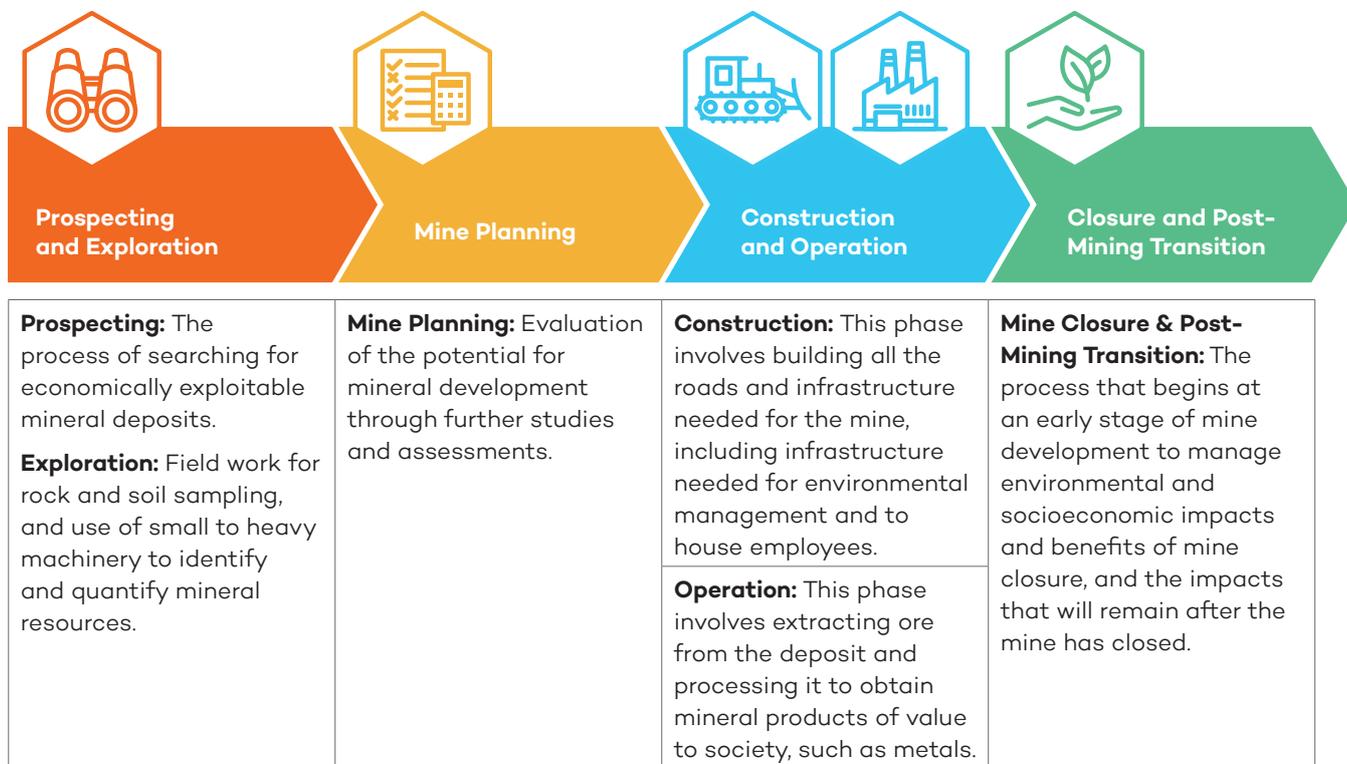
- Prospecting and Exploration
- Mine Planning
- Construction
- Operations
- Mine Closure and the Post-Mining Transition

These phases are defined in Table 4, and each provides opportunities to mitigate negative impacts while optimizing the potential benefits of mining to sustainable development. It is important to note that mine phases often overlap. For example, advanced exploration drilling often occurs during mine planning, exploration drilling often occurs during operations to find additional ore to extend the life of the mine, and progressive closure and rehabilitation activities should begin during operations to minimize liabilities at the end of the mine life.

If environmental and social issues are not properly identified and managed in the early phases of the mine life, efforts to control impacts in subsequent phases may be ineffective. Inadequate collection of baseline data or a lack of effective public engagement in the exploration and mine planning phase may negatively impact all the subsequent phases of a project and could ultimately undermine the viability of a project. Similarly, responsible management in each phase can set the stage for responsible management of subsequent phases. For example, successful management of environmental, social, and economic impacts during the operations stage may increase the success of the mine closure and post-mining transition phase.

More detailed definitions and additional references about the phases of mining are included in Annex 2 of this guidance document.

**TABLE 4. THE MINE LIFE CYCLE: DEFINITIONS AND KEY OPPORTUNITIES FOR RESPONSIBLE ENVIRONMENTAL AND SOCIAL MANAGEMENT**

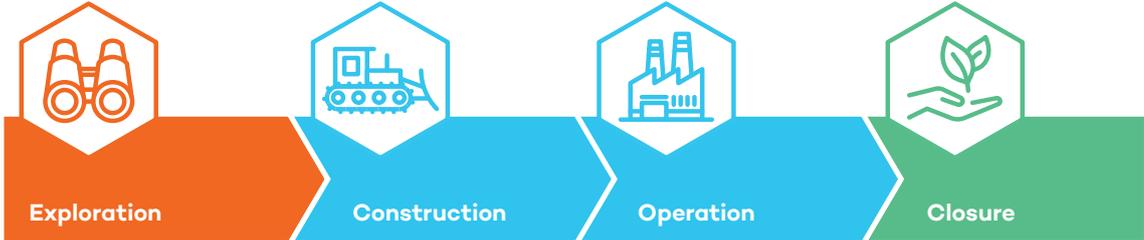


<b>KEY OPPORTUNITIES TO PROMOTE RESPONSIBLE ENVIRONMENTAL AND SOCIAL MANAGEMENT</b>			
<p><b>Prospecting and Exploration:</b> This phase offers opportunities to make a good “first impression” of the mining company by demonstrating respect and engaging with local communities, managing any advanced exploration techniques or other exploration techniques that pose a high level of social and/or environmental risk, and conducting remediation of exploration activities commensurate with level of environmental impact. Early environmental and social data acquisition.</p>	<p><b>Mine Planning:</b> This phase offers the optimal opportunities to comprehensively assess and develop plans and adequate funds to manage environmental and socioeconomic impacts from construction through mine closure. This process, backed by the country’s legal framework and informed by public engagement and input from local communities, helps parties avoid social conflict and legal disputes, while optimizing environmental management and socioeconomic development opportunities.</p>	<p><b>Construction:</b> This phase offers opportunities to continuously implement and improve environmental and social management plans, including participatory monitoring mechanisms, to enhance environmental management and socioeconomic benefits of the mine project.</p> <p><b>Operation:</b> Participatory monitoring programs will last throughout operations and offer the opportunity for direct communication with the community about mine performance and for improvement of environmental and socioeconomic conditions.</p>	<p><b>Mine Closure &amp; Post-Mining Transition:</b> While action on mine closure and the post-mining transition begins with planning in the Mine Planning Phase, and implementation and modification of plans in the Construction and Operations Phases, the closure phase offers a final opportunity to promote a positive legacy of the mine project, particularly for local communities, and to ensure that the project supports local, regional, and national sustainable development objectives through the post-mining transition.</p>

## COMMON ENVIRONMENTAL AND SOCIAL IMPACTS ACROSS THE MINE LIFE CYCLE

Mining has a range of potential environmental and social impacts that vary by project phase, from prospecting and exploration through mine closure and the post-mining transition. These impacts can be complicated by environmental factors, such as climate change, and by the “cumulative” impacts of multiple projects. Table 5 provides a high-level summary of these impacts, organized by phase.

**TABLE 5. KEY SOURCES AND POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS ACROSS THE MINE LIFE CYCLE\***



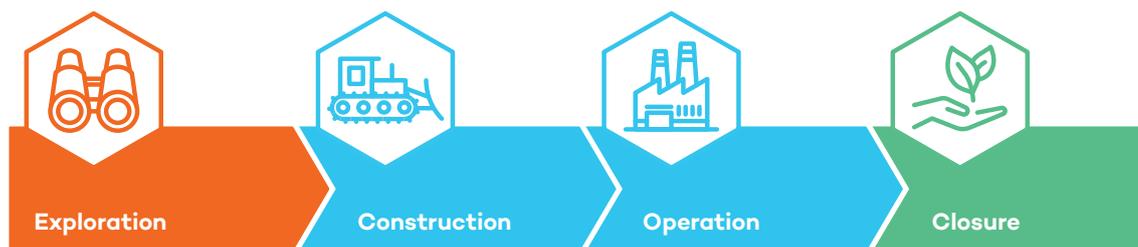
	Exploration	Construction	Operation	Closure
<b>Water use and quality</b>	Drilling water use Sediments in discharge Water use for camp operation	Sediment release Water use for camp operation	Water use for mineral processing Water treatment and discharge Potential for acid rock drainage and/or metal leaching Water use for camp operation	Water use for camp operation Potential for long-term water management and treatment depending on how the mine was designed and the characteristics of the mine rock types
<b>Wastes</b>	Camp putrescible and non-hazardous waste	Camp putrescible and non-hazardous waste	Camp putrescible and non-hazardous waste Mine rock storage Tailings storage	Camp putrescible and non-hazardous waste
<b>Hazardous materials</b>	Potential spills from fuel transport, use, and storage	Potential spills from fuel transport, use, and storage	Potential spills from fuel transport, use, and storage Potential for spills from transportation, use, and storage of reagents	Potential spills from fuel transport, use, and storage
<b>Land use and biodiversity</b>	Small disturbance of land use and biodiversity	Larger land clearing disturbance affecting fish and wildlife and their habitat	Incremental disturbance of habitat	Restoration of habitat and land use values as reclamation progresses
<b>Air quality</b>	Some vehicle emissions and dust	Dust from land clearing Greenhouse gas emissions from equipment	Dust from mining, roads, and tailings Potential emissions from processing (depending on the type of process) Greenhouse gas emissions from equipment	Minor dust generated until facilities are revegetated

**SECTION A:  
SETTING  
THE STAGE**

**SECTION B:  
GOOD LEGAL FRAMEWORK COMPONENTS  
AND ENABLING MECHANISMS**

**SECTION C:  
KEY GOVERNMENT  
ACTIONS BY PHASE**

**SECTION D:  
HOW TO IMPROVE YOUR LEGAL  
FRAMEWORK IN PRACTICE**



<b>Noise and vibrations</b>	Noise from drilling	Noise from heavy equipment. Vibration and noise from mine pre-development	Noise from heavy equipment. Vibration and noise from mine blasting	Some noise from equipment completing closure work
<b>Energy use</b>	Minor energy use for camp operation and drilling, usually provided by mobile generators	Energy use increases through construction as processes are brought online	Large energy requirements for milling ore and moving materials.	Energy use is for equipment used in reclamation and any ongoing water treatment
<b>Visual impacts</b>	Minor visual impacts from drill roads and camp	Visual impacts increase as land is cleared and new facilities built	Visual impacts as the land is transformed with mine and rock storage changes	Visual impacts diminish as facilities are removed and reclamation progresses
<b>Heritage resources</b>	Risk of disturbance of heritage resources during clearing for roads and drill pads	Greatest risk of disturbance of heritage resources during land clearing	Some risk of disturbance as new areas cleared	
<b>Workers</b>	Risk to drillers and around equipment	High-level risk to worker health and safety that needs protection and management	High-level risk to worker health and safety that needs protection and management	Risk to workers around equipment used for reclamation work
<b>Community</b>	Some risk from exploration workers adversely affecting the community	Largest influx of transient workers that can adversely affect the community	Operations workforce is generally more stable and smaller than construction, but can adversely affect the community	Some risk from reclamation workers adversely affecting the community
<b>Socio-economics</b>	Small influx of exploration staff and small increase of demand for services in local communities	Large influx of workers and demand for contractors and services	Sustained increase in job opportunities and demand for contractors and services above pre-development levels	Loss of employment opportunities and decreased demand for contractors and services as the mine closes

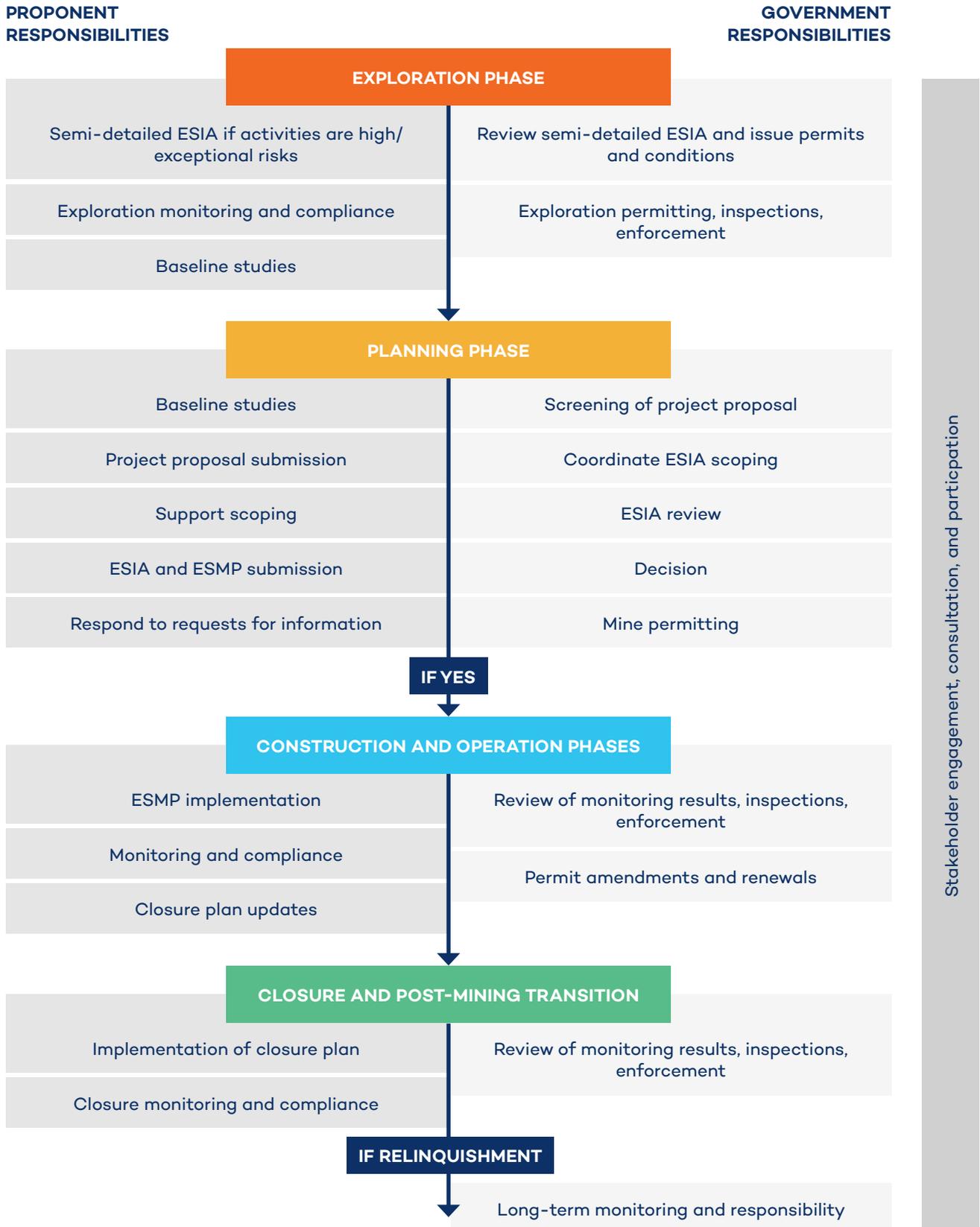
*\*Note, however, that the issues surrounding potential impacts on mining are complex and vary significantly depending on local social and political contexts and biological, geological, and climate conditions. Definitions and additional references are provided in Annexes B and D of this guidance document.*

## **GOVERNMENT AND COMPANY RESPONSIBILITIES IN ENVIRONMENTAL AND SOCIAL MANAGEMENT BY MINE PHASE**

It is important to clarify the roles of government versus those of companies in environmental and social management across the life of the mine.

In general terms, the company is responsible for preparing the project proposal, conducting ESIA where required, implementing plans, and operational monitoring. The government is responsible for screening to determine when a full ESIA will be required and to determine the level of environmental and social management needed; review of ESIA's; decisions regarding environmental certifications and mining permits or licences; compliance monitoring; inspection; and enforcement. Both the company and the government play a role in relinquishment. It is critical for governments to maintain high-quality review of the ESIA, ESMPs, and all monitoring data to successfully hold proponents accountable and minimize adverse impacts from mining. These responsibilities are presented in Figure 1 and are further elaborated in subsequent chapters.

**FIGURE 1. GOVERNMENT AND PROPONENT RESPONSIBILITIES IN ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT BY MINE PHASE**



## KEY STAKEHOLDERS IN ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT

It is important to understand the key stakeholders involved in environmental and social impact assessment and management. A “stakeholder” is a person or group that is influenced by, or can influence, an operation (Vanclay, 2003). Stakeholders vary across jurisdictions and from one project to the next but typically include national and local government representatives, representatives of Indigenous groups, leaders and residents of mine-impacted communities, representatives of non-governmental organizations (NGOs), and companies. Common stakeholder groups are described below.



**Government stakeholders** include both national government leaders in relevant ministries and regional and local government leaders. Stakeholders may include representatives of national, regional, or local departments or ministries governing environment, mining, labour, finance, health, infrastructure, transportation, energy, trade, or planning and development.



**Community stakeholders** may include communities in mineral-rich areas, particularly those in areas zoned for mineral development. When considering a particular mining project, community stakeholders may include those within the mine area, in neighbouring areas, or in areas of proposed roads or other construction developments or transportation corridors.

When discussing community stakeholders, it is very important to give special consideration to “vulnerable” groups within communities. Vulnerable groups may include children and youth, persons living below the poverty line, those without documented land rights, people with disabilities, migrant and temporary workers, and traditionally disadvantaged or marginalized groups. Women should also be given special consideration to ensure that they are engaged in any process and that gender-based impacts and benefits are considered. As further discussed below, Indigenous Peoples are afforded special rights under international frameworks and may also have special protections under national and subnational legislation.



**Company stakeholders** may include specific mining companies, industry groups, and companies that provide services to mines and in mining communities. In a particular project, the key company stakeholder is the company that holds the mining permit or licence. Public companies are driven by shareholder goals for economic gains and may have other investment requirements, which may include sustainability.

A wide range of **other important stakeholders** may be interested in a project, including NGOs, land users, the media, and individuals who express interest or have been identified as a stakeholder through ESIA and related studies. Stakeholders also include financiers that typically require developers to follow international best practice standards and have expectations regarding financial performance of the mine.

**SECTION A:  
SETTING  
THE STAGE**

**SECTION B:  
GOOD LEGAL FRAMEWORK COMPONENTS  
AND ENABLING MECHANISMS**

**SECTION C:  
KEY GOVERNMENT  
ACTIONS BY PHASE**

**SECTION D:  
HOW TO IMPROVE YOUR LEGAL  
FRAMEWORK IN PRACTICE**



## SECTION B:

# GOOD LEGAL FRAMEWORK COMPONENTS AND ENABLING MECHANISMS

## 3.0

# COMPONENTS OF A COMPREHENSIVE LEGAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT



This chapter presents the following key components of a comprehensive legal framework for environmental and social impact assessment and management:

#### **Commitment to Sustainable Development:**

1. Commitment to sustainable development, including environmental and social protection, is stated in the legal framework.

#### **Consistency and Coordination:**

2. Consistency is maintained across all legal instruments.
3. Responsible authorities are clearly identified, along with their respective roles in review, decision-making, and monitoring processes.

#### **Coverage of All Phases of Mine Life:**

4. Social and environmental requirements are defined for all phases of the mine life, commensurate with risks.

#### **Public Engagement, Consultation, and Transparency:**

5. Requirements and guidelines for public engagement and consultation are provided, including ongoing requirements for public engagement throughout the life of the mine.
6. Requirements and guidelines regarding transparency and access to environmental and social information are provided.

#### **Grievance Mechanisms:**

7. Requirements and guidelines for grievance mechanisms are provided.

#### **ESIA Requirements:**

8. Standard requirements for the initial project proposal are clearly described.
9. Screening procedures are required to determine when a mining activity will require an ESIA and review process.
10. Requirements and procedures for scoping are provided, including requirements for stakeholder input.

11. ESIA is part of project planning and is conducted before any decisions are made to approve a proposed large-scale mining project.
12. A reasonable timeline for the ESIA report review process is defined.

**ESMPs:**

13. ESMPs are required in the review process, and guidelines are provided.

**Mine Closure Plans and Financial Assurance:**

14. Preliminary mine closure and post-mining transition plans are required in the review process, and guidelines are provided.
15. Adequate financial assurance for remediation and mine closure is required and must be maintained by the mining licence holder.

**Permits and Approvals:**

16. Permits and approvals are subject to standard terms and conditions, including reporting and updating requirements.

**Monitoring, Inspections, and Enforcement:**

17. Oversight of environmental and social impacts across the life of the mine is required through monitoring, inspections, and enforcement.
18. Sanctions for non-compliance are commensurate with the level of violation.
19. Existing permit conditions must be met prior to renewal and prior to approving a permit for large-scale mine development.
20. Clear conditions are provided for “exit tickets,” relinquishment, and management of residual risks.

## OVERVIEW

A comprehensive legal framework for ESIA and environmental and social management is essential to the government’s ability to avoid and mitigate the negative impacts of mineral development while optimizing social and economic benefits from the sector. It promotes good governance of environmental and social impacts and benefits through all phases of the life cycle of the mine, from exploration through the post-mining transition. Such a framework incorporates good international practice and is also tailored to respond to unique local circumstances.

The IGF Secretariat’s review and analysis of current legal frameworks and study of good international practices identified the following components of a comprehensive legal framework for ESIA and related management plans for the mining sector.

Guidance regarding how to assess and revise your legal framework, taking into consideration these components and other factors, is provided in the last section of this guidance document.

## COMMITMENT TO SUSTAINABLE DEVELOPMENT

### 1. COMMITMENT TO SUSTAINABLE DEVELOPMENT, INCLUDING ENVIRONMENTAL AND SOCIAL PROTECTION, IS STATED IN THE LEGAL FRAMEWORK.

Governments can lay the foundation for responsible management of environmental and social impacts by promoting a clear vision for sustainable development and clearly stating a commitment to sustainable development, including environmental and social protection, in the legal framework for environmental and social impact assessment and management for the mining sector.

International frameworks, such as the United Nations Sustainable Development Goals, can inform the national vision for sustainable development. However, the vision should primarily be informed by local perspectives and experience, including representatives of local government, Indigenous Peoples, and local communities (including perspectives of vulnerable groups) in mineral-rich regions. A vision may encourage investment and resource development while ensuring environmental and social protections and optimizing benefits for current and future generations.

## CONSISTENCY AND COORDINATION

### 2. CONSISTENCY IS MAINTAINED ACROSS ALL LEGAL INSTRUMENTS

Consistency of legal instruments within a jurisdiction is critical to ensuring effective implementation. Requirements across all domestic laws and between domestic laws and international commitments, including obligations under customary international law, should be consistent and aligned. Where mining contracts are used, they should be aligned with legal requirements for environmental and social impact assessment and management, and they should clarify or specify unique circumstances or opportunities to advance environmental protection and socioeconomic progress.

### 3. RESPONSIBLE AUTHORITIES ARE CLEARLY IDENTIFIED, ALONG WITH THEIR RESPECTIVE ROLES IN REVIEW, DECISION-MAKING, AND MONITORING PROCESSES

Effective governance of review and approval processes may require the involvement of multiple government agencies. Where requirements are issued by multiple governmental agencies, care should be taken to ensure that obligations and procedures are aligned and do not conflict or result in unnecessary duplication or inefficiencies. The legal framework should identify a lead government agency to coordinate the ESIA review process and specify the decision-making authority. The legal framework should define the clear roles and responsibilities of government departments to ensure accountability and provide clear procedures for decision making.

## COVERAGE OF ALL PHASES OF MINE LIFE

### **4. SOCIAL AND ENVIRONMENTAL REQUIREMENTS ARE DEFINED FOR ALL PHASES OF THE MINE LIFE, COMMENSURATE WITH RISKS**

Different phases and types of mining have different environmental and social impacts. Therefore, requirements for social and environmental protection should be defined distinctively for prospecting, exploration, exploitation, and closure activities. In addition, the legal framework should clarify the difference between prospecting and exploration that exists in many jurisdictions, as well as the different legal and procedural requirements for each, including environmental and social requirements.

It is critical to avoid any gap in addressing and managing impacts throughout the mine life cycle, including in the exploration phase, which is currently less regulated in several jurisdictions. Governments should therefore include in their legal framework the minimum requirements for applications for an exploration licence or an authorization. They should also require screening to determine levels of environmental and social impact assessment and management commensurate with risk.

Remediation and closure requirements for the exploration phase should also correspond to the level of impact. The legal framework should also outline associated requirements for costing and triggers for when temporary and permanent closure and rehabilitation should begin.

### **5. REQUIREMENTS AND GUIDELINES FOR PUBLIC ENGAGEMENT AND CONSULTATION ARE PROVIDED, INCLUDING ONGOING REQUIREMENTS FOR PUBLIC ENGAGEMENT THROUGHOUT THE LIFE OF THE MINE.**

The public engagement process is a cornerstone of building an understanding of and addressing community concerns and fostering an ongoing dialogue and possible partnerships with communities. A good legal framework lays the foundations for the meaningful engagement and effective contributions of local communities.

The legal framework should require mining project proponents, in preparing their applications for a mining permit, to engage with communities and other stakeholders at all stages of the assessment and planning process and to document the nature and results of their engagement program in the permit application. The legal framework should ensure that public engagement begins early in the ESIA process, and the project design reflects input from the stakeholders.

### **6. REQUIREMENTS AND GUIDELINES REGARDING TRANSPARENCY AND ACCESS TO ENVIRONMENTAL AND SOCIAL INFORMATION ARE PROVIDED.**

Access to information regarding proposed and ongoing mining projects and their potential environmental and social impacts and related mitigation are key to achieving public and stakeholder trust. Access to information is also prescribed by international instruments, including the Rio Declaration on Environment and Development (United Nations Conference on Environment and Development, 1992) and the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention, 1998). Public

participation is also recognized as a key principle in international environmental law, and the public cannot effectively participate if they do not have access to information on which to provide input and comments.

The format (summaries, hard copies, radio), language (official, community language), and location (government offices, radio, websites, social media) of sharing information should be tailored to the specific audience.

The legal framework should clarify transparency requirements on multiple levels, including:

- Legal transparency: access to current and proposed laws and policies related to environmental and social governance, and access to mining contracts (Extractive Industries Transparency Initiative, n.d.; Resources Contracts, n.d.), community development agreements, and other key agreements related to mineral development.
- Procedural transparency: procedures for accessing copies of ESIA reports and management plans; how to provide input on ESIA reports and management plans, and under what timeline; steps and criteria for government decision making on certifications and permits.
- Oversight transparency: access to periodic reports on management plan implementation and to revised plans.
- Financial transparency: access to information on environmental and social management funds; payments from companies to national and subnational governments, trusts or funds, or communities; and use of these funds by the beneficiaries.

## GRIEVANCE MECHANISMS

### **7. REQUIREMENTS AND GUIDELINES FOR GRIEVANCE MECHANISMS ARE PROVIDED.**

The legal framework should accommodate a grievance mechanism in the ESIA review process and also require the proponent to establish a culturally appropriate grievance mechanism for the project.

Using community and worker grievance mechanisms, particularly when combined with multistakeholder and participatory mechanisms, offers an opportunity to proactively identify and manage issues before they escalate into major conflicts or legal disputes. The legal framework should provide guidelines for grievance mechanisms throughout the life of the mine.

## ESIA REQUIREMENTS

### **8. STANDARD REQUIREMENTS FOR THE INITIAL PROJECT PROPOSAL ARE CLEARLY DESCRIBED.**

The legal framework should list standard requirements for a project proposal for any mining activity and require a government review of the proposal as part of the screening process to determine whether an ESIA review will be required. The review should also determine the level of environmental and social impact management that will be required for the project.

The project description should include sufficient detail on what infrastructure and activities are proposed, an initial list of potential impacts, and the initial intended mitigation and management measures that will be followed to minimize impacts. The initial project description should include alternative options that have been and still need to be considered in the final mine design.

## **9. SCREENING PROCEDURES ARE REQUIRED TO DETERMINE WHEN A MINING ACTIVITY WILL REQUIRE AN ESIA AND REVIEW PROCESS.**

The legal framework should require submission of a company's plans for mineral prospecting, exploration, development, and/or mine expansion and outline the government's review process for these proposals. The legal framework should require a screening process of the project proposal and describe the screening process and criteria. Screening criteria should be developed and set to determine which projects require an ESIA review process and the type of process to be followed. Proposed projects should include all components and related infrastructure and should not be broken down into components to avoid an ESIA review process.

A clear and transparent legal framework is needed that presents the criteria linked to the level of risk for the type and level of activity and the subsequent permitting pathway. Pathways could take a range of forms, including issuing an approval with guidance on best prospecting or exploration practices; issuing a permit with standard terms and conditions that aim to minimize impacts using specified best practices; conducting a partial ESIA review and issuing a permit with standard terms and conditions plus additional site-specific conditions for advanced exploration and low-impact mines; or requiring a proposed large mining project with the potential for high levels of impact to complete a full ESIA review process.

The legal framework should always require a full ESIA review process and baseline characterization for large-scale mining projects.

## **10. REQUIREMENTS AND PROCEDURES FOR SCOPING ARE PROVIDED, INCLUDING REQUIREMENTS FOR STAKEHOLDER INPUT.**

Scoping is required to define the requirements for the impact assessment.

The legal framework for the scoping stage should require stakeholder input on the mine plan and ToR. Government can facilitate acquiring stakeholder input through coordinating meetings, requests for information, and public requests, taking into consideration political, social, and cultural considerations for the project. The legal framework should require responses to stakeholder input in the scoping phase. Responses should focus on identifying the items to be considered in the assessment and the analyses that will be completed in the ESIA to address the stakeholder concerns, rather than attempting to answer the stakeholder concern immediately. Relevant socioeconomic factors such as health, culture, gender, lifestyle, age, and cumulative effects consistent with the concept and principles of sustainable development should be integrated into the process (IAIA, 1999). Climate conditions and the need to mitigate and adapt to climate change should also be considered during the scoping phase.

Following scoping, provisions should be in place to set ToR that define the content of the ESIA. An alternatives assessment should be included in the ToR, including a "no project" alternative. The

alternatives assessment process is a key opportunity in the ESIA review process for stakeholders to have meaningful input to the project design and for the project to be modified to avoid and minimize adverse project impacts. Note that alternatives need to be technically feasible and assess options that meet environmental and social protection goals while still maintaining the economic viability of the project.

The legal framework should also clarify the scope of review and how it will be conducted. Government review of the mine development plan should also determine opportunities for shared use of infrastructures, such as roads, ports, power generation, and power lines that may be used to benefit surrounding communities.

Some legal frameworks require a wide range of types of impact assessments. These may include environmental, social, human rights, economic, gender, health, and possibly other types. While these types of assessments are identified as separate components of a comprehensive analysis, ideally, the ESIA legislation or policy will direct the overall analysis to be conducted in an integrated manner, resulting in a comprehensive review. Older legislation that only assesses environmental impacts may benefit from updates to include other critical socioeconomic issues. Likewise, each assessment may have its own separate management plan that is monitored by separate teams and may or may not inform progress on rehabilitation plans, mine closure plans, and plans for the post-mining transition. Where possible, these impact assessments and management plans should be streamlined to avoid duplication of effort and to optimize access to information and use of resources.

## **11. ESIA IS PART OF PROJECT PLANNING AND IS CONDUCTED BEFORE ANY DECISIONS ARE MADE TO APPROVE A PROPOSED LARGE-SCALE MINING PROJECT.**

No exploitation activity or any other mining activity should be allowed to proceed without a permit or licence from the competent government authority. An ESIA review and resulting licence, certificate, or approval are conditions for granting a large-scale mining permit.

The legal framework should provide clear requirements for submission of ESIA reports, government review of the assessment reports and related management plans, and approval as a condition for a mining licence or renewal of a mining licence. In particular, the legal framework should:

- Provide criteria for review and decision making and should be clearly described in regulations or a guidance document.
- Require decisions to be made based on the review of a team of technical experts, not only at the discretion of one decision-maker or one governmental department.
- Require a statement of the reasons for denial (in the case of denial), including additional information that is required or must be corrected and the timeline for submission, if any.
- Outline the procedural means for an applicant's appeal of the permit decision.
- Include opportunities for public comments and proponent responses.
- Require publication of information to maintain transparency.

## **12. A REASONABLE TIMELINE FOR THE ESIA REPORT REVIEW PROCESS IS DEFINED.**

Taking the appropriate time to review the ESIA report is necessary for an informed decision-making process. The legal framework should provide a reasonable timeline for the government's ESIA review process from the project proposal submission through to the project decision, with provisions to address delays caused by either the proponent or the government, as well as special circumstances where general deadlines do not apply. In defining these timelines, governments should take into account the complex nature of ESIA reports for large-scale mines, adequate time for public engagement and consultation, time frames for input from technical experts, and coordination and overall availability of human resources in the government ministries undertaking the review.

## **ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS**

### **13. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS ARE REQUIRED IN THE REVIEW PROCESS, AND GUIDELINES ARE PROVIDED.**

A program to manage all the social and environmental risks and benefits of mining activity is essential. The management plan should include identified risks and mitigation strategies, internal and external monitoring and reporting, contingency planning, and plans for corrective action.

The legal framework should require an analysis of impacts and mitigation and management measures to be developed in order to minimize the impacts. Requirements of the legal framework might include management plans ranging from a resettlement plan to an environmental monitoring plan and closure plan. The management plans should integrate stakeholder input. The legal framework should require the company to collect appropriate detailed baseline data to assess impacts on the identified valued environmental and social components and conduct a full ESIA review process.

## **MINE CLOSURE PLANS AND FINANCIAL ASSURANCE**

### **14. PRELIMINARY MINE CLOSURE AND POST-MINING TRANSITION PLANS ARE REQUIRED IN THE REVIEW PROCESS, AND GUIDELINES ARE PROVIDED.**

The success of mine closure and the post-mining transition rely on actions that span the entire life of the mine. Social and economic objectives in particular may take a long time to achieve, so starting the implementation of a comprehensive mine closure plan early is key.

The preliminary mine closure plan should be required in the ToR for the ESIA and should include progressive rehabilitation; definition and measures for temporary and sudden closure; land-use objectives consistent with local, regional and national strategies; stakeholder engagement strategies; measures to ensure chemical and physical stability; social closure components; research and monitoring requirements to ensure long-term success; and preliminary cost estimates. Minimum legal requirements will ensure that mine closure plans:<sup>7</sup>

---

<sup>7</sup> These principles are inspired by the Royal Government of Bhutan's Environmental Assessment Guidelines for Mines and Quarries (National Environmental Commission, 2012, p. 39).

- Incorporate results from stakeholder consultations, including the perspectives of men and women, youth, and representatives of vulnerable groups.
- Provide a clear, fully engineered plan from the outset.
- Ensure that adequate financial assurance is in place at all times.
- Include progressive rehabilitation.
- Prepare for, alleviate, and minimize adverse socioeconomic impacts on mine-dependent communities after the mine closes.
- Anticipate post-mining employment, skills, and business development needs.
- Recreate or preserve valuable attributes and aesthetics of the site and surrounding area.
- Protect off-site environmental resources (i.e., air, land, water, plants, fish, wildlife, etc.) and human health and safety.
- Minimize or eliminate all potential sources of pollution after the mine closes (i.e., it includes an effective plan for long-term physical and chemical stability).
- Integrate and take into consideration regional economic development plans.
- Allow for sustainable post-mining land use.
- Integrate climate change impacts and needs for adaptation.

## **15. ADEQUATE FINANCIAL ASSURANCE FOR REMEDIATION AND MINE CLOSURE IS REQUIRED AND MUST BE MAINTAINED BY THE MINING LICENCE HOLDER.**

Adequate financial assurance for remediation and mine closure is fundamental to ensuring that funds are readily available to governments in case of insufficient remediation or mine closure, or mine abandonment by project proponents.

The legal framework should require a financial assurance fund for remediation and mine closure prior to approving a permit for mine construction and operation. The fund can be used for mine closure and post-mining transition, including funds to cover costs related to any unexpected closure. Unexpected closures may be temporary or permanent and may occur at any time in the mine life from a variety of causes, such as the collapse of market prices, fires or accidents, or the bankruptcy of a mining company. The financial assurance should cover the outstanding liabilities for the property at any point in time. Financial assurance should be reviewed by a third-party analyst and reviewed at least every five years or when a significant change occurs to the mine plan.

## **PERMITS AND APPROVALS**

### **16. PERMITS AND APPROVALS ARE SUBJECT TO STANDARD TERMS AND CONDITIONS, INCLUDING REPORTING AND UPDATING REQUIREMENTS.**

Defining and monitoring conditions for permits is critical to ensuring that legal requirements are followed by mining proponents and promoting learning from experience. Approvals and permits should be time-limited with clear conditions and reporting requirements. The legal framework should require permit holders to monitor and report on environmental and social impacts, as well as the

implementation and effectiveness of applied mitigation and management measures. This includes periodic reporting on the status of ESMPs and closure plans. The legal framework should provide clear requirements regarding when reports must be submitted and what must be covered, circumstances that trigger the submission of additional reports (e.g., material changes to the mine plan), and what must be included in the report.

The legal framework should also require a periodic review of management plans on a regular basis and in case of material change. Triggers for assessing material changes should be provided. There should also be periodic updates to the mine closure plan, particularly when there are changes to the mine plan or new data indicates the need for updates to the plan. The legal framework should require regular reporting on the adequacy of the financial assurance, taking into consideration current and anticipated conditions of the site.

## MONITORING, INSPECTIONS, AND ENFORCEMENT

### **17. OVERSIGHT OF ENVIRONMENTAL AND SOCIAL IMPACTS ACROSS THE LIFE OF THE MINE IS REQUIRED THROUGH MONITORING, INSPECTIONS, AND ENFORCEMENT.**

The legal framework should express the government oversight role in ensuring that impact mitigation and management measures are implemented by mining companies. Government should consider requiring the use of external entities to contribute to the auditing of management plans and closure plans, and to validate the risk assessments, studies, and activities associated with high-risk elements. Such high-risk elements include tailings dams, waste dumps, and acid rock drainage.

Implementation of inspection procedures and schedules requires clear legal requirements, plans, and timelines. It also requires highly trained human resources and sufficient financial resources for equipment, travel, continuing education, and other ongoing inspection requirements. Some legal frameworks set up a fund for independent third-party inspections through which companies provide funds, with clear methods for oversight and transparent use of funds. The inspection process should be clear, including a process for review by the company and government and procedures for the company to dispute findings in inspection reports. The government must have the capacity to do some inspection of its own, to “check the checkers.”

Incorporating participatory monitoring mechanisms for the management of environmental and social issues of greatest concern to local community members can be an effective way to complement government monitoring actions and build trust among stakeholders. Governments can facilitate this by providing guidelines for participatory monitoring mechanisms.

### **18. SANCTIONS FOR NON-COMPLIANCE ARE COMMENSURATE WITH THE LEVEL OF VIOLATION.**

Defining and applying sanctions is a key component of an effective legal framework. A clear definition of breaches and failures to comply with permit requirements and procedures to initiate sanctions is important to ensure the predictability and credibility of the legal framework.

The process for addressing breaches and applying reasonable sanctions for unmet environmental and social management obligations should be detailed in the legal framework and outlined or referenced in permit terms and conditions. The sanctions should be commensurate with the level of violation in order to fairly but effectively discourage violations of the law.

## **19. EXISTING PERMIT CONDITIONS MUST BE MET PRIOR TO RENEWAL AND PRIOR TO APPROVING A PERMIT FOR LARGE-SCALE MINE DEVELOPMENT.**

Ensuring that permit holders have met all the environmental and social conditions of their permits, along with any other requirements, before renewing or granting a new permit, especially for a large-scale mine, is a common-sense management approach. However, such requirements are not specified in some legal frameworks, or they are only specified for certain phases of mining.

Any request for the renewal or extension of an exploration licence, exploitation permits, or other mining licences should include a description and evidence of compliance with environmental and social reporting, mitigation plans, and other related obligations set out in the legal framework and in the permit holder's stipulated terms and conditions. Failure to implement environmental and social management obligations should grant the government the right to prevent further activity under the permit, with clear guidelines and a process for company appeals to challenge the government's exercise of such a right. The process for addressing breaches and applying reasonable sanctions for unmet environmental and social management obligations should be detailed in the legal framework and outlined or referenced in relevant permit terms and conditions.

## **20. CLEAR CONDITIONS ARE PROVIDED FOR "EXIT TICKETS," RELINQUISHMENT, AND MANAGEMENT OF RESIDUAL RISKS.**

Relinquishment occurs when ownership, residual liabilities, and responsibility for a former mine site can be returned to the corresponding jurisdiction or the original owner or is transferred to a third party, following completion of closure activities and satisfaction of agreed success criteria. Legal frameworks should provide clear guidelines and requirements for relinquishment.

Relinquishment should be determined at each project level after the determination that all closure objectives, activities, and criteria have been met. At the outset, the legal framework for the closure plan should require that the proponent indicates the expected timeline for relinquishment and publication of a notice. At the same time, legal frameworks should offer a pathway to final relinquishment (APEC Mining Task Force, 2018) or a relinquishment process that also includes what is expected from the proponent and the situation in which relinquishment might not be feasible. Responsibility for ongoing liabilities, transferable liabilities, and residual risks must be clear, especially for situations where relinquishment is a managed process, such as in cases requiring passive or active long-term care. Uncertainty can lead to heavy financial, environmental, and social burdens for governments for abandoned mines (Cowan, Mackasey, & Robertson, 2010).

While several recommendations or principles in this chapter can be implemented only through the adoption of a new law or regulation or the revision of existing frameworks, some recommendations require other kinds of mechanisms, such as guidelines, partnerships, and dialogue. Additional enabling factors that can influence the success of the integration and implementation of the proposed recommendations and best practices are described in the next chapter.

# 4.0

## ENABLING FACTORS AND MECHANISMS OF A GOOD FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT



This chapter covers key enabling factors and mechanisms for a good legal framework for environmental and social impact assessment and management:

1. **Alignment of Laws:** Align international, national, and subnational law and policy
2. **Stabilization Provisions:** Avoid legal stabilization of environmental and social provisions in laws and contracts
3. **Strategic Assessment:** Conduct a strategic environmental and social assessment for the mining sector
4. **Inter-Ministerial Collaboration:** Establish a coordinating agency
5. **Engagement and Consultation:** Establish guidelines for public engagement and consultation
6. **Human Resources:** Ensure that effective human resources are in place, along with ongoing training programs
7. **Funding:** Identify sources of funding for assessing and improving your legal framework

### OVERVIEW

This chapter describes the key enabling factors and mechanisms for a comprehensive legal framework for environmental and social impact assessment and management.

Putting the time and resources into getting the right legal framework in place in advance of permitting mining activities can minimize environmental and social issues throughout the life of the mine while optimizing environmental management and socioeconomic benefits.

## ENABLING FACTORS AND MECHANISMS

### 1. ALIGNMENT OF LAWS: ALIGN INTERNATIONAL, NATIONAL, AND SUBNATIONAL LAW AND POLICY

Consistency among all legal instruments governing environmental and social impact assessment and management is a key factor for a good legal framework. When adopting or revising laws and regulations, governments should ensure alignment at two levels: (a) within domestic legislation and (b) between domestic legislation and international commitments.

Alignment within **domestic law**:

- **Across domestic laws and regulations:** In the majority of jurisdictions, ESIA requirements for the mining sector are primarily, but not exclusively, mining and environmental laws and regulations that outline environmental and social impact assessment and management plans in the context of mine permitting, management, and closure. Domestic law should comprehensively address and regulate all components of ESIA processes and outcomes without contradictions. For example, some jurisdictions' investment codes include provisions on automatic approval of investment projects when a certain time elapses without an official response from the competent authorities. The aim is to streamline and speed up processes and set up one-stop shops with the expectation this system will attract more investment. This might result in inconsistencies with the timelines required in the ESIA process in mineral development investments, unless there are clear and separate requirements for the mining sector are specified.
- **Between domestic law and mining contracts:** Where mining contracts are used, they should always be aligned with and subject to domestic laws. Government should ensure that mining contracts are not used as an instrument to replace domestic laws or undermine implementation of the domestic rule of law.

Alignment between domestic law and international commitments:

- **Domestic law and international treaties:** Domestic law should reflect and implement the principles and obligations of international and regional instruments the government has adopted and ratified. International treaties may include commitments directly or indirectly related to ESIA processes. Key examples of international treaties include the International Covenant on Civil and Political Rights; the International Covenant on Economic, Social and Cultural Rights; the United Nations Framework Convention on Climate Change; the Stockholm Convention on Protecting Human Health and the Environment from Persistent Organic Pollutants; the Convention on Biological Diversity; the Ramsar Convention on Wetlands; and the Convention on the Elimination of All Forms of Discrimination Against Women. Sources of customary international law and universally agreed non-binding instruments include the Universal Declaration of Human Rights or the United Nations Declaration on the Rights of Indigenous Peoples.

## BOX 2. THE PRECAUTIONARY PRINCIPLE

The precautionary principle is enshrined in the 1992 Rio Declaration on Environment and Development. It calls for affirmative regulatory policies in the face of significant environmental harm, even when full scientific certainty is lacking (Sands, 2000). An important component of the precautionary principle (Kriebel et al., 2001) is the recognition for states to develop environmental measures that anticipate and mitigate environmental risks where activities could otherwise lead to serious or irreversible environmental harm.<sup>8</sup> When faced with such consequences, the precautionary principle states that the absence of full scientific certainty should not be used as an excuse to prevent the implementation of environmentally sound policies.

Principle 15 of the Rio Declaration reads:

*In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. (United Nations Conference on Environment and Development, 1992)*

The precautionary principle, also known as the precautionary approach, has been used as a legislative concept as far back as the 1970s in Sweden and other Nordic countries (Sands, 2000) and is currently a mainstay in nearly 20 multilateral treaties, including the UN Framework Convention on Climate Change, the Convention on Biological Diversity, the Aarhus Protocols, and the 1996 London Protocol to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (Sands, 2000; Secretariat of the Pacific Regional Environment Programme, n.d). Many countries include a form of the precautionary principle in their environmental legislation, such as South Africa (Vinti, 2018), Canada (Saxe, 2015; Surtees, 2018), Finland, and the European Union (Sands, 2000). Many view the principle as heading toward becoming a foundational component of customary international law (Sands, 2000).

The International Court of Justice (ICJ) first invoked the precautionary approach in the Pulp Mills case in 2010, where Argentina charged Uruguay with failing to put environmental protections in place when Uruguay awarded permits to milling operations that resulted in polluted waterways between the two nations.<sup>9</sup> This case affirmed the use of ESAs as an essential obligation under international law and the use of the precautionary principle as an approach to interpreting state obligations (Anton et al., 2011).

In an advisory opinion concerning deep seabed mining, a chamber within the International Tribunal for the Law of the Sea concluded that states must implement the precautionary approach as an integral part of their due diligence obligations “in situations where scientific evidence concerning the scope and potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks” (Anton et al., 2011). The advisory opinion is notable for

<sup>8</sup> The precautionary principle contains four essential elements: taking preventative action in the face of scientific uncertainty, shifting the burden of proof to the proponents of an industrial activity, investigating safer alternatives to potentially harmful actions, and increasing public participation in decision-making activities. See Brown Weiss (1992).

<sup>9</sup> Pulp Mills on the River Uruguay (Argentina v. Uruguay), ICJ Reports 2010, 14 (April 20).

linking the precautionary principle to a state's established international law obligation to perform its due diligence, conduct ESIA, and prevent environmental harm (Chen 2016).

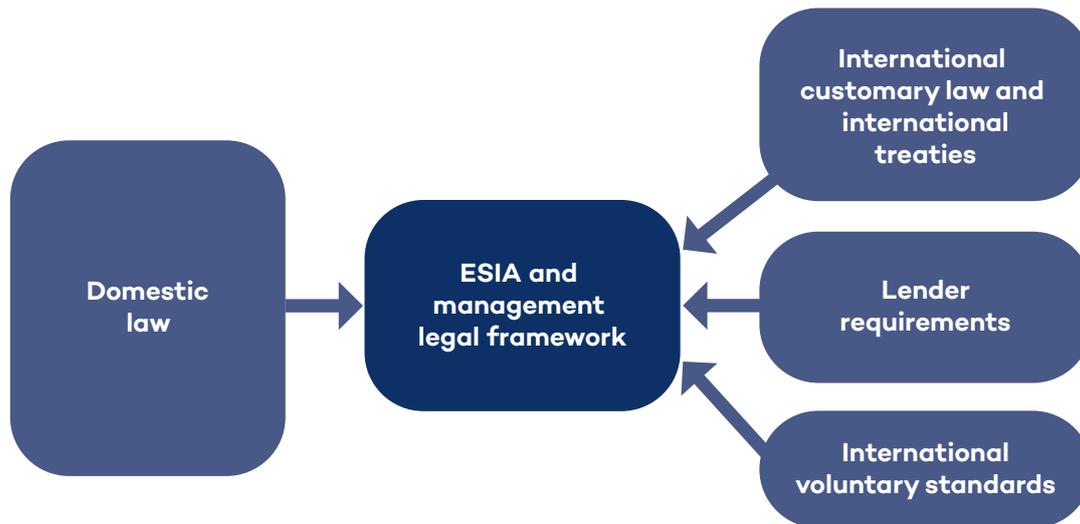
The European Court of Human Rights invoked the precautionary principle in *Tătar v. Romania*, where it held that Romania was under obligation to adopt precautionary measures to protect citizens from health problems that may have resulted from a sodium cyanide spill at a gold mine.<sup>10</sup> The court noted that, because the mine had been allowed to continue its operations after the accident, the state breached the precautionary principle when it failed to take appropriate measures to assess and monitor the health and environmental risks of the operations, both at the time of granting the operating permit and after the accident occurred (European Court of Human Rights, 2009).

- **Lender requirements:** A range of requirements imposed by lenders have been major drivers of ESIA development in much of the world. The requirements are provided by two categories of lenders. The first set of requirements applies to projects funded by development banks, such as the World Bank *Environmental and Social Framework*, which has applied since 2018 in parallel with the previous *Environmental and Social Safeguard Policies* (World Bank, n.d.) for a transitional period, and the International Finance Corporation (IFC) *Performance Standard 1* and its related guidance notes (IFC, n.d.b, 2012a), and regional development bank requirements. The second set of requirements applies to projects financed by private lenders. The main set of requirements is the Equator Principles (2020), which incorporates the IFC Performance Standards. All of these requirements not only represent good practice, but they are also obligatory for many projects. If national ESIA practice does not meet these standards, the ESIA process, or parts of it, may need to be revised.
- **Voluntary sustainability initiatives (VSIs):** Voluntary standards can synthesize good international practices and provide guidance for national legislation and for specific stakeholders. Such voluntary standards may be adopted by governments, companies, or other stakeholders, and these standards may also be referenced in mining contracts and legal frameworks. However, it can be challenging for governments to capitalize on the multitude of VSIs. As noted by a joint report from the IISD and State of Sustainability Initiatives, prepared under the auspices of the IGF, “while there is an opportunity for VSIs to fill the void, advancing sustainable development goals and acting as a de facto regulator,” (IGF et al., 2018, p. 23) most of them are “fundamentally instruments of the market” (IGF et al., 2018, p. 21). In order to help “public sector officials understand how to take advantage of VSIs in the mining sector to advance their sustainable development goals, ... VSIs should be designed to operate in the ‘shadow’ of rules and sanctions provided by the general law” (IGF et al., 2018, p. 28) and not become a “substitute for continuing government oversight and the threat of direct intervention where necessary” (IGF et al., 2018, p. 28). It is critical for governments to align international legal obligations and, where relevant, good practices represented in voluntary standards, in domestic laws pertaining to ESIA governance. The IGF Mining Policy Framework, particularly its Environmental Management and Post-Mining Transition themes (IGF, 2020), is an example of an international voluntary standard adopted by a government-led organization.

<sup>10</sup> *Tătar v. Romania*, no. 67021/01, ECHR 2009.

The overall domestic legal framework should be free of conflicts between international obligations and national law and policy frameworks. This alignment will promote procedural clarity and streamline implementation. The main sources<sup>11</sup> of a legal framework governing environmental and social impact assessment and management are presented in Figure 2.

**FIGURE 2. SOURCES OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT LEGAL FRAMEWORK**



## 2. STABILIZATION PROVISIONS: AVOID LEGAL STABILIZATION OF ENVIRONMENTAL AND SOCIAL PROVISIONS IN LAWS AND CONTRACTS

Stabilization provisions are law or contract clauses that limit the application of certain new laws and regulations to a particular investor or require a government to compensate an investor who does apply them.<sup>12</sup> Stabilization provisions can appear in mining and investment laws as well as in mining contracts in some developing countries. However, developed country governments do not allow such provisions, either in full or in limited forms.<sup>13</sup>

Stabilization clauses are generally divided into two categories: fiscal and non-fiscal. The latter includes issues like environmental and social assessments and management, labour law, and other non-fiscal issues. Such provisions can “freeze” an outdated ESIA law or mining codes applicable to a mining project investment at the date of its approval and for the life of the mine. In some instances, government compensation for additional costs is required as a condition for the mining company

<sup>11</sup> Sources of international law as presented in Article 38 of the Statute of the ICJ include international conventions, international custom, general principles of law as well as judicial decisions and legal scholarship. Governments can learn from national and international landmark case laws related to environmental and social disputes to inform the discussion around the effectiveness of their legal framework on ESIA.

<sup>12</sup> For a general discussion of this issue, see Mann, H. (2011, October 7). Stabilization in investment contracts: Rethinking the context, reformulating the result. *Investment Treaty News*. <https://www.iisd.org/itn/2011/10/07/stabilization-in-investment-contracts-rethinking-the-context-reformulating-the-result/>.

<sup>13</sup> See Shemberg (2008, p. 17): “No contract from the OECD countries contains either full or limited freezing clauses.”

to implement a new law, and this can create other obstacles for the implementation of new modern legislation promoting better environmental and social protections.

The issue of stabilization has been on the global stage for some time. As stated in Principle 4 of the 2009 UN Principles for Responsible Contracts, “stabilization clauses, if used, should be carefully drafted so that any protections for investors against future changes in law do not interfere with the State’s bona fide efforts to implement laws, regulations or policies, in a non-discriminatory manner, in order to meet its human rights obligations” (United Nations Human Rights Office of the High Commissioner, 2015). This approach has been confirmed in the recent Organisation for Economic Co-operation and Development (OECD) *Guiding Principles on Durable Extractive Contracts* (OECD Policy Dialogue on Natural Resource-based Development, 2019). Moreover the OECD Guiding Principle VII goes further regarding the use of non-fiscal stabilization clauses. They are clearly set out as undesirable, while there is also clear recognition that the cost to industry of complying with new laws should be deductible from income as business expenses.<sup>14</sup>

The growing consensus indicates that stabilization clauses covering environmental and social topics should be avoided in mining contracts and legal frameworks. The reasons for this are many. One reason is that it leads to multiple special legal regimes governing foreign mining operations within a single jurisdiction, which complicates government’s role of monitoring, administering, and enforcing the regimes. Consider also the difficulty of enforcing stabilized obligations for a foreign investor while applying a new, separate set of environmental and social standards to domestic businesses (Shemberg, 2008). This imbalance could result in misunderstandings among both company and community stakeholders while making enforcement of the new legislation more challenging. Another reason is that litigation or arbitration could be very costly if a company complains that such a clause was not enforced: contracts with investors, for example, are often enforceable in international arbitration. The cost of arbitration and amounts of awards can be extremely burdensome for governments.

The review of legal frameworks and contracts for this guidance document demonstrated that some developing country jurisdictions continue to use stabilization provisions on environmental and social topics. However, it is now recognized as good practice to avoid such provisions in domestic legal frameworks.

---

<sup>14</sup> Guiding Principle VII states, in part: “Durable extractive contracts are consistent with applicable laws, applicable international and regional treaties, and anticipate that host governments may introduce bona fide, non-arbitrary, and non-discriminatory changes in law and applicable regulations, covering non-fiscal regulatory areas to pursue legitimate public interest objectives. The costs attributable to compliance with such changes in law and regulations, and wholly, necessarily and exclusively related to project specific operations, should be treated as any other project costs for purposes of tax deductibility, and cost recovery in production sharing contracts” (OECD Policy Dialogue on Natural Resource-based Development, 2019, p. 11).

## LEGAL DISPUTE CASE STUDY

**Year initiated:** 2003

**Case name:** *Glamis Gold v. United States* (UNCITRAL)

**Status:** Award in favour of the state (dismissed on the merits)

**Amount claimed in initial request:** USD 50 million

**Amount awarded:** None

**Year of award:** 2009

### Cultural Measures; Environmental Measures

Glamis Gold Limited is a Canadian-based mining company that sought authorization to develop a mining site in the U.S. State of California using traditional open pit techniques. Previously, such techniques had been legal in the state; however, state law enacted in the mid-1990's banned open pit mining and other procedures. These higher regulatory standards also integrated extensive environmental and cultural impact assessments into the permitting processes. This included outlining a proposal's effects on ancient Native American religious and cultural sites. The Glamis project was in close proximity to traditional lands and sacred sites of the locally based Quechan Indian Tribe and other areas of special cultural concern. This incited significant public opposition to the project based on both environmental and cultural heritage grounds (Wredberg, 2009).

Updated land reclamation regulations established rules requiring the total backfill and restoration of the mining site and took sustained measures to protect the local Native American religious and cultural heritage sites. Glamis argued that the new California law targeted the investor's project and was designed to make the project infeasible, which was discriminatory and arbitrary. Much of Glamis's claims hinged on the allegation that the State of California and the federal government had violated the fair and equitable treatment (FET) standard when the new regulations made their investment project infeasible by affecting the level of profits the company could anticipate.

Before concluding the permitting process, Glamis invoked Chapter 11 (the Investment Chapter) of the North American Free Trade Agreement (NAFTA)<sup>15</sup> and claimed that the regulatory actions amounted to an expropriation of their investment and a violation of NAFTA's FET standard. The tribunal disagreed and found the anticipated loss in profit (over USD 28 million, or about 55–59% of anticipated profit) was not sufficient to amount to an expropriation because the mining rights continued to retain significant value (around USD 20 million) (Bernasconi-Osterwalder & Johnson, n.d., p. 63; Wredberg, 2019). Further, the tribunal found no breach of the FET standard because the government had not engaged in actions that were "egregious" or "shocking" (Bernasconi-Osterwalder, N., & Johnson, n.d., p. 65). Importantly, the tribunal noted that the government had

<sup>15</sup> NAFTA is the 1994 trade agreement established between the United States, Canada, and Mexico. The United States-Mexico-Canada (USMCA) trade agreement will replace NAFTA in 2020. Investment provisions are ubiquitous—according to UNCTAD, there are currently 2,338 bilateral investment treaties in force and an additional 319 treaties with investment provisions. Investment treaties are common with developing countries to promote and facilitate foreign direct investment and to foster economic growth. Increased foreign direct investment by multinational mining companies has resulted in a growing number of international arbitration claims, based on investment agreements or treaties, that have a connection to environment regulation, and the FET standard. FET is often raised when a state adopts and enforces new or more stringent environmental regulations (Lahlou et al., 2019).

made no specific assurances to Glamis that its permits would be approved, thus implying it may have reached another conclusion if such assurances had been made. Glamis now stands for an approach that affords government increased flexibility to take into account environmental and cultural heritage concerns in the regulatory space (Bernasconi-Osterwalder & Johnson, n.d.).

A host state could violate the FET standard if it has made a specific commitment to the foreign investor that such a regulatory change would not be made. Many tribunals have held that the state's change of law or regulations does not breach the FET standard unless the host state has made specific stabilization assurances to the foreign investor. For instance, in *Parkerings v. Lithuania*, the tribunal held that “[s]ave for the existence of an agreement, in the form of a *stabilisation* clause or otherwise, there is nothing objectionable about the amendment brought to the regulatory framework existing at the time an investor made its investment” (Zhu, 2018). Where a government has not adopted environmental or social stabilization provisions, like in Glamis, it will thus be able to continue to advance its environmental and social regulation of the mining sector. It is important to note that the government advanced these regulations in a manner that was not viewed by the tribunal as “egregious” or “shocking,” in violation of customary international law.<sup>16</sup>

### 3. STRATEGIC ASSESSMENT: CONDUCT A STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR THE MINING SECTOR

Strategic environmental and social assessment (SESA) is a tool to develop the government's overall vision, goals, framework, and land-use plans for the mining sector, informed by other national and subnational development plans and objectives. The SESA process helps development planners design investment strategies, programs, and projects that are environmentally and socially sustainable on national and subnational levels.

SESA is important to inform mineral development and its contributions to social and economic benefit optimization. SESA can promote greater understanding and clarity for all stakeholders regarding national and subnational plans for the mining sector. National and/or subnational governments are best situated to lead or mainstream SESAs (United Nations Environment Programme, 2020, p. 15), since the objectives and results are directly linked to land-use plans, development policies, and legislation requirements. The requirements for conducting SESA can also be integrated into the ESIA legal framework, which provides the impetus, structure, and transparency in the SESA process.

---

<sup>16</sup> *Glamis Gold, Ltd. v. United States*, Award, para. 627 (NAFTA Arb. Trib. June 8, 2009): “The Tribunal therefore holds that a violation of the customary international law minimum standard of treatment, as codified in Article 1105 of the NAFTA, requires an act that is sufficiently egregious and shocking—a gross denial of justice, manifest arbitrariness, blatant unfairness, a complete lack of due process, evident discrimination, or a manifest lack of reasons—so as to fall below accepted international standards and constitute a breach of Article 1105. Such a breach may be exhibited by a ‘gross denial of justice or manifest arbitrariness falling below acceptable international standards’; or the creation by the State of objective expectations in order to induce investment and the subsequent repudiation of those expectations.”

Benefits of SESA include:

- **Responsible governance:** Better preparedness and strengthened governance for environmental and natural resources management (Netherlands Commission for Environmental Assessment, 2017a).
- **Enhanced understanding of stakeholder perspectives:** SESA may help meet national and subnational development objectives by improving understanding of a wide range of stakeholder perspectives and potential mining sector impacts, both positive and negative.
- **Improved alignment of national and subnational development plans:** SESA can inform the preparation of development plans at regional and local levels while integrating regional and local concerns into national development planning.
- **Enhanced coordination and collaboration:** SESA can guide discussions of appropriate policy and plans that may be needed in order to achieve sustainable mining in the country while taking into account institutional and policy constraints. It is a good opportunity to identify gaps in legal framework, institutional capacity, and public consultation mechanisms.
- **Definition of excluded zones:** SESA can assist governments, with input from key company, community, and civil society stakeholders, to identify environmental, social, and cultural constraints in land-use planning and mine permitting. SESA can also inform government decisions related to regional and local land-use decisions, such as where mining (and industrial activities in general) may be permitted and where there may be development restrictions, such as areas of major ecological importance. Excluded zones may cover World Heritage Sites (United Nations Educational, Scientific and Cultural Organization, n.d.), other cultural heritage sites,<sup>17</sup> and protected areas.<sup>18</sup> Excluded zones should be integrated into the mining cadastre and territorial cadastre and made accessible to the public and investors.

The success of a SESA is dependent on formulating the correct questions and scope of the assessment, as well as the availability of data and information. SESA can be limited by various constraints, such as the availability of data and information. Governments can refer to useful existing guidance to help them prepare for and conduct an effective SESA (Loayza & Albarracin-Jordan, 2010; Netherlands Commission for Environmental Assessment, 2017a; OECD, 2006; World Bank, 2010).

#### 4. INTER-MINISTERIAL COLLABORATION: ESTABLISH A COORDINATING AGENCY

Effective governance of ESIA and related management plans requires governments to collaborate and work across ministries. Defining clear roles and responsibilities is necessary to provide clear lines of accountability, procedures, and decision making.

<sup>17</sup> For a good definition, see International Finance Corporation. (2012). *Performance Standard 8: Cultural Heritage*. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/policies-standards/performance-standards/ps8](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps8)

<sup>18</sup> The International Union for the Conservation of Nature (IUCN) defines six levels of protected areas and suggests zones in which mining should not occur. Under the terms of the International Labour Organization Indigenous and Tribal Peoples Convention 169, the United Nations Declaration on the Rights of Indigenous Peoples, the Convention on Biological Diversity, and other provisions of national and international law, exploration should not occur on the territories of Indigenous Peoples or where it affects resources of traditional subsistence, cultural or other use, without prior consultation with the appropriate Indigenous communities.

Ideally, the ESIA process should be centralized in the ministry of the environment or within a special agency, with collaboration from other ministries. The advantage of this approach over a sectoral approach in which each ministry is responsible for ESIA for projects subject to its jurisdiction (for example, hydroelectric dams in the ministry of energy, forestry projects in a ministry of forestry, and mining projects in a mines ministry) is that a centralized approach may be more consistent and streamlined. A sectoral approach can lead to inconsistencies and confusion. However, the ministry of environment or other authority responsible for ESIA should collaborate with other ministries on national and subnational levels to assess and manage environmental and social impacts.

Such approaches may take the form of a formal government agency being solely responsible for this coordination,<sup>19</sup> which is likely a good approach where a country has many mining projects. They may also take the form of a Memorandum of Understanding among agencies on an as-needed basis, which may be more practical for countries with only a few mining projects.

## LEGAL DISPUTE CASE STUDY

**Year initiated:** 2015

**Case name:** *Cortec Mining v. Kenya* (ICSID Case No. ARB/15/29)

**Status:** Award in favour of the state

**Amount claimed in initial request:** USD 2 billion plus interest

**Amount awarded:**

**Year of award:** 2018

### ESIA; Environmental Permitting

In *Cortec Mining v. Kenya*, three mining companies challenged the revocation of their mining licence, which was obtained in early 2013 yet revoked by the Minister for Mining and the Environment of Kenya in August 2013 (Herbert Smith Freehills, 2018). An essential issue was whether the licence had been obtained lawfully, given the claimants' failure to complete the required EIAs. The tribunal held that, because the EIA is a mandatory component of the licence application, the revocation of the licence could not be challenged under the UK–Kenya Bilateral Investment Treaty (BIT) (Nyamori, 2019). The International Centre for Settlement of Investment Disputes (ICSID) tribunal therefore declined jurisdiction over the mining companies' claims.

The dispute concerned investments in a mining project at Mrima Hill in southern Kenya. Under Kenyan law, Mrima Hill is designated as a forest reserve, a nature reserve, and a national monument, affording it extra protections.<sup>20</sup> Mrima Hill is also home to sacred areas for the Digo, an Indigenous People of the coastal region of Kenya. In 1997, the Kenyan government entered a notice under the 1940 Mining Act that prohibited "all prospecting and mining in the Kwale district which includes

<sup>19</sup> Bill C-69, An Act to enact the Impact Assessment Act and the Canadian Energy Regulator Act, to amend the Navigation Protection Act and to make consequential amendments to other Acts, 1st Session, 42nd Parliament, 2019.

<sup>20</sup> ICSID Decision, p. 13, <https://www.italaw.com/sites/default/files/case-documents/italaw10051.pdf>

Mrima Hill.”<sup>21</sup> Despite these restrictions, the claimants successfully obtained a special prospecting licence in 2008 and a special mining licence in 2013 (Herbert Smith Freehills, 2018).

The tribunal determined that the special mining licence was obtained in contravention of Kenyan local law, which required an EIA to be conducted as a prerequisite to obtaining the mining permit (Herbert Smith Freehills, 2018). Because no EIA was conducted, the tribunal rendered the mining licence as void as a matter of Kenyan law (Herbert Smith Freehills, 2018). Further, the tribunal held the project was not a “protected investment,” because the BIT and ICSID Convention protect only investments in “substantial compliance with” the legal requirements of the host state (Herbert Smith Freehills, 2018). Because the mining licence was not procured in conformity with the domestic laws of Kenya, the claimants could not avail themselves of protection under the BIT or ICSID Convention. The tribunal asserted that, in this case, environmental considerations were of “fundamental importance,” and affirmed that “[i]t is difficult to overstate the importance of environmental protection in areas, such as Mrima Hill, of special vulnerability” (Herbert Smith Freehills, 2018).

This outcome demonstrates the need for government ministries to coordinate their efforts, particularly to ensure that a mining licence is not issued until all legal requirements for the licence are met, including completion of an ESIA and the government’s ESIA review process.

## **5. ENGAGEMENT AND CONSULTATION: ESTABLISH GUIDELINES FOR PUBLIC ENGAGEMENT AND CONSULTATION**

Public engagement and consultation requirements for the ESIA process can be supported by guidelines. Guidelines for public engagement and consultation, particularly consultation with Indigenous Peoples, can help clarify procedures to implement legal requirements.

In particular, guidelines can add further clarification regarding government and company roles in the public engagement and consultation processes.

Best practice principles for public participation by the IAIA should be considered. IAIA principles for public participation include that the process be initiated early and sustained, well planned and focused on negotiable issues, supportive to participants, open and transparent, and context-oriented (André et al., 2006).

Guidelines can help clarify:

- Parties to be consulted
- Method of engagement and/or consultation
- Frequency and timing of consultations
- Role of government
- Required level of effort from the company
- Documentation and publication requirements.

<sup>21</sup> Gazette Notice No. 986 of 1997, The Mining Act (Cap.306), 13 February 1997. ICSID decision, p. ix & p.15, <https://www.italaw.com/sites/default/files/case-documents/italaw10051.pdf>

Consultation with Indigenous Peoples should have distinct requirements and guidelines aligned with international frameworks such as the International Labour Organization (ILO, 1989) Indigenous and Tribal Peoples Convention 169 (ILO Convention 169) and the United Nations Declaration on the Rights of Indigenous Peoples (UN General Assembly, 2007). Where a project affects Indigenous Peoples' rights to land, territory and resources, the project should meet the requirements of Free, Prior and Informed Consent (FPIC) to conform with Article 32 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

## LEGAL DISPUTE CASE STUDY

**Year initiated:** 2014

**Case name:** *Bear Creek v. Peru* (ICSID Case No. ARB/14/2)

**Status:** Award in favour of the investor

**Amount claimed in initial request:** USD 522 million

**Amount awarded:** USD 18.2 million plus interest

**Year of award:** 2017

### Environmental Permitting; Rights of Indigenous Peoples

The *Bear Creek v. Peru* arbitration is important to the principles of sustainable development because it illustrates the importance of public consultation and community outreach to guarantee that investment projects are well received. In November 2007, Peru issued Supreme Decree 083-2007, which granted Canadian investor Bear Creek the authorization to acquire, own, and operate the relevant mining concessions.<sup>22</sup> Bear Creek immediately commenced exploratory operations in the Santa Ana mine and completed an ESIA. Peru approved the ESIA in 2011 yet instructed Bear Creek to establish community participation mechanisms to evaluate the ESIA.

The Aymara Indigenous communities strongly opposed the operation of the Santa Ana mine. Protests ensued from March until June 2011. Mainly, the communities were concerned that the mining activity would negatively affect their land as well as their cultural identity. In June 2011, the newly elected government stopped the mining project.

In August 2014, Bear Creek filed a claim under the Canada–Peru Free Trade Agreement (FTA). The investor argued that Decree 032 breached the requirements of the FTA, including requirements “to protect investors against unlawful expropriation” (Schacherer, 2018, p. 6). Peru countered that the social unrest was so severe that it necessitated the revocation of the previous mining authorization. According to the Government of Peru, Bear Creek was responsible for the project's termination because of its inability to procure a social licence from the affected Indigenous communities (Gurmendi, 2019). Peru referenced the ILO's Indigenous and Tribal Peoples Convention (ILO Convention 169) and the implementing domestic law for the legal basis that Bear Creek was required to obtain the relevant social licence before the project could be approved. However, the tribunal disagreed with Peru's arguments and found that, because Peru did not object to the investor's conduct at the time of the riots, it could not then “in hindsight claim that this conduct was contrary to the ILO Convention 169 or was insufficient, and caused or contributed to the social unrest in the region.”

<sup>22</sup> Supreme Decree 083-2007, <http://intranet2.minem.gob.pe/web/archivos/ogp/legislacion/ds083-2007.pdf>

The Bear Creek tribunal unanimously found that the Peruvian government's actions constituted unlawful expropriation of Bear Creek's investment and ordered the country to pay Bear Creek over USD 8 million damages.<sup>23</sup>

This dispute highlights the importance of establishing and maintaining clear requirements for public engagement and consultation. After a mining licence is issued, it may be very difficult and costly for the government to revoke the licence, as demonstrated by this dispute. Developing community and stakeholder support early in the project and putting mechanisms in place for social monitoring are therefore very important.<sup>24</sup>

## 6. HUMAN RESOURCES: ENSURE THAT EFFECTIVE HUMAN RESOURCES ARE IN PLACE, ALONG WITH ONGOING TRAINING PROGRAMS

Mining technology and our understanding of the short- and long-term environmental and social impacts of mining are evolving rapidly. Social impacts and benefits, as well as the environmental impacts of mining, are changing as mining becomes increasingly automated. Likewise, pronounced impacts of climate change, including more frequent and severe storms, floods, and prolonged droughts, require enhanced assessment and management of risks. It is challenging for governments and other stakeholders to stay ahead of this curve, particularly the most under-resourced governments and those responsible for managing impacts in very remote regions. Ongoing capacity-building and training programs are necessary to better understand complex issues, risk factors, and related costs over long periods of time.

While having a strong legal framework in place is important, funding, hiring, and retaining skilled staff to implement the legal framework at national and subnational levels are also essential to a well-functioning environmental and social management framework. Governments may also have difficulty retaining skilled human resources to implement a legal framework for ESIA and related management plans. Governments may not be able to pay competitive salaries that are needed to retain skilled staff. However, many government officials really enjoy undertaking collaborative processes and find satisfaction in opportunities to develop capacity and advance their professional skills.

Effective implementation of the framework takes continuous efforts to secure needed funding and to educate and support government staff, particularly those who are placed in isolated, rural settings. Special attention should be given to recruiting, training, and supporting staff, and doing so in a manner that advances gender equality.

<sup>23</sup> The tribunal looked at four factors in determining if Decree O32 constituted an illegal expropriation of Bear Creek's investment: (1) the value of the investment had been "substantially compromised"; (2) Decree O32 interfered with the investor's reasonable expectations to develop its project, based on the previously authorized Decree O83; (3) the "character of the measure" of Decree O32; and (4) the tribunal's determination that the government could have done more to obtain the necessary social licence from the local community (Schacherer, 2018, p. 7–8). The tribunal declined to make any further findings on the investor's additional FTA claims.

<sup>24</sup> See, e.g., *Urbaser v. Argentina*.

## 7. FUNDING: IDENTIFY SOURCES OF FUNDING FOR ASSESSING AND IMPROVING YOUR LEGAL FRAMEWORK

The government should identify continuous sources of funding for assessing and improving legal frameworks and guidance for ESIA and environmental and social management for the mining sector. Impacts of new technologies, the need to mitigate and adapt to climate change, and the diverse and shifting expectations of a wide range of stakeholders require governments to adapt and ensure that the legal framework remains responsive to the needs of their jurisdiction.

Potential sources of funding include:

- **A portion of general government revenue from mineral development.** This portion can be put in a special fund to support the cost of reviewing the ESIA process and monitoring of management plans.
- **A fixed annual or monthly regulatory fee from mining companies.** This contribution could be required to fund environmental and social monitoring activities and/or lead agency coordination of ESIA and monitoring.<sup>25</sup> When adopting this option, governments should consider that an additional fee may increase the tax burden on companies. However, the impact is likely to be relatively low.
- **Budget appropriations from national and subnational budgets.** This option may not be available where such budgets are very limited.
- **Technical and capacity-building support from international organizations and aid agencies.**

---

<sup>25</sup> In Peru, for example, an *Aporte por Regulación* to finance the Peruvian Environmental and Control Agency (OEFA) has been implemented, which is calculated on the mining company's monthly turnover, after value-added tax (see: <https://www.oefa.gob.pe/apr/> [in Spanish]).



**SECTION C:**

**KEY GOVERNMENT  
ACTIONS BY PHASE**

**SECTION A:  
SETTING  
THE STAGE**

**SECTION B:  
GOOD LEGAL FRAMEWORK COMPONENTS  
AND ENABLING MECHANISMS**

**SECTION C:  
KEY GOVERNMENT  
ACTIONS BY PHASE**

**SECTION D:  
HOW TO IMPROVE YOUR LEGAL  
FRAMEWORK IN PRACTICE**



## **5.0**

# **THE SCREENING PROCESS: GOVERNMENT ACTIONS THROUGH EXPLORATION AND DEFINING WHEN A PROJECT NEEDS AN ESIA REVIEW PROCESS**



**This chapter covers key government actions on the following topics related to the screening process and through the exploration phase:**

1. **Screening Process:** Decide if an ESIA review process is required for the project
2. **Terms and Conditions:** Ensure that permits and approvals are subject to standard terms and conditions
3. **Special Conditions:** Specify social and environmental requirements for exploration commensurate with project risks
4. **Compliance:** Require existing permit conditions to be met prior to renewal and large-scale mine development

## OVERVIEW

This chapter outlines the screening process for determining whether a mining activity requires an ESIA review process, based on the level of environmental and social risks. The legal framework should define the screening process and provide clear definitions of the type and scale of mining activities that require an ESIA review (Bekhechi, & Mercier, 2002).

Establishing clear requirements for managing environmental and social risks in the early phases of prospecting and exploration is also crucial in responsible governance of the mining sector. Indeed, the prospecting and exploration phases set the stage for responsible mine management and can be a critical phase for company–community relationship building. The first impression of mining and mining companies in local communities is often made by company representatives involved in prospecting and subsequent exploration activities, as they are the first “boots on the ground.” This impression may be very long-lasting and set the tone for company–community relationships for the life of the project and beyond. The Prospectors and Developers Association of Canada (n.d.) has published best practice guidelines (entitled *e3 Plus*) for proponents to manage stakeholder engagement and environmental protection during prospecting and exploration. Establishing clear requirements for managing environmental and social risks in these early phases is therefore crucial in responsible governance of the mining sector.

Table 6 provides an overview of key government actions and requirements in the screening process.



**TABLE 6. KEY GOVERNMENT ACTIONS AND REQUIREMENTS IN THE SCREENING PROCESS**

RESEARCH		INVESTIGATION / MONITORING / REPORTING		FEASIBILITY / ESIA SCREENING
Prospecting	Exploration	Advanced Exploration	Feasibility and Planning (ESIA/Permit)	
<ul style="list-style-type: none"> <li>• Government reviews exploration plans and issues permit</li> </ul>	<ul style="list-style-type: none"> <li>• Government reviews updated plans and renews and amends permits with standard terms and conditions</li> <li>• Government reviews regular permit compliance reports and inspects for permit compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Government reviews updated plans and renews, amends or issues new permits with project-specific terms and conditions, including exploration reclamation plans</li> <li>• Government reviews regular permit compliance reports and inspects for permit compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Government decides whether an ESIA review is required for a mine development</li> <li>• Government reviews regular permit compliance reports and inspects for permit compliance</li> <li>• Government inspects exploration reclamation if exploration ends</li> </ul>	
<ul style="list-style-type: none"> <li>• Company applies for prospecting authorization</li> <li>• Company researches and identifies mineral areas with potential for further investigation</li> <li>• Company applies for exploration permits</li> </ul>	<ul style="list-style-type: none"> <li>• Company undertakes exploration activities</li> <li>• Company abides by permit terms and conditions, implements standard operating procedures for environmental protection</li> <li>• Preliminary environmental baseline studies initiated</li> </ul>	<ul style="list-style-type: none"> <li>• Company undertakes advanced exploration activities</li> <li>• Company applies for permit renewals and amendments as needed</li> <li>• Company abides by permit terms and conditions, and implements management plans and standard operating procedures for managing environmental and social impacts</li> <li>• Environmental baseline studies progress and preliminary impact assessments completed as part of project design and planning</li> </ul>	<ul style="list-style-type: none"> <li>• Company continues with exploration, feasibility design and planning, and submits project proposal for mine development if economics are favourable</li> <li>• Company continues to abide by exploration permit terms and conditions and implement management plans and standard operating conditions</li> <li>• Extensive environmental and social baseline studies and modelling completed to support the ESIA review process</li> <li>• Company implements the exploration reclamation plan if project not proceeding to development</li> </ul>	
				
				
<b>PUBLIC AND STAKEHOLDER ENGAGEMENT</b>				



## STATE OF PLAY

Review of legal frameworks for ESIA revealed that clear requirements for the screening phase are missing or unclear in some jurisdictions.

Many legal frameworks do not distinguish between the prospecting and exploration phases or acknowledge the need to address potential environmental and social risks for the exploration phase. While most mining laws require a licence or permit for prospecting and exploration, the differences and specific obligations related to each phase are often not clearly defined.

Companies may be concerned about committing substantial resources to ESIA's and related management plans. They may also be concerned about the costs of public consultation in exploration, as a mineral resource and revenue from mineral development is unconfirmed and possibly years away. Exploration may lead to mine development, but results obtained may demonstrate that a project will not be viable to proceed to mine construction and operation (Desjardins, 2018; Government of Canada, 2013b). Also, because these activities typically have much lower levels of environmental and social impact than mine construction and operations, many legal frameworks completely overlook the need to require controls to minimize the environmental and social risks for exploration. Nevertheless, environmental and social risks in the exploration phase at times can be significant. Therefore, the legal framework governing the exploration phase should require a level of risk assessment and management planning that is commensurate to the planned exploration activity.

## KEY GOVERNMENT ACTIONS

### 1. SCREENING PROCESS: DECIDE IF AN ESIA REVIEW PROCESS IS REQUIRED FOR THE PROJECT

Government should be informed of and screen all exploration and mining activity in order to effectively and efficiently control land use, environmental and social impacts, and benefits from the mining sector, as well as all related permitting requirements. Therefore, the legal framework should require submission of a company's project for any type of mineral development activity, including mineral prospecting, exploration, and exploitation/mine development. The framework should also define the government's review process for these proposals. Proposals should be subject to a screening process to determine the level of review required.

The screening process should proceed with regulations or guidelines that define criteria, clarify procedures, and ensure an appropriate level of rigour for the type and scale of the project, while avoiding unnecessary delays and costs. Governments should review the project proposal to decide if the project will be subject to an ESIA and what level of detail will be required based on thresholds and/or criteria identified in the legal framework. Criteria should be based on the risk of adverse impacts and requirements for project-specific mitigation measures.

Screening determines the need for a full ESIA and review process on a case-by-case basis using thresholds or criteria. Thresholds may define when an ESIA review is required, indicative thresholds for projects that may need an ESIA review, and/or exclusion thresholds when an ESIA review is not



required (European Commission, 2017). Criteria may include components such as the type and scale of mining activity; impacts on local populations, including vulnerable groups; and impacts on the environment, such as biodiversity. Large-scale mining projects and major expansions of mines should require an ESIA process and possibly a public hearing. Advanced exploration and small-scale mines may require a semi-detailed ESIA process to identify and manage aspects of the proposal that might require project-specific permit conditions.

Note that all project components and activities (including new infrastructure and/or use of infrastructure) should be included in defining the project that is screened. The project should not be separated into components by either the government or the proponent to avoid an ESIA. Governments should also consider potential rates of project expansion. For example, the project should be considered a large-scale mine requiring an ESIA process even if the initial mine and incremental expansions are below thresholds, but the ultimate mine will have a large disturbance.

In general, the criteria or thresholds should identify projects that have potentially significant social and/or environmental impacts, are of concern to stakeholders, and require project-specific mitigations. Setting clearly defined criteria and/or thresholds in legislation manages the expectations of stakeholders and investors and builds trust in governments. Examples of a range of screening criteria and thresholds in legal frameworks are presented below. The examples from Australia and Mexico provide criteria, and the examples from Canada and the United Kingdom provide size and rate thresholds.

**TABLE 7. EXAMPLES OF SCREENING CRITERIA AND THRESHOLDS**

<p><b>Australia</b></p> <p>Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016</p>	<p><b>All activities</b></p> <p>Is the proposed action likely to have a significant impact on a matter of national environmental significance?</p> <p>The referral is presented for public comment and review by the Environmental Protection Authority to determine whether the project is subject to the ESIA review process.<sup>26</sup></p>
<p><b>Canada</b></p> <p>Physical Activities Regulations, Mines and Metal Mills</p>	<p>“18. The construction, operation, decommissioning and abandonment of one of the following:</p> <p>(a) a new coal mine with a coal production capacity of 5 000 t/day or more;</p> <p>(b) a new diamond mine with an ore production capacity of 5 000 t/day or more;</p> <p>(c) a new metal mine, other than a rare earth element mine, placer mine or uranium mine, with an ore production capacity of 5 000 t/day or more;</p> <p>(d) a new metal mill, other than a uranium mill, with an ore input capacity of 5 000 t/day or more;</p> <p>(e) a new rare earth element mine with an ore production capacity of 2 500 t/day or more;</p> <p>(f) a new stone quarry or sand or gravel pit with a production capacity of 3 500 000 t/year or more.</p>

<sup>26</sup> Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016 (WA) (Austl.). [http://epa.wa.gov.au/sites/default/files/Policies\\_and\\_Guidance/Gg223.pdf](http://epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Gg223.pdf)



19. The expansion of an existing mine, mill, quarry or sand or gravel pit in one of the following circumstances:

(a) in the case of an existing coal mine, if the expansion would result in an increase in the area of mining operations of 50% or more and the total coal production capacity would be 5 000 t/day or more after the expansion;

(b) in the case of an existing diamond mine if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore production capacity would be 5 000 t/day or more after the expansion;

(c) in the case of an existing metal mine, other than a rare earth element mine, placer mine or uranium mine, if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore production capacity would be 5 000 t/day or more after the expansion;

(d) in the case of an existing metal mill, other than a uranium mill, if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore input capacity would be 5 000 t/day or more after the expansion;

(e) in the case of an existing rare earth element mine if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore production capacity would be 2 500 t/day or more after the expansion;

(f) in the case of an existing stone quarry or sand or gravel pit if the expansion would result in an increase in the area of mining operations of 50% or more and the total production capacity would be 3 500 000 t/year or more after the expansion.

20. The construction, operation and decommissioning, outside the licensed boundaries of an existing uranium mine, of a new uranium mine with an ore production capacity of 2 500 t/day or more.

21. The expansion of an existing uranium mine, if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore production capacity would be 2500 t/day or more after the expansion.

22. The construction, operation and decommissioning, outside the licensed boundaries of an existing uranium mill, of a new uranium mill with an ore input capacity of 2 500 t/day or more.

23. The expansion of an existing uranium mill, if the expansion would result in an increase in the area of mining operations of 50% or more and the total ore input capacity would be 2 500 t/day or more after the expansion.

24. The construction, operation, decommissioning and abandonment of a new oil sands mine with a bitumen production capacity of 10 000 m<sup>3</sup>/day or more.

25. The expansion of an existing oil sands mine, if the expansion would result in an increase in the area of mining operations of 50% or more and the total bitumen production capacity would be 10 000 m<sup>3</sup>/day or more after the expansion.”<sup>27</sup>

<sup>27</sup> This text is quoted directly from Physical Activities Regulations (2019) (SOR/2019-285) (Can.). <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2019-285/page-3.html#h-1194153>



<p><b>Mexico</b></p> <p>Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental</p>	<p>Exploration, exploitation and benefit of minerals and substances reserved to the federation.</p> <p>I. Works for the exploitation of minerals and substances reserved for the federation, as well as their support infrastructure;</p> <p>II. Exploration works, excluding gravimetric, surface geological prospecting, geoelectric, magnetotelluric, magnetic susceptibility and density, as well as the works of drilling, trenching and rock exposure, provided they are carried out in agricultural, livestock or wasteland and in areas with dry or temperate climates where dry-loving scrub vegetation develops, tropical deciduous forest, coniferous or holm oak forests, located outside natural areas protected, and</p> <p>III. Benefit of minerals and final disposal of their waste in dams, excluding Benefit plants that do not use substances considered dangerous and the hydraulic filling of underground mining works.<sup>28</sup></p>
<p><b>United Kingdom</b></p> <p>The Town and Country Planning (Environmental Impact Assessment) Regulations 2017</p>	<p>“(a) Quarries, open cast mining and peat extraction (unless included in Schedule 1);</p> <p>(b) Underground mining;</p> <p>Schedule 1 (requires an EIA)</p> <p>Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction where the surface of the site exceeds 150 hectares.</p> <p>Schedule 2 (should be considered for requiring an EIA if potentially significant effects)</p> <p>All development except the construction of buildings or other ancillary structures where the new floorspace does not exceed 1,000 square metres.”<sup>29</sup></p>

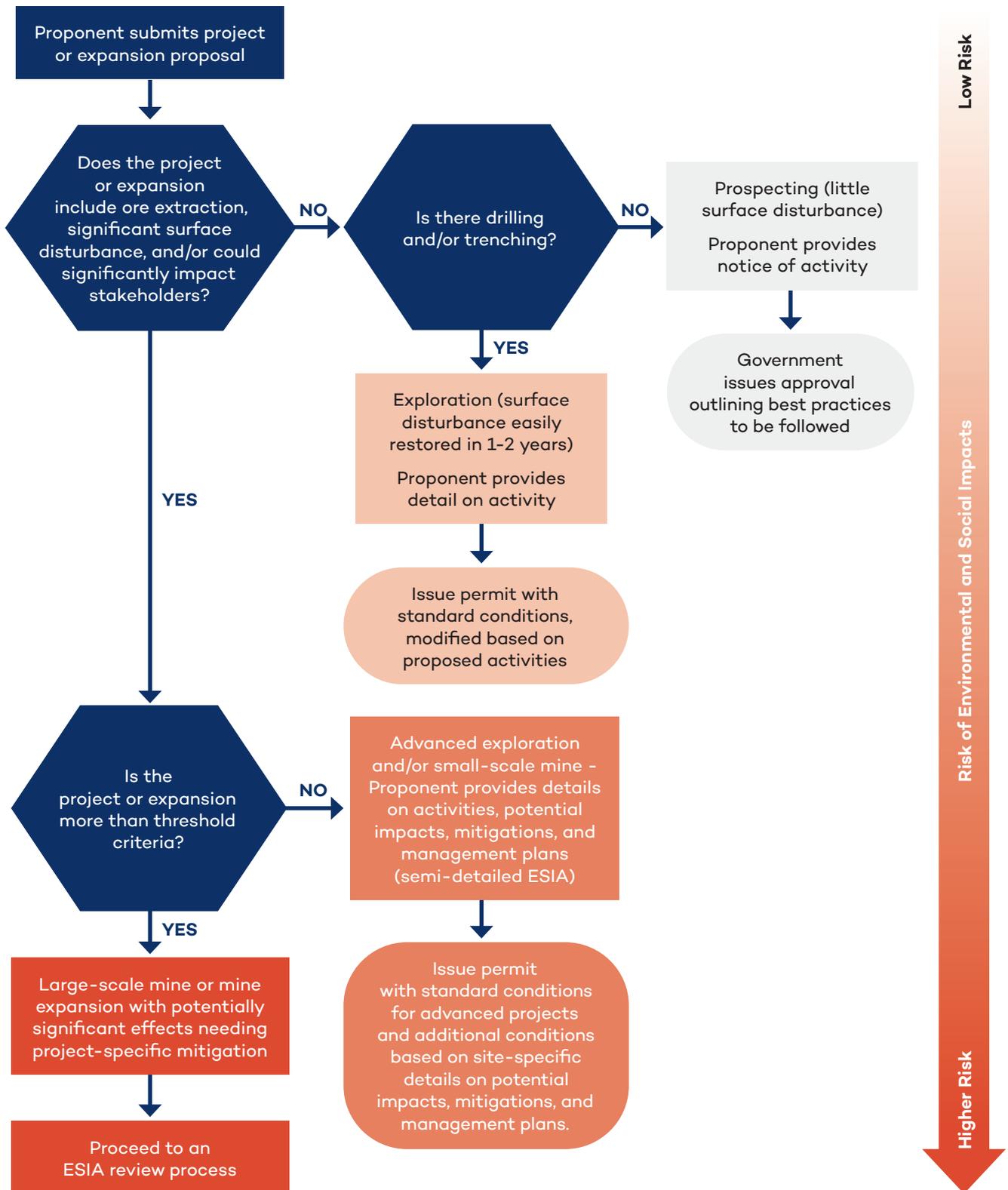
Governments should decide at the end of the screening process if an ESIA review process is required. An example of a decision tree related to the screening process is provided below.

<sup>28</sup> This text is translated directly from Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental [LGEEP EIA Regulation], Diario Oficial de la Federación [DOF] 30-05-2000, últimas reformas DOF 31-10-2014 (Mex.). <https://www.gob.mx/cms/uploads/attachment/file/311389/RegLGEEPAYMEIA.pdf>

<sup>29</sup> This text is quoted directly from The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, SI 2017/571 (UK). <http://www.legislation.gov.uk/uksi/2017/571/schedule/1/made>



**FIGURE 3. SCREENING PROCESS DECISION TREE**





## 2. TERMS AND CONDITIONS: ENSURE THAT PERMITS AND APPROVALS ARE SUBJECT TO STANDARD TERMS AND CONDITIONS

Every permit and/or approval for mineral exploration or exploitation should include terms and conditions to protect the environment in which the activities are being carried out. For lower-impact or lower-risk activities such as early exploration, there can be standard terms and conditions drafted that cover all typical activities for a given level of activity and meet best practice standards for environmental and social protection. Standard conditions can then be supplemented for activities with higher potential impacts or risks.

Table 8 presents typical permits and details requiring standard terms and conditions during exploration.

**TABLE 8. EXAMPLES OF TYPICAL PERMITS AND APPROVALS ISSUED FOR THE EXPLORATION PHASE**

PERMIT ACTIVITIES	POTENTIAL DETAILS REQUIRING TERMS AND CONDITIONS
Mineral title	Boundaries, definition of subsurface and/or rights and limitations, term of holding, work requirements, renewal requirements, transfer restrictions
Land use	Definition of boundaries, approved and prohibited activities on the land, approved equipment and/or equipment restrictions, material use restrictions, closure and rehabilitation requirements, management plan requirements, timing, terms of use, notification procedures, monitoring and reporting requirements
Water use	Quantity of water, location of intake and/or discharges, intake control structures to protect fish and wildlife, management plan requirements, timing of intakes and/or discharges, erosion and sediment release control requirements, water quality restrictions, timing, term of use, notification procedures, monitoring and reporting requirements
Hazardous materials transport, storage and use	Listing of all hazardous materials, quantities, transportation requirements, storage requirements, reporting requirements
Non-hazardous waste disposal	Facility design requirements, allowable quantities and materials, operational requirements, reporting requirements
Hazardous waste disposal	Approval facilities design requirements, allowable quantities and materials, operational requirements, reporting requirements
Contaminated soil on-site treatment	Approval facilities design requirements, allowable quantities, operational requirements, testing and reporting requirements
Camp operations	Number of people, approved facilities, timing of use, potable water treatment and testing requirements, first aid requirements, reporting requirements

## 3. SPECIAL CONDITIONS: SPECIFY SOCIAL AND ENVIRONMENTAL REQUIREMENTS FOR EXPLORATION COMMENSURATE WITH PROJECT RISKS

Some environmental and social impacts of exploration, particularly advanced exploration, can be very significant but have been overlooked in some of the legal frameworks reviewed in the preparation of this guidance document. This can result in overlooking the rights of Indigenous Peoples and the needs of vulnerable groups, unmanaged social and environmental impacts, conflict that lasts for generations, as well as missed opportunities for positive impacts.



Governments should include in their legal framework the minimum requirements for applications for an exploration licence or an authorization commensurate to the risk associated to the type of exploration activity, the social and environmental context, and the type of mineral sought to avoid any gaps in addressing and managing potential serious impacts at the exploration phase.

Options for tools to address these gaps could include the requirements of a section in the application for exploration licences or authorizations to address impacts and mitigations, an environmental report, a semi-detailed ESIA, standard conditions for complex issues, requirements for best practices, and requirements to follow sources of good practice guidance (e.g., Prospectors and Developers Association of Canada, n.d.).

The extent of the environmental and social effects of exploration may vary substantially in magnitude, and these effects are often location- and mine-dependent. The legal requirements for the exploration phase should correlate with the level of anticipated environmental and social impacts and should be well defined. This will avoid projects with low impacts from being subject to unnecessarily onerous environmental and social requirements during the exploration phase and conserves important financial resources and time for both governments and mining companies. Table 9 provides examples of specific requirements during the exploration phase.

**TABLE 9. EXAMPLES OF REQUIREMENTS FOR THE EXPLORATION PHASE**

<b>Colombia</b>	In Colombia, if the exploration company does not continue to the exploitation phase, the company must complete mine closure <sup>30</sup> and submit a study for “dismantling and abandonment.” <sup>31</sup>
<b>Ecuador</b>	Ecuador’s Ministerial Agreement 37, the Environmental Regulation for Mining Activities, specifies requirements by stage of mining activity: prospecting requires no permit or environmental analysis; exploration activities require the approval of an “Environmental Form;” advanced exploration activities require an environmental impact declaration; and exploitation activities require an environmental impact study, including an environmental management plan. <sup>32</sup> The exploration phase is granted for an initial period of up to four years. Prior to termination of the exploration phase, the company may request an additional period of four years, which constitutes an advanced exploration phase. <sup>33</sup>
<b>Peru</b>	Peru’s legal framework includes three categories of environmental studies: Category I: Environmental Impact Declaration (applicable for mining exploration activities) Category II: Semi-Detailed Environmental Impact Assessment (applicable for advanced mining exploration activities) Category III: Detailed Environmental Impact Assessment (applicable for exploitation activities). <sup>34</sup>

<sup>30</sup> See Colombia’s Resolution 428 of 2013.

<sup>31</sup> See Article 2.2.2.3.9.2. of L. 1076/2015, mayo 26, 2015, Diario Oficial [D.O.] (Colom.). <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=78153>

<sup>32</sup> See Articles 11, 17, and 23 of Reglamento Ambiental de Actividades Mineras, Ministerio Ambiente, Acuerdo Ministerial 37, Registro Oficial Suplemento 213, 27/03/2014 (Ecu.). [https://www.ambiente.gob.ec/wp-content/uploads/downloads/2015/02/REGLAMENTO\\_AMBIENTAL\\_DE\\_ACTIVIDADES\\_MINERAS\\_MINISTERIO\\_AMBIENTE.pdf](https://www.ambiente.gob.ec/wp-content/uploads/downloads/2015/02/REGLAMENTO_AMBIENTAL_DE_ACTIVIDADES_MINERAS_MINISTERIO_AMBIENTE.pdf)

<sup>33</sup> See Article 37 of Registro Oficial Suplemento 517, Expídesese la Ley de Minería 45, 29/01/2009 (Ecu.). <https://www.ambiente.gob.ec/wp-content/uploads/downloads/2015/06/Ley-de-Mineria.pdf>

<sup>34</sup> See Peru’s Supreme Decree No. 040-2014-EM (Regulation of Protection and Environmental Management for the Activities of Exploitation, Benefit, General Labour, Transport and Mining Storage) and Supreme Decree No. 042-2017-EM (Environmental Regulation for Mining Exploration Activities).



Below is a case study providing an example of a semi-detailed ESIA required at the exploration phase.

## **CASE STUDY: REQUIREMENT FOR A SEMI-DETAILED ESIA AT THE EXPLORATION PHASE: THE CAÑARIACO PROJECT**

The Cañariaco Project, located in Lambayeque, Peru, sought to further define a mineral resource for the potential exploitation of copper. The planned exploration activities between 2011 and 2012 included the development of access roads, drilling platforms and wells, test pits, and auxiliary facilities within the titled mineral concessions to Cañariaco Copper Perú S.A. (Candete Copper Corporation, 2019). The project went through a semi-detailed EIA (EIASd), which was completed to permit the project for mining exploration. This is a requirement in Peru under the Environmental Regulation for Mining Exploration Activities (*Reglamento Ambiental para las Actividades de Exploración Minera*) and Regulation for Public Participation for the Mining Sub-Sector (*Reglamento de Participación Ciudadana en el Sub Sector Minero*), approved via Supreme Decrees No. 020-2008-EM and 028-2008-EM.

ToR for environmental studies for exploration (Category I and II) are legislated under Ministerial Resolution (*Resolución Ministerial (R.M.)* No. 167-2008-EM/DM and Public Participation Mechanisms under Ministerial Resolution (*Resolución Ministerial (R.M.)* No. 304-2008-MEM/DM (Servicio Nacional de Certificación Ambiental para las Inversiones Sostenibles, 2017).

Per the applicable legislation, the EIASd includes a project description, public participation plan, impact assessment, and management and closure plans for the proposed exploration activities. The public participation plan included in the EIASd outlined the objectives and mechanisms to engage stakeholders per the applicable legislation. Stakeholders included local authorities and organizations at the regional, provincial, district, and community/municipal levels, as well as members of the public, within the area of direct influence of the project, as defined in the EIASd. Engagement activities included open houses at the onset of the EIASd, where comments and questions from stakeholders were received and documented. The EIASd process gave an opportunity to various stakeholders, through public participation activities, to raise their concerns with regard to water quality and the environment in general, particularly for the Cañariaco River and how water would be managed for the project. An explanation of exploration versus exploitation was requested by various stakeholders. Another key issue raised was employment opportunities that would be available to members of local communities.

This example highlights a lesson learned in best practices for the development of an impact assessment study: undertaking public engagement activities prior to and early in the impact assessment process. Opportunities to inform stakeholders of the project and the EIASd proved key in obtaining approval for the project and informing management plans, community relations, and a closure plan for the exploration phase. In clarifying its requirements for the exploration phase, the government was able to consider all parameters for the renewal of the exploration permit. In meeting all legislative requirements and maintaining continuous and open communication with stakeholders, the company was able to retain support for and confidence in the project at an early stage of the EIASd process (AMEC Perú S.A., 2012). In subsequent years, this facilitated the modification of the EIASd for additional exploration activities that led to an impact assessment study for exploitation. The EIASd process was constructive for the government, the mining company, and local communities.



#### **4. COMPLIANCE: REQUIRE EXISTING PERMIT CONDITIONS TO BE MET PRIOR TO RENEWAL AND LARGE-SCALE MINE DEVELOPMENT**

Government should require that existing conditions for a permit for exploration activities be met before granting renewal of the exploration permit or issuing a permit for large-scale mining activity. Applicants for permit renewals should submit evidence that they complied with all environmental and social obligations attached to the initial permit. Through monitoring and inspections, the government will have collected information about the permit applicant's compliance status and should ensure the project is in full compliance with permits and approval prior to issuing a permit renewal. When exploration identifies a mineral deposit of possible commercial interest and a preliminary feasibility study defines a feasible large-scale mining project, the proponent can decide to pursue permitting and move into the mine planning phase.

For projects that are in compliance through exploration and are now proposing mine development above the screening threshold criteria with potentially significant impacts, the project moves to the ESIA review process, as discussed in the next chapter.



## **6.0 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS:**

## **GOVERNMENT REQUIREMENTS THROUGH THE MINE PLANNING PHASE**



This chapter covers key government actions on the following topics for the ESIA process through the mine planning phase:

1. **Development Plans:** Review the mine development plan and initiate the ESIA review process
2. **Scoping:** Set out criteria for project scoping
3. **Engagement:** Require and oversee meaningful engagement and consultation, including building stakeholder capacity for participation
4. **Terms of Reference:** Agree to the content of the ESIA through ToR
5. **Review Coordination:** Coordinate government agencies and stakeholder review of the ESIA
6. **Review Timelines:** Establish a reasonable timeline for the ESIA review process
7. **ESIA Report Evaluation:** Review the ESIA report, the management plans, the closure plans, and other relevant plans
8. **Financial Assurance:** Assess and specify financial assurance for remediation and mine closure
9. **Decisions:** Approve or deny the environmental authorization
10. **Conditions:** Transfer ESIA and project approval conditions to subsequent permits

## OVERVIEW

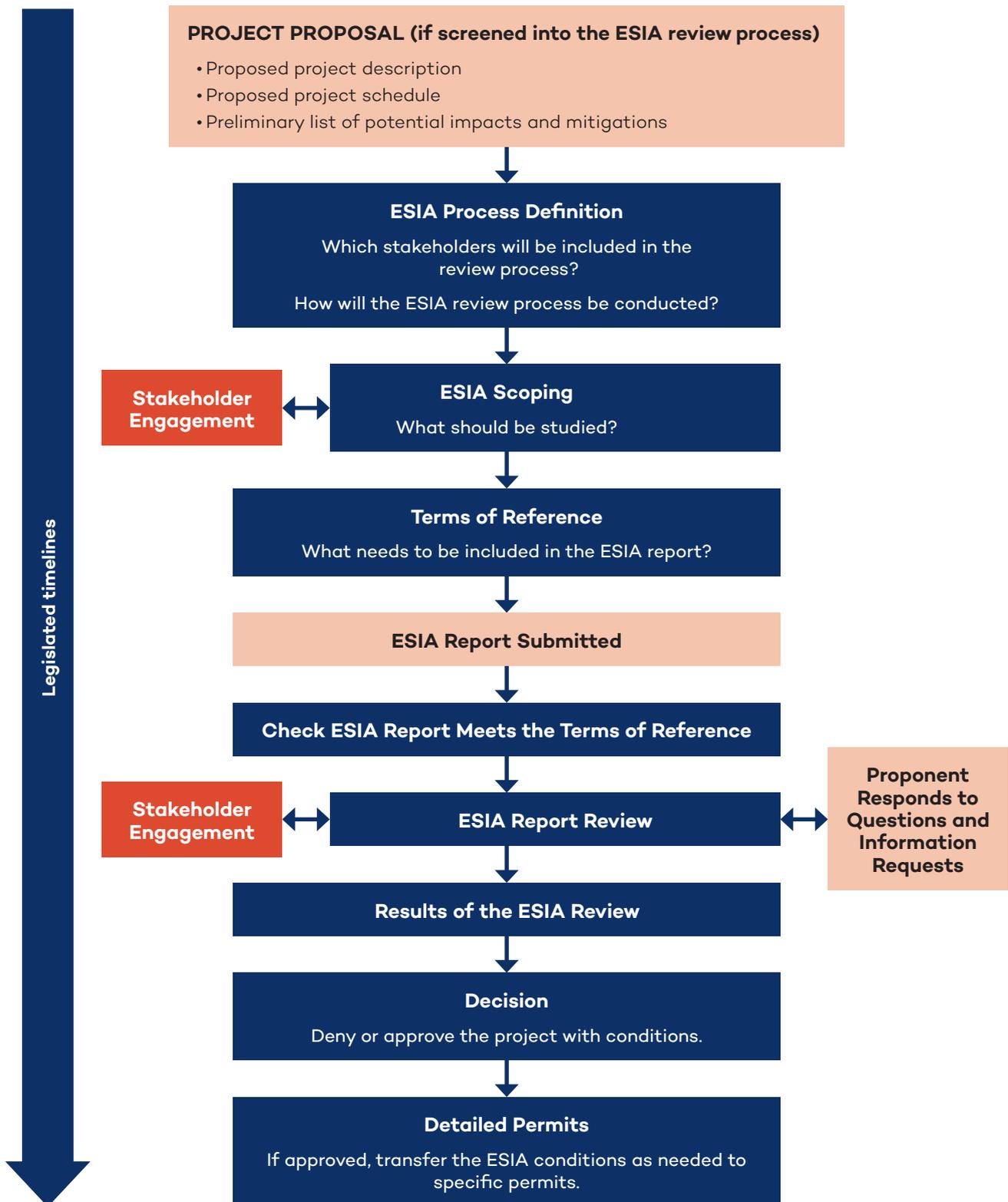
The ESIA review process determines if and under what conditions the mining project will be developed, based on identified environmental and social impacts and proposed mitigation measures.

The legal framework should be very clear that an ESIA is required for all large-scale mines prior to the issuance of a permit for mine construction and operation. Requirements and guidelines for stakeholder engagement and consultation should also be defined and communicated to mining proponents.

While all steps for environmental and social impact assessment and management are important to ensure sustainable outcomes, the assessment steps through the mine planning phase are critical from a legal perspective. The main steps of the government ESIA review process are presented in Figure 4.



**FIGURE 4. GOVERNMENT ESIA REVIEW PROCESS**





## STATE OF PLAY

Unclear or inadequate requirements and procedures during the ESIA process and review can lead to many issues regarding responsible environmental and social management of the mining sector.

The ESIA process under the mine planning phase is becoming a critical phase for implementing legal framework good practice in order to avoid disputes that may culminate in costly international arbitration. This is evident from the increasing number of arbitration cases arising from actions or inactions made during the ESIA review (Burnett & Bret, 2017).. This phase is indeed the phase where a government's key decisions on the future of the project are made.

Some common problems and recurring challenges in legal frameworks reviewed for this guidance document include:

- Automatic approval or rejection/denial of an ESIA report or environmental permit is allowed after the lapse of a deadline.
- A mine closure and post-mining transition plan is not required as a condition to obtain the mine permit.
- Guidelines or mechanisms for meaningful and ongoing public participation and consultation are not available.
- An accessible grievance mechanism is not required as a condition of the exploitation permit.
- Guidelines for well-designed ESMPs, mine closure plans, emergency response plans, and crisis management plans are inadequate.
- Guaranteeing an exploration permit holder a “right” to obtain a mining operation or exploitation permit without conditioning this right on government review of ESIA reports and related management plans.
- Unreasonable timelines for government review of ESIA reports and related management plans.

In several developing countries, exploration permit holders benefit from a right or entitlement to obtain an exploitation permit. While some mining codes do not subject this right to any conditions related to an ESIA process, others have explicitly limited this right to the fulfillment of process-oriented obligations under mining regulations. This may imply the automatic approval of an ESIA report, or even that no approval of any type is required, prior to the granting of an environmental permit. The language of such provisions varies, for example: “The mining permit [...] is granted by right to any holder of a research permit who has provided proof of the existence of a deposit within its perimeter.” Such a “right to obtain” an exploitation permit is generally absent in the mining legislation of developed countries. Furthermore, the same result is achieved when the legislation allows for the conclusion of contracts that cover both the exploration and exploitation phases. These contracts may even grant the mining company exploitation rights before the identification of an exploitable deposit and the government's review of an ESIA report. These contracts are problematic and are becoming less frequent.

A “right to obtain” an exploitation permit, particularly without any safeguards, could undermine the government's ability to use ESIA as a decision-making tool when assessing if a mining project



should proceed to exploitation. This can minimize the role of ESIA, making the ESIA process purely procedural. If the right of government to make an informed decision on whether a mine should proceed or not is not clear in the laws and regulations (or contract), it may give rise to a claim that the denial of an exploitation permit based on environmental and social concerns frustrated an expectation that the exploitation permit would be issued. Therefore, it is recommended to not provide such a “right to obtain” the exploitation permit in the legal framework.

Governments that wish to grant an advantage to exploration companies to reduce the investment risk in an exploration project could instead grant an exclusive right to first apply for an exploitation permit, but the law should be clear that the issue of such a permit is conditional, based on the review of a full ESIA and related management plans as outlined in this guidance document. The legal framework could further clarify that another exploitation permit for a similar project could not be granted to another mining company as long as the environmental, economic, social, and technological conditions that justified the denial of an exploitation permit remain unchanged.

### BOX 3. WHAT ABOUT RESETTLEMENT? AVOIDING AND MANAGING RESETTLEMENT<sup>35</sup>

Displacement of local populations to make way for mining projects is perhaps the most difficult issue to manage in the mineral sector. The impacts of resettlement on local communities, if improperly managed, can leave communities at risk of landlessness by removing existing productive systems, activities, and livelihoods (Downing, 2002). Moreover, improper management of resettlement, particularly where Indigenous groups are concerned, may lead to litigation and conflict. Resettlement is a topic that must be so carefully managed that it cannot possibly be adequately covered in the limited pages of this guide, but it also cannot be overlooked or its importance understated.

The World Bank (2004) has issued guidance in its *Involuntary Resettlement Sourcebook*, currently in the process of being updated. The sourcebook states that “involuntary resettlement should be avoided where feasible,” and established three main objectives:

- “To avoid or minimize adverse impacts and to conceive and execute resettlement activities as sustainable development programs
- To give displaced persons opportunities to participate in the design and implementation of resettlement programs
- To assist displaced persons in their efforts to improve their livelihoods and standards of living, or at least to restore these to pre-project levels” (p. 25).

In sum, if resettlement must be undertaken, it is best practice to proceed with resettlement only in a way that leaves communities better off. Governments should require the creation

<sup>35</sup> See Annex 4, Section 4 for a list of additional resources on the topic of Resettlement and Livelihood Restoration. Also note the availability of IFC’s consultation draft, *Good Practice Handbook: Land Acquisition and Resettlement* (2019), available at [https://www.ifc.org/wps/wcm/connect/928928b9-49bd-4d3d-bc12-fb2e7aee80c1/Draft\\_Resettlement+Handbook\\_Intro.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/928928b9-49bd-4d3d-bc12-fb2e7aee80c1/Draft_Resettlement+Handbook_Intro.pdf?MOD=AJPERES)



of a Resettlement Action Plan (RAP) with such objectives as those listed above, developed in consultation with affected communities (World Bank, 2004, p. 63).

As prescribed in the UNDRIP, where Indigenous Peoples are involved, governments should ensure that Indigenous Peoples are not forcibly removed from their lands or territories and that relocation of Indigenous Peoples only occurs with the FPIC of the Indigenous Peoples concerned (UN General Assembly, 2007). The United Nations further recommends that custom and tradition are taken into account when creating resettlement plans, including designing housing and communities with Indigenous needs, practices, and lifestyles in mind (United Nations, 2019).

Governments should also remain aware of the requirements of relevant development banks and lenders regarding resettlement, including the World Bank Environmental and *Social Standard 5 on Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement* (2018) and related guidance notes (2020). The IFC *Performance Standard 5 on Land Acquisition and Involuntary Resettlement* (2012b) is another prominent standard that applies to the private sector as well as over 105 financial institutions that have adopted the *Equator Principles* (2020), which incorporate the IFC Performance Standards.

RAPs should include strategies, objectives, goals, and costs associated with resettlement, as well as monitoring and evaluation post-implementation (Downing, 2002, p. 12). Costs of resettlement, in particular, should be carefully analyzed in order to ensure the full expense of the process is captured in the economic analysis of the project operations.<sup>36</sup> The RAP should specify the procedures to be followed and measures that should be taken to relocate and adequately compensate affected individuals and communities (IFC, 2002, 2012b). It should also identify all the people affected by the project and justify their displacement, having taken into consideration any alternatives that would minimize or avoid this dislocation. Additionally, it should define the eligibility criteria applicable to the parties concerned, set the compensation rates for the loss of assets, and define the levels of support for relocation and reconstruction of affected households (Bankwatch Network, n.d.). Impacts of climate change and climate adaptation should also be taken into consideration in RAPs (Rogers, 2017).

It is important for governments to ensure that resettlement activities result in tangible improvements in the economic situation and social well-being of the affected individuals and communities.

<sup>36</sup> Costs may include a “range of measures, including compensation, income restoration, transfer assistance, income substitution, training, benefits and other actions due to affected people—depending on the nature of their losses—to restore their economic and social base.” Operations that have failed to take these varied costs into account have made otherwise profitable projects insolvent (Downing, 2002, p. 13; Wachenfeld, 2018, p. 26).



## KEY GOVERNMENT ACTIONS

### 1. DEVELOPMENT PLANS: REVIEW THE MINE DEVELOPMENT PLAN AND INITIATE THE ESIA REVIEW PROCESS

The lead government agency identified in the legal framework should coordinate the ESIA review process.

An initial project description will have been submitted and reviewed for the screening stage. The project description should include sufficient details on what infrastructure and activities are proposed, an initial list of potential impacts, and the initial intended mitigation and management measures that will be followed to minimize impacts. It should also include alternative options that have been and still need to be considered in the final mine design. The alternatives assessment process is a key opportunity in the ESIA review process for stakeholders to have meaningful input to the project design and for the project to be modified to avoid and minimize adverse project impacts.

Government review of the mine development plan should also determine opportunities for shared use of infrastructures, such as roads, ports, power generation, and power lines that may be used to benefit surrounding communities.

Some jurisdictions publish the project description for stakeholder comments prior to defining the review scope and process to gauge the level of interest and concern about the project.

### 2. SCOPING: SET OUT CRITERIA FOR PROJECT SCOPING

The scoping process of an ESIA determines what components and issues should be assessed for the project. In earlier stages of impact assessment, this may look at a broad suite of components or focus on a few key issues that are expected to be critical for the project (e.g., water use, land tenure, land use). However, for proposed large mines entering the ESIA review process, the scoping stage should be developed by review of ESIA's of similar projects in similar areas and through an engagement process to ensure that all components and issues that are important for stakeholders are included in the ESIA for review. Geoenvironmental models that link geological attributes and environmental settings can be considered during the project scoping as another tool to help determine the scope of potential environmental impacts based on the characteristics of the mineral deposit being proposed for development.

The scope of the assessment for a large-scale mine is typically extensive, including all physical (air, land, and water), biological (aquatic and terrestrial), social (infrastructure, services and community well-being), economic (jobs and the local economy), human health, and heritage components. Depending on the situation, human rights, labour rights and conditions, gender equality and issues, and climate change should be considered in defining the scope of the assessment.

It is important that all project facilities and activities are scoped into the project. New infrastructure proposed for the project should be scoped into the project. If the new infrastructure is being built for a number of projects or uses, there may be a separate ESIA being completed; however, at a minimum, the use of the new infrastructure and the cumulative effects should be scoped into the project assessment.



Governments should make the final decision for what is scoped into the assessment and what should be screened considering:

- The level of risk for the component or issue to avoid expending effort on low-risk issues
- Whether it can be assessed with confidence to ensure the assessment is meaningful and can reach a conclusion
- Whether the component or issue is represented by another component to avoid duplication
- Whether assessing the component or issue is linked to analyzing another component to avoid gaps.

Government should assess if the indicators used to assess the stakeholder concerns are based on the stakeholders' perspectives so that the correct questions are answered (i.e., the concern should be assessed from a sociopolitical viewpoint rather than a technical viewpoint). For example, public concern about water quality may require that the indicator be water quality in comparison to drinking water standards and an analysis of human health risks as well as a comparison to aquatic life standards.

## **CASE STUDY: HOW THE ESIA PROCESS AND SUBSEQUENT REQUIREMENTS CAN ADDRESS GENDER ISSUES: KUDZ ZE KAYAH PROJECT, YUKON, CANADA**

BMC Mineral's Kudz Ze Kayah Project is a proposed zinc-copper-lead open pit mine in the Yukon Territory, Canada, located within the traditional territories of the Ross River Dena Council and Liard First Nation. The Yukon Environmental and Socioeconomic Assessment Board (YESAB) conducted the environmental and socioeconomic review process for the project from 2017 to 2020.

When YESAB published the *Draft Screening Report*, the following mining project approval requirements were made<sup>37</sup>:

- Harassment prevention training
- Mentors or supervisors for First Nation women
- Formal feedback process for First Nation concerns
- Development of policies and processes that promote a safe, respectful, and inclusive environment for women and sexual minorities
- Development of an anti-harassment and bullying policy
- Support for communities impacted by the project with implementing programs for women in need
- Creation of policies, procedures, and plans to support and protect survivors of sexual harassment and gender-based violence.

BMC supported and commended YESAB for providing these requirements.

This case study illustrates use of the ESIA process to assess and respond to gender-based impacts and proactively minimize adverse social impacts.

<sup>37</sup> BMC Minerals (No.1) Ltd. 2020. *Kudz Ze Kayah project initial response to YESAB on draft screening report and recommendation*. <https://yesabregistry.ca/projects/5942a72b-b77d-403d-83d6-bc2ffffc0c7b/documents>



### **3. ENGAGEMENT: REQUIRE AND OVERSEE MEANINGFUL ENGAGEMENT AND CONSULTATION, INCLUDING BUILDING STAKEHOLDER CAPACITY FOR PARTICIPATION**

Government should ensure that public engagement and consultation are not just about the dissemination of information or invitation to comment but rather meaningful dialogue about the project and its potential effects.

Engagement and consultation are multi-directional processes in which the company, the government, communities, and other stakeholders discuss the potential effects of the project, the plans for engagement and monitoring, and the proposed mitigation measures. There is a great deal of highly relevant local knowledge in communities that is important to the development of a quality project.

Government should oversee the implementation of the public engagement and consultation mechanisms provided in the legal framework to address limiting factors and assist in achieving effective engagement. Limiting factors for stakeholder participation can be funds, time, language, or knowledge. The involvement of communities will likely require financial support from the government and companies. Government should work with companies to identify efficiencies and collaborative funding opportunities where government resources are limited.

For example, an application process could be administered to access funds for travel to meetings, adequate time for reviews can be included in legislation, and non-technical summaries of the ESIA can be provided in local languages.

Government should carefully assess the questions being asked to ensure there are clear distinctions between concerns related to the project and issues unrelated to the project.

Government can also promote the use of a company grievance mechanism, a formal process for responding to stakeholder complaints about the project, a review process, or related issues that may be causing negative effects on stakeholders. A local-level grievance mechanism should be established early in the life of the mine and can be one way to address, monitor, and manage environmental and social impacts and benefits.<sup>38</sup> The mechanism should be culturally relevant and accessible to the community. The response and follow-up to a grievance submission are critical components of the mechanism. Frequent use of such a mechanism by community members can be a positive sign, indicating trust in the mechanism and its ability to manage and respond to seemingly “small” complaints before they become major conflicts. Table 10 provides an example of language requiring and promoting public participation.

---

<sup>38</sup> Good guidance on what a grievance mechanism should include can be found in IFC (2009). See also Office of the Compliance Advisor/Ombudsman (2008).



**TABLE 10. EXAMPLE OF REQUIREMENTS AND GUIDANCE FOR PUBLIC PARTICIPATION**

<b>Ecuador</b>	<p>Ecuador's Ministerial Declaration 109 of 2018 outlines several tools for public participation in environmental regulation, including:</p> <ul style="list-style-type: none"><li>a. <b>Public Assemblies:</b> Gatherings with the population in the area of direct social influence of the project to discuss environmental studies in a way that is relevant to the local community. This is a dialogue space where questions about the project are answered and observations of the community are collected. In this assembly, the operator, the designated facilitator and the persons responsible for the survey of the environmental study must be present.</li><li>b. <b>Environmental Education Workshops:</b> Workshops that allow the operator to know the perceptions of the population living in the area of direct social influence of the project, work or activity so that mitigating and/or compensatory measures may be included in the Environmental Management Plan.</li><li>c. <b>Informative Workshop:</b> A mechanism used to reinforce the presentation of the Environmental Study ... to the inhabitants of the area of direct social influence of the project, work or activity.</li><li>d. <b>Distribution of informative documentation</b> about the project.</li><li>e. <b>Website:</b> A mechanism through which all interested parties can access information on the project, work or activity.</li><li>f. <b>Public Information Centre:</b> A local, easily accessible public space where the environmental study, as well as documentation that contains the description of the project and the corresponding management plans, are made available to the area of direct social influence of the project. The location may be fixed or rotating, but a representative of the operator and those responsible for the survey of the environmental study must be present. The information must be presented in a didactic and clear manner and, at a minimum, contain a description of the project, maps of the location of the activities, and infrastructure of the project, communities and properties.</li><li>g. <b>Other mechanisms</b> that are established for this purpose.<sup>39</sup></li></ul>
----------------	---

Note that under ILO Convention 169, the Indigenous and Tribal Peoples Convention, consultation in good faith is required with Indigenous Peoples for any projects that affect them. Governments should ensure legal requirements for Indigenous consultation align with ILO Convention 169.

<sup>39</sup> Unofficial translation of Ecuador's Ministerial Declaration 109 of 2018. Ministerio del Ambiente, Acuerdo No. 109, 02/10/2018 (Ecu.). <http://mesadeayuda.ambiente.gob.ec/Documentacion/MesaAyuda/Normativa/A.M.%20109%20DEL%2002-10-2018.pdf>



## BOX 4. INDIGENOUS RIGHTS AND CONSULTATION

Indigenous Peoples have special rights under international law and declarations. The UNDRIP requires that governments “consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.”

ILO Convention 169 (International Labour Organization Indigenous and Tribal Peoples Convention 169) is the primary international treaty that governs Indigenous rights. Only 23 countries have ratified ILO Convention 169. Some of those countries recognize the right to FPIC, and some do not. ILO Convention 169 provides a legal framework for FPIC in countries that have ratified it. In these countries, consultation must have certain characteristics: appropriate proceedings, good faith, representative community institutions, and the aim of achieving an agreement. The consultation is the responsibility of the government when there are “legislative or administrative measures which may affect them directly.”

Implementation of ILO Convention 169 has proven to be difficult. Some countries have adopted regulations, others have attempted but failed to adopt regulations, and some others are simply moving forward without regulations. In certain countries that did not ratify ILO Convention 169, the state has granted Indigenous Peoples the right to approve or reject a project.

Issues related to Indigenous Peoples are crucial in North and South America, the location of several responding states in mining arbitration cases related to ESIA. The mining and environmental laws we reviewed from these regions demonstrate that Indigenous Peoples have been given a role to play in the process of developing ESIA and related plans, but consent is not required. Another of the main problems is that the law in many states has not provided effective mechanisms for communities to actually participate or have their issues addressed (this includes the regulation of ILO Convention 169).

For countries where the protection of Indigenous Peoples is a sensitive issue, it is important that legislation clarify and strengthen their role in the process of developing ESIA and related plans while putting in place tools and mechanisms to ensure their effective participation. The UNDRIP, jurisprudence of the Inter-American Court of Human Rights, and recommendations from UN supervision agencies and Special Rapporteurs offer best practice on how to meaningfully consult the public and uphold Indigenous rights. If every legislative approach considered these best practices, it would reduce the risk of conflicts and arbitration cases related to ESIA.

## 4. TERMS OF REFERENCE: AGREE TO THE CONTENT OF THE ESIA THROUGH TOR

Governments should review and validate the ToR for the project, based on the standard ToR provided in the legal framework. The project ToR can be adjusted either by the proponent or by the proponent and the government. Government should ensure that the project-adjusted ToR include the issues identified through scoping; information from baseline data collection through impact assessment, mitigation and management measures; and details needed to make high-level decisions and follow a logical flow of coverage, as required by law, for environmental and social protection. Legal



requirements regarding the extent of baseline environmental and social data and project design detail needed for the ESIA review process should be clear in the legal framework. As with the scoping stage, additional consideration should be made to integrate requirements to address human rights, labour rights and conditions, gender equality and issues, and climate change.

An example of standard ToR is presented below.

**TABLE 11. EXAMPLE OF STANDARD TOR**

- Executive plain language summary
- Proponent information (including proponent policies and commitments to voluntary standards)
- Project description (including all project components, infrastructure, and on-site and off-site activities)
  - Construction phase
  - Operations phase
  - Closure phase
  - Post-closure phase
  - Alternatives assessment (including a “no project” alternative)
- Regulatory framework
  - Applicable legislation and standards
  - Permits and authorizations required after ESIA approval
- ESIA methodology description
  - Selection of valued components (what will be assessed)
  - Spatial and temporal boundaries
  - Indicators (how the effects will be measured) and thresholds (at what level the impact becomes unacceptable)
  - Assessment criteria for significance (magnitude, extent, frequency, reversibility, context, likelihood)
  - Cumulative effects methodology
- Baseline conditions description
- Effects assessment
  - Effects analysis (including modelling, qualitative, and quantitative methods as appropriate, cumulative effects)
  - Mitigation and compensation measures
  - Characterization of residual effects (extent, magnitude, frequency, duration, reversibility, context, likelihood, uncertainty)
  - Assessment of significance of residual effects
- Accidents and malfunctions
- Effects of the environment on the project
- Management plans (including adaptive management plans to address unexpected effects)
- Monitoring and follow-up
- Conclusions
- References

Government should also assess if the ToR address the management of construction impacts when there is a high level of activity that can occur almost immediately after project approval. Often, a major mining project will require the construction of numerous ancillary facilities not directly related to mine extraction and waste facilities.



These may include:

- Power plants and transmission lines
- Water storage and pumping facilities, or aqueducts
- Airstrips for landing and takeoff near the mine site
- Road or rail facilities
- Sewage treatment or other waste disposal facilities
- Cell phone towers or other communications equipment
- Residential areas for mine employees
- Other kinds of infrastructure

In general, the less developed the region is, the more ancillary infrastructure will be required and the greater the impacts will be in the construction phase. If this phase is not carefully planned with appropriate engagement and support of local governments and institutions, adverse impacts could be far-reaching, and many potential benefits can be lost. There are many examples of cell phone towers, railroads, or water plants that only benefit the mine when, with some additional foresight and planning, they could serve the broader developmental needs of the region and minimize cumulative adverse impacts.

Sometimes the ESIA process for these various facilities is separate: for example, the power plant or the railroad requires an impact statement separate from the impact statement for the mine. In general, it is better practice to combine as much of the ESIA process and public consultation as possible in a single assessment, coordinated by government among all the respective regulatory authorities to ensure that cumulative effects are adequately assessed and managed.



## LEGAL DISPUTE CASE STUDY

**Year initiated:** 2008

**Case name:** *Clayton/Bilcon v. Canada* (PCA\* Case No. 2009-04)

**Status:** Award in favour of the investor

**Amount claimed in initial request:** USD 300 million

**Amount awarded:** Deferred to a later decision

**Year of award:** 2015

### Terms of Reference (ToR)

The Bilcon case arose after a project to develop and operate a quarry and marine terminal in Nova Scotia was rejected. Following the granting of a preliminary approval, the project underwent a lengthy environmental assessment (EA), jointly directed by the governments of Canada and Nova Scotia. The EA revealed that the project raised “widespread public concern and potentially significant adverse environmental effects” (Schecherer, 2018, p. 56); therefore, the EA was referred to a Joint Review Panel for further evaluation. The Joint Review Panel recommended the rejection of the application because of the project’s “significant and adverse environmental effect on the ‘community core values.’”

The tribunal’s majority found that the Joint Review Panel’s decision-making process was “in breach of the investors’ legitimate expectations, which were based on federal and provincial law as well as specific representations by government officials who repeatedly encouraged Bilcon to pursue the project” (Schecherer, 2018, p. 56). The tribunal further cast doubt on the legal authority of the concept of core community values. It held that the “core community values” standard was not mentioned in any statute, regulation, or guideline in Nova Scotia or Canada, and the meaning of this newly introduced standard was unclear.<sup>40</sup> This led the tribunal to conclude that the introduction of the standard into the final report was a deviation from national law and, thus, arbitrary. Therefore, the tribunal held that Canada breached the minimum standard of treatment under NAFTA.

This case study illustrates the need for well-defined ToR for the ESIA. Here, the government did not list “community core values” as a requirement in its content for the ESIA and could not later deny the permit based on failure to consider this in the report. Standard and project-specific ToR are also a way to clarify coverage of the ESIA.

\*Note: PCA: *Permanent Court of Arbitration*

<sup>40</sup> According to Schecherer (2018): “The majority stressed that this novel standard played the most prominent role in the assessment even though the meaning of this standard appeared to be unclear (paras. 505–506). The award stated four possible meanings: first, ‘community core values’ could refer to the local community’s majority opinion of whether the project should be accepted or rejected; second, it could mean values espoused in local policy statements and documents (press releases, action plans); third, the community’s right to determine for itself rather than allowing the local and (press releases, action plans); third, the community’s right to determine for itself rather than allowing the local and national government to make the ultimate decision on the project; or lastly, the term could signify ‘community DNA’ as meaning the community’s traditions and lifestyles that distinguish it from other communities” (p. 58).



## **5. REVIEW COORDINATION: COORDINATE GOVERNMENT AGENCIES AND STAKEHOLDER REVIEW OF THE ESIA**

A project ESIA report should be submitted for review after the ToR is finalized and the ESIA report has been submitted to the government. The ESIA report may have been prepared by the proponent (and their team of experts) or by another independent party contracted by the government, depending on the defined legal requirements.

The process should require an initial review by the lead agency receiving the ESIA report to check if the ESIA report meets the ToR. Once the ESIA report is deemed complete or acceptable, the ESIA report should be made available for all relevant government agencies and other stakeholders for review and comment.

Paper copies of the report should be made available in local communities where Internet access is limited and notices should be posted as to where and for what period the report can be reviewed by the public. The lead agency should then collect, screen, request proponent responses to applicable comments or questions, and track issues. Non-technical and technical meetings with different government agencies and stakeholder groups may be needed to assist with understanding and managing issues and may be held during and/or prior to the ESIA report review stage. The lead agency should obtain support from other departments and/or the proponent to carry out these tasks depending on the situation and resources.

Once the review period is complete, the lead agency should prepare a document that summarizes the stakeholder issues and how the issues have been addressed. This summary may include recommendations for the deciding authority to consider during preparation of the decision document, if that is the process that is followed. Or alternately, the summary of issues can be included in a decision report if the lead agency is the decision authority.

## **6. REVIEW TIMELINES: ESTABLISH A REASONABLE TIMELINE FOR THE ESIA REVIEW PROCESS**

Many jurisdictions provide a timeline for the ESIA process from commencement to final decision. The process of public engagement, review, and consideration of ESIA reports and the approval of environmental certificates may take years for a large mining project. Timelines are important because delays may frustrate investors as well as other project stakeholders, as delays and uncertainty pose a risk to investors and developers. However, governments need a reasonable amount of time to review ESIA's and related plans, particularly for large projects or those with novel or unusual factors to consider (e.g., use of new technologies). Government resources should be reviewed periodically and measures should be taken to fill resource gaps to meet timelines and deliver a predictable and fair review process.

Timelines help keep the ESIA process moving forward, but only a few legal frameworks explain procedures for what happens when the given time period lapses. This is important because government departments in many jurisdictions regularly fall behind. Some jurisdictions allow for automatic approvals where the time frame for review has lapsed. This practice is not recommended, as it may result in insufficient management of environmental and social impacts. Some jurisdictions



deal with this issue simply by allowing for the review process to continue until an environmental licence is issued.<sup>41</sup>

It is also common for ESIAAs to be incomplete, whether due to the adequacy of the underlying data or the quality of the analysis. Poorly written applications with gaps and deficiencies are as common as government bureaucracy as causes of delay. A legislated timeline for the ESIA, if any, should take this issue into account when defining provisions for adjustments to the schedule and allow for the administration of the process to adjust as necessary. Not all information regarding a project is known at the start of the process, and project designs sometimes need to be adjusted as the review is proceeding. Therefore, the ESIA process must be somewhat flexible.

At the same time, reasonable causes for delays should be defined either in law or in supporting policies. For example, a common reason for a delay in completing the review is the need for more research or data collection in order to address a substantive concern that arises in the assessment review. In order to ensure transparency and instill confidence in the review process, a list of valid reasons for possible delays should be made public to all stakeholders. Furthermore, the time limit should not start to run until the agency has reviewed the application and finds that the application is complete and complies with the law. Legal frameworks should also provide specifications on special circumstances or exceptions where general deadlines can be extended or do not apply. This may include projects that incorporate new technologies or take place in new terrain for a particular government, such as deep seabed mining.

The Canadian Impact Assessment Act (2019) is an example of legislation that defines maximum timelines for each phase of the ESIA process and outlines acceptable causes for timeline suspensions. There are five phases with a maximum timeline for each, as follows: 180 days for planning; three years for the impact statement process (from issuance of the Notice of Commencement to acceptance of the Impact Statement); 300 days for the impact assessment process (600 days if it is a panel process); 30 days for the decision making (60 days if it's a panel process); and no timeline for post-decision monitoring and follow-up. The timeline can be suspended if the proponent requests a suspension, if there is a change in the project design, or if the proponent fails to pay the required fees.

## **7. ESIA REPORT EVALUATION: REVIEW THE ESIA REPORT, THE MANAGEMENT PLANS, THE CLOSURE PLANS, AND OTHER RELEVANT PLANS**

The government lead agency, other agencies with a role in the review process, and stakeholders should review the ESIA report and its related plans. The legal framework should require that the applicant submit ESMPs and a preliminary mine closure plan with the ESIA, and it should also require that the government undertake a review of the ESIA and these plans together. Note that ESMPs should include emergency response plans that are developed in consultation with surrounding communities to respond to risks associated with potential failures of tailings dams or other mine facilities, extreme weather events, seismic events, pandemics, and political stability. Mine closure plans should also incorporate measures to be implemented in the event of sudden, unexpected closure.

---

<sup>41</sup> See Ecuador's Ministerial Declaration 109, 2018.



It is important that the review of the ESIA and ESMPs is a quality and thorough review. Experts should be contracted or brought in from other agencies to review technical details where the lead agency requires assistance. The key questions for the internal or expert review should be clearly defined as follows:

- Does the baseline information sufficiently define the current conditions to determine if there are potential effects and to be able to measure effects over the life of the project?
- Are the potential direct, indirect, and cumulative impacts all identified and defined in sufficient quality and quantity to develop effective mitigation and management plans?
- Are the proposed mitigation measures and management plans sufficient in detail and quality to minimize adverse environmental and social impacts and risks?
- Do all proposed facilities, activities, mitigation measures, management plans, and residual impacts meet legal requirements?
- Are there any significant residual environmental or social impacts or risks?
- Have all potentially affected stakeholders been consulted and their issues addressed?
- Are the proposed monitoring and follow-up plans adequate to manage the impacts and risks through all phases of the project?
- Should the project be approved or denied, and what conditions should be set if approved?

Transparency should be maintained during the review process. Results of the review and issues being tracked through the review process should be made public. A range of tools can be used to manage the review process, including workshops, publishing complete reports and summary reports, and use of issue-tracking tables. Opportunities should be available for stakeholders to comment and for proponents to respond to questions and issues through the review process. Table 12 provides an example of an issue-tracking tool.



## BOX 5. IMPACT ANALYSIS GRID FOR TRACKING ISSUES

One method that can be used for tracking issues is an impact analysis grid as recommended by the Secrétariat international francophone pour l'évaluation environnementale (SIFÉE). This tool assists stakeholders with transparency and can facilitate monitoring issues at all stages of the process. Several of the impacts identified at the scoping stage may be removed from the grid because they are not significant (i.e., low impact) after evaluation or because there are recognized and effective measures to mitigate them. Also, impacts could be removed from the grid in light of monitoring results because the impacts are below the predicted levels, or impacts may be added as they become apparent in the next assessment stage. The element of coherence brought about by the issue-based approach makes it possible to establish its importance more clearly. In short, structuring the information on impacts by issue constitutes a significant improvement compared to current practice. Below is an example impact analysis grid for Indigenous rights.

**TABLE 12. AN EXAMPLE OF A METHOD FOR ASSESSING AND MONITORING PROTECTION OF INDIGENOUS RIGHTS**

THEME	ISSUES	CRITERIA	INDICATORS
Regional biophysical health	Preservation of regional biophysical health	Disturbance of natural ecosystems	Area of exploited natural ecosystem Harvest rate Level of disturbance
Sociocultural	Preservation of traditional land use and cultural practices	Preservation of natural vegetation, fish and wildlife for harvest	% of area protected Area of aquatic habitat
		Maintenance of traditional values	% of traditional sites protected
		Maintenance of Indigenous development potential	Level of opportunity for development
Indigenous participation in territorial management	Control over territorial management and development	Control over territorial decisions	Level of control (e.g., a scale of 1 to 4; 1 being weak control and only informed, 4 being self-governance)
Health	Community moral health	Empowerment	Opportunities for action
Economy	Diversification of uses of natural ecosystems in support of the Indigenous economy	Projects using the value of natural ecosystems under Indigenous control	Number of projects under Indigenous control
	Preservation of natural resources	Level of resource exploitation	Limit levels on resource exploitation
	Increased Indigenous participation in economic life	Indigenous-controlled business	Number of Indigenous businesses

Source: Comments provided by SIFÉE at the IGF public consultation on the ESIA guidance document, 2019.



It is important to note that ESMP and closure plans are not the only tools available to manage environmental and social impacts in the mining sector. Other tools are required by legal frameworks in some jurisdictions or are voluntarily used by the mining sector. These additional tools are ways to link, integrate, and commit the mine to local communities. These tools should be considered and implemented as complementary tools and should neither undermine nor replace ESMP. Therefore, when used, legal frameworks should clarify the role of these instruments and their linkages to the ESIA process and permitting. Table 13 provides these additional and complementary tools for environmental and social management.

**TABLE 13. ADDITIONAL AND COMPLEMENTARY TOOLS FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT**

<p><b>Human rights impact assessment (HRIA)</b></p>	<p>HRIA is a process through which actors engaged in mining activities can identify, understand, assess, and address any impacts on human rights their activities may have. The United Nations’ Protect, Respect, and Remedy framework and the corresponding <i>Guiding Principles on Business and Human Rights</i> are leading documents describing states’ obligations concerning human rights (United Nations, 2011). The framework highlights the state’s duty to protect human rights, corporations’ responsibility to respect human rights, and the need for effective remedies (United Nations, 2011). Ensuring HRIAs are included within the larger ESIA framework is one way to ensure human rights obligations are being monitored during mining operations. An HRIA can be defined as “a process for identifying, understanding, assessing and addressing the adverse effects of a business project or activities on the human rights enjoyment of impact rights-holders such as workers and community members” (Danish Institute for Human Rights, 2016, p. 9).</p>
<p><b>Community Development Agreements (CDAs)</b></p>	<p>CDAs, also known as impact–benefit agreements, company–community agreements, and other names, are increasingly used to manage the social, economic, and environmental impacts of mining and to prepare for the post-mining transition. Such agreements are typically voluntarily negotiated and agreed between the company and community leaders, or between the company and local governments. Only a few jurisdictions have legal obligations for mining companies to conclude CDAs, but there are growing expectations from communities, mining companies, and investors to have some type of agreement in place to manage mining impacts and benefits. The government can help facilitate such agreements by creating supportive legislative frameworks, establishing flexible guidelines for agreements, and participating in mechanisms created by the agreements where appropriate. However, it is important that these agreements be negotiated to respond to the unique objectives, circumstances, and desires of affected communities.</p>
<p><b>Corporate social responsibility (CSR)</b></p>	<p>A rapidly increasing number of jurisdictions require some level of requirements for CSR and/or company benefit sharing with communities. These requirements should align with socioeconomic management plans. Managing benefit sharing is important for many reasons, one being that actual or perceived inequalities in how benefits from mining are shared can result in inter-community and company–community conflict. Thoughtful work with stakeholders around CSR initiatives and benefit-sharing agreements can also contribute to a successful post-mining transition and enhance sustainable development outcomes.</p> <p>These objectives may also be achieved through a CDA, as discussed above.</p>



<p><b>Gender impact assessment (GIA)</b></p>	<p>A gender impact assessment (GIA) is a policy tool for the screening of a given policy proposal, in order “to detect and assess its differential impact or effects on women and men, so that these imbalances can be redressed before the proposal is endorsed” (Esposito &amp; Daaji, 2019). GIA helps ensure that the rights of both women and men are equally respected throughout the project design and implementation. GIA requires assessment of the different social, economic, and cultural dynamics between women, men, girls, and boys in affected communities (including division of labour, access to and control over resources, and social and cultural norms). Plans may then incorporate strategies to promote women’s empowerment (Hill et al., 2017). GIAs must be participatory (Netherlands Commission for Environment Assessment, 2017b), with women and girls in affected communities taking an active role in their design and conduct (Hill et al., 2017). Also, GIAs must be reflective of diverse intersectional factors of discrimination and exclusion (IAIA, 2020) and ensure that the focus is on the most marginalized (Hill et al., 2017).</p> <p>A GIA can be conducted as a stand-alone exercise or part of the environmental and social assessment(s). It can be undertaken at any point during the mine life cycle (i.e., at exploration and project planning through to operations and closure) (Hill et al., 2017). However, gender and other identity factors should best be accounted for early in the project process, at the point of conceptualization, so as to help anticipate potential impacts and better integrate gender and other identity factors into project design and implementation (Peletz &amp; Hanna, 2019)</p>
<p><b>Institutionalized local development mining funds</b></p>	<p>A growing trend in some developing countries is the creation of institutionalized local development mining funds (fonds miniers de développement local) (Dolo &amp; Nikièma, 2019). These funds are neither negotiated nor voluntary. Their structures are fixed and harmonized in the law and include the contributors, amount and frequency of contributions, the beneficiaries, and the use and management of the fund. Usually, these funds are managed by municipalities, and the use should be aligned with national and local development plans. In any case, as for any trust fund, key principles should be reflected in the structure and management of funds to achieve objectives and ensure success. These include transparency and accessibility of contributions, transparency in use and management, alignment with local development plans, development priorities of the local community, and monitoring and evaluation of impacts.</p>
<p><b>Multistakeholder mechanisms</b></p>	<p>Multistakeholder mechanisms are typically comprised of key stakeholder groups, including representatives of mine-impacted local communities, local government, and the mining company. They can provide oversight for public engagement and consultation and can aid with the monitoring and implementation of ESMPs, resettlement plans, and mine closure plans. Multistakeholder mechanisms can also help build mutual understanding and opportunities to identify and promptly address environmental and social issues.</p> <p>While the government may initiate the development of multistakeholder mechanisms, they may also be established through a CDA or be co-developed by stakeholder groups and governments. In either case, the participation of government in the mechanism can aid government in better understanding issues and opportunities related to social and environmental aspects of the mining project. Governments may also issue guidelines for the use of multistakeholder mechanisms in the ESIA and ESMPs for the mining sector.</p>



A growing number of jurisdictions use legislation to specify requirements for community development. Several examples of legal requirements for community development are provided below.

**TABLE 14. EXAMPLES OF LEGAL REQUIREMENTS FOR COMMUNITY DEVELOPMENT**

<b>Australia</b>	Australia's Aboriginal Land Rights Act and Native Title Act provide protection to the traditional owners of Aboriginal land. The Land Rights Act authorizes the Land Council to negotiate agreements with mining companies that take these traditional rights into account. The Land Rights Act ensures that Aboriginal landowners receive protection of sacred sites, environmental protection, some form of compensation, and employment and training, when feasible. Mining may not proceed until an agreement is in place. Generally, such agreements must be completed before the exploration licence application may be approved.
<b>India</b>	In India, different states have their own legislation regarding mining. In the state of Meghalaya, for instance, the Meghalaya Mines and Minerals Policy 2012 requires that 3% of net profits from mining activities is set aside each year for a CSR fund. The scheme must be used for the implementation of local area development plans. The Indian Supreme Court ruled in 2019 that no mining may occur in Meghalaya without the consent of the Indigenous Peoples there. India's regional laws are influenced by the National Mineral Policy 2019, which aims to protect the welfare of tribal communities in accordance with other land protection legislation that requires consent from Indigenous communities, such as The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
<b>Kenya</b>	<p>Kenya's Mining Act 2016 Section 47(2)(g) requires that the holder of a mineral right for large-scale operations must enter into a community development agreement. Section 45(2)(f) provides that, where applicable and necessary, the holder of a mineral right for large-scale operations must "carry out social responsibility" to the local communities.</p> <p>In addition, Kenya's Natural Resources (Benefit Sharing) Bill, (2018) requires that an applicant for a mineral right on "community land" obtain consent from either the authority that administers community land or, on unalienated community land, from the Land Commission. Consent will be deemed where there is an agreement between the community and either the applicant for rights or the government, which either allows the prospecting/ mining operations or which provides for compensation.</p> <p>The bill also provides that a mining right may be granted subject to conditions relating to community development (Section 42(1)(c)).</p>
<b>Philippines</b>	The Philippines Mining Act of 1995 states that "[n]o ancestral land shall be opened for mining operations without the prior consent of the indigenous cultural community concerned." Furthermore, "[i]n the event of an agreement with an indigenous cultural community pursuant to the preceding section, the royalty payment, upon utilization of the minerals shall be agreed upon by the parties. The said royalty shall form part of a trust fund for the socioeconomic well-being of the indigenous cultural community." Mining contractors must also assist in the development of the mining community, including "the promotion of the general welfare" and "the development of science and mining technology."
<b>Sierra Leone</b>	Sierra Leone's Mines and Minerals Act 2009 states that "the holder of a small-scale or large-scale mining licence shall assist in the development of mining communities affected by its operations to promote sustainable development, enhance the general welfare and the quality of life of the inhabitants, and shall recognize and respect the rights, customs, traditions and religion of local communities." Furthermore, "[t]he holder of a small-scale or large-scale mining licence is required to have and implement a community development agreement with the primary host community" if the operation exceeds a particular size.



<b>South Sudan</b>	South Sudan's Law on Mining (Law No. 36 of 2012) requires firms to sign CDAs to secure mining licences. Although the CDA is signed after the licence has been granted, non-compliance with the requirements of the CDA may result in licence suspension (Article 68(2)). Additionally, mining operations cannot commence until the titleholder has entered into an approved CDA (Article 80 (1)(c)). The objectives of the CDA include "the development of communities near to or affected by its operations to promote the general welfare and enhance the quality of life of the inhabitants living there. Development of communities shall include but be not restricted to provision of schools, clean drinking water, health centres, roads, police stations and other services in accordance with best Corporate Social Responsibility practice" (Article 128(1)). The Law on Mining also requires firms to implement CSR, guided by ISO 26000.
--------------------	---

## 8. FINANCIAL ASSURANCE: ASSESS AND SPECIFY FINANCIAL ASSURANCE FOR REMEDIATION AND MINE CLOSURE

The legal framework should require a financial assurance fund for remediation and mine closure prior to mine construction and operations. There is a consensus that mining companies bear the financial responsibility of mine closure activities and that such funds should be managed in a transparent manner. Only a well-designed and practical financial assurance model will ensure that economic resources are sufficient for closure.

The financial assurance must:

- Be calculated based on sound engineering rather than negotiated or determined politically.
- Be guaranteed by mechanisms that allow the government to access the funds promptly and efficiently when they are needed.
- Not include equipment salvage value as a source of funding for closure.
- At every stage, be adequate to pay for rehabilitation of the site if the company should fail.

Financial assurance must also be regularly reviewed and updated. A good financial mechanism is one that can be utilized and adjusted throughout the life cycle of the mine to reflect the actual costs of closure activities. Financial assurance should be designed to allow government access to the funds to undertake strictly closure activities in case of the failure of the mining company.

Correct determination of the amount of the financial assurance is critical. But equally important is the form in which the assurance is provided. Typical forms include letters of credit, bank guarantees, insurance company guarantees, or cash. A good financial assurance mechanism ensures that adequate funds are available quickly when needed. It is important that the assurance be provided in a form that is not dependent on the success of the mining operation. Self-bonding and corporate guarantees should not be used.

The financial assurance should be designed to allow government access to funds to undertake closure activities in case of failure of mining companies. The financial assurance system is an important incentive for progressive rehabilitation during the mine life. Any assurance will have a cost to the company. The less work that remains to complete the closure plan, the lower the financial assurance amount can be. This in turn reduces costs for companies when they perform part of the rehabilitation early in the life of the mine and in an ongoing manner. The financial assurance should



be integrated into the economic modelling of the project. The costs for rehabilitation and closure are important factors in assessing the overall viability of the project.

Early legal agreement on or collection of financial assurance is important to ensure that funds for remediation as well as unexpected closure are available. It is increasingly common for legal frameworks to require mining companies to post financial insurance as a prior condition for a permit to construct and operate a mine (APEC Mining Task Force, 2018; Otto, 2009). Developing the financial assurance agreement or fund early and requiring mining companies to adjust available funds as needed over the life of the mine is the preferred approach.

Financial assurance for premature closure and post-closure water treatment is especially important for mines with known long-term challenges with chemical and/or physical stability. The financial surety should be reviewed and updated at least every three to five years during operations and shortly before mine closure. Guidelines for post-closure financial surety for long-term monitoring, maintenance, and water treatment can be found in the Initiative for Responsible Mining Assurance's *Standard for Responsible Mining* (2018).<sup>42</sup> The financial assurance must guarantee that the funds will be available regardless of the company's financial situation during or after mining. One option is to convert the financial surety to a trust fund at relinquishment to cover long-term treatment, monitoring, and management costs by a third party.

## **9. DECISIONS: APPROVE OR DENY THE ENVIRONMENTAL AUTHORIZATION**

The legal framework should clearly state that exploitation activities may not begin without written authorization or certification from the environmental ministry and the ministry of mines. Requirements for such authorization or certification to conduct exploitation activities must include a full ESIA, ESMP, and rehabilitation and mine closure plan with corresponding budgets. The approval process for ESIA and related plans is typically led by the environmental ministry.

Governments should consider all the technically feasible alternatives proposed and assess options that meet environmental and social protection goals while still maintaining the economic viability of the project.

In addition, a “no project” alternative should be assessed. This is particularly important where a strategic EA or land-use planning has not been completed and allows the government and stakeholders to examine the scenario of not having the project. For example, if treatment, monitoring, or management are going to be needed in perpetuity—for example, for active water treatment or tailings dam monitoring—one option is to deny the permit. If the government nevertheless wants to grant the permit, then the question is how it will assure that the costs of treatment are internalized, not just in the present but far beyond our lifetimes. Failure to adopt measures to ensure the internalization of those costs will result in costs being incurred on society in general or on downstream water users, which is inconsistent with the achievement of Sustainable Development Goal 6 on clean water and sanitation.

Decisions to approve or deny certificates and permits should be based on a rigorous review process, including input from a wide range of stakeholders. The legislative framework should include a clear,

---

<sup>42</sup> See Section 2.6.7. Post-Closure Financial Surety in Initiative for Responsible Mining Assurance (2018).



logical framework and methodology for approval or denial of environmental certificates based on the ESIA and related management plans. Methodologies should consider residual effects, costs and benefits, sustainability, and public interest. Good economic performance of a project does not compensate for poor environmental performance; therefore, the legal framework should clearly lay out a decision-making approach based on multiple criteria, where the best option is the proposal that performs well on all criteria but might not have the highest overall score (Maystre et al., 1994).

The government should issue a decision document that includes:

- A description of the project infrastructure and activities.
- A summary of the ESIA review process.
- A summary of the public engagement and consultation conducted on the ESIA.
- A summary of the issues identified in the ESIA report and by stakeholders through the ESIA review process and how the issues have been addressed.
- The decision on whether the project can proceed or not supported by a detailed rationale for the decision.
- If denied, a statement of the government's rationale for denial outlining any opportunity and time frame for submission of additional documentation for further consideration; where the denial is final, outline the process for administrative appeal.
- If approved, a list of conditions, which typically include:
  - A requirement to fulfill the commitments made in the ESIA and ESMPs.
  - Additional commitments made during the review process.
  - Follow-up programs.
  - Specific legislation with which the proponent must comply.
  - Limitations on project activities.
  - Timelines and related restrictions.

The law should contain clear procedures for evaluating applications and granting or denying certifications and permits. Where a licence or permit is not approved, there should be a clear process for administrative appeal. Appeals need to be strictly framed by clear criteria, for example, if there is a failure of the decision to comply with the decision criteria or if there is an abuse of rights in the interpretation of the criteria. The right of appeal needs to be structured to avoid creating a veto over the decision by individuals, interest groups, or organizations.<sup>43</sup>

---

<sup>43</sup> Based on comments on improving frameworks for environmental and social impact assessment and management by G. Côté, Secrétariat international francophone pour l'évaluation environnementale.



## LEGAL DISPUTE CASE STUDY

**Year initiated:** 2011

**Case name:** *Crystallex v. Venezuela* (ICSID Case No. ARB(AF)/11/2)

**Status:** Award in favour of the investor

**Amount claimed in initial request:** USD 3.16 billion plus interest

**Amount awarded:** USD 1.202 billion plus interest

**Year of award:** 2016

### Environmental Permitting

The dispute between Crystallex and Venezuela emerged when the state denied the mining company a key environmental permit (the Natural Resources Permit), which then led to the subsequent termination of the Mining Operation Contract as a whole. The dispute was decided under the Canada–Venezuela BIT<sup>44</sup> and did not involve any elements of Venezuelan domestic legislation. This case is deemed important to sustainable development because the Crystallex tribunal directly acknowledged a state’s right to grant or deny natural resource permits as an important element of state sovereignty.

A major legal issue explored in the Crystallex case included whether the government created a legitimate expectation in the mining company that a permit would inevitably be granted. The Crystallex tribunal held that states should enjoy a high level of deference for their decision to grant or deny an exploitation permit, and a foreign investor cannot be “entitled” or have a “right” to be awarded one (Schacherer, 2018, p. 49). Consequently, the conditions under which a state determines whether to grant an exploitation permit are an “essential element” in certifying that investment activities comply with sustainable development objectives (Schacherer, 2018, p. 49). However, the tribunal held that the methods a state uses to determine whether a permit should be denied or granted are critical, and if states are going to deny a permit based on environmental concerns, the states must base such decisions on “technical studies and scientific research” (Schacherer, 2018, p. 49) put forward in a timely and transparent manner.

In this dispute, the tribunal found that Venezuela’s letter denying Crystallex the exploitation permit showed signs of arbitrariness, which was a breach of the FET standard located in the BIT. The tribunal stated that Venezuela “had the right (and the responsibility)” to raise environmental concerns and issues of global warming in denying the exploitation permit (Schacherer, 2018, p. 49). However, the tribunal determined that the government reacted in an arbitrary manner when it brought up these concerns for the first time in the April 2008 letter denying the exploitation permit. Such concerns, the tribunal stated, were newly mentioned and not based on scientific evidence. The tribunal found it “troublesome” that Venezuela mentioned concerns about global warming for the first time in this denial letter and found that such “an attempt to justify the denial of the Permit is a clear example of arbitrary and unfair conduct” (Schacherer, 2018, p. 49).

The tribunal also took issue with the fact that the Ministry of Environment had sent Crystallex a letter in 2007 “assuring it that the authorization would be granted once the company posted a bond” (Schacherer, 2018, p. 51), yet denied the environmental permit a year later based on

<sup>44</sup> Canada–Venezuela Bilateral Investment Treaty, [http://www.sice.oas.org/Investment/BITSbyCountry/BITs/CAN\\_Venezuela\\_e.asp](http://www.sice.oas.org/Investment/BITSbyCountry/BITs/CAN_Venezuela_e.asp).



concerns about the potential impact on the environment and Indigenous Peoples. Because the government's previous letter constituted a "specific representation" made to the mining company, it created a legitimate expectation that was then violated when the environmental permit was later denied, thereby breaching the FET standard.

This case highlights the need for governments to avoid providing any "expectation" of a permit until all permit application requirements have been met and the government's review is complete, following a process clearly outlined in the legal framework. Furthermore, if the government denies a permit, it should provide a detailed and, where possible, science-backed rationale for rejecting the permit, leaving no room for arbitrariness. The government should describe in detail the aspects of the ESIA report that are not acceptable and why, with references to the ESIA report and the legal framework.

## **10. CONDITIONS: TRANSFER ESIA AND PROJECT APPROVAL CONDITIONS TO SUBSEQUENT PERMITS**

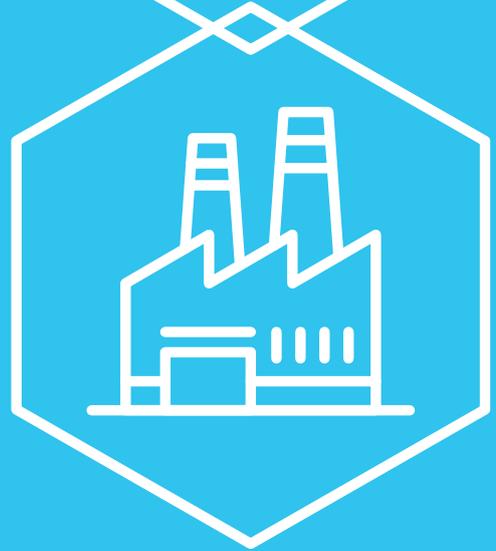
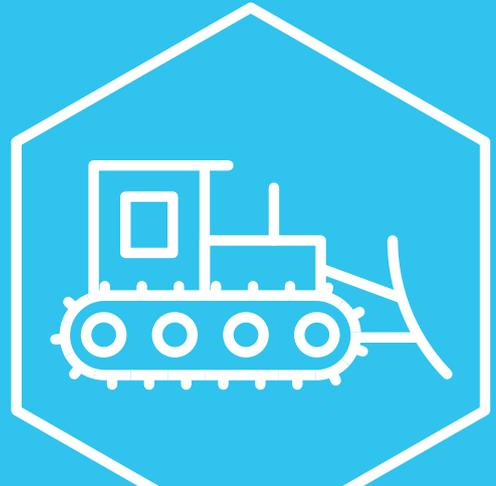
The conditions of approval of a large mine through the ESIA review process apply to all aspects of the mine and span a wide range of legislation (e.g., land use, water use, waste management, transportation, etc.). From the government perspective, the conditions of the ESIA decision and subsequent detailed permits carry the commitments made in the ESIA report to requirements that are monitored for compliance.

The conditions of project approval through the ESIA review process can be broader, high-level objectives. With a comprehensive legal framework, more specific, detailed conditions are developed in the operational permits that regulate details such as effluent quality and quantity, emission quality and quantity, waste storage and disposal, mine health and safety requirements, etc. It is important to ensure that the detailed permit conditions are consistent with the project approval conditions and ensure all the commitments are transferred to the operational level to allow for effective compliance and enforcement.

It is also important to ensure there is a link between the ESIA review team and the permitting team. The linkages between the ESIA review and permitting are complex and challenging in mining projects for the following reasons:

- There is a large quantity of ESIA documentation requiring review.
- Often there is a long period between the authorization and the start of construction due to funding delays, during which time the project may be modified.
- Depending on the extent of changes, the permitting conditions may need significant modifications and/or amendments.

This step helps ensure continuous government oversight, monitoring, inspections, and enforcement, as further discussed in the next chapter of this guidance document.



## **7.0 MONITORING, INSPECTIONS AND ENFORCEMENT:**

**ENSURE ENVIRONMENTAL  
AND SOCIAL IMPACTS ARE  
CONTINUALLY MANAGED  
THROUGH CONSTRUCTION  
AND OPERATIONS**



**This chapter covers key government actions on the following topics related to monitoring, inspections and enforcement:**

1. **Engagement:** Ensure ongoing stakeholder and community engagement and capacity building
2. **Transparency:** Communicate results of compliance and enforcement to communities and the public
3. **Reporting:** Provide clear guidelines for environmental and social reporting
4. **Collaboration:** Collaborate with local governments to manage the impacts and benefits of the workforce
5. **Progressive Rehabilitation:** Require progressive rehabilitation and ongoing preparation for environmental and social aspects of the post-mining transition
6. **Monitoring:** Conduct regular review of progress reports and monitor implementation of management plans
7. **Inspection:** Provide clear inspection requirements and adequate human resources for compliance checks and enforcement
8. **Enforcement:** Enforce permit conditions and manage non-compliance
9. **Permit Amendments and Renewal:** Require updated assessments and amended plans where there are material changes to mine plans or impacts



## OVERVIEW

While defined as two distinct stages of the mining life cycle, construction and operations entail similar activities from the perspective of implementation of the ESMPs after the ESIA process is complete and all respective approvals for mine development and exploitation have been secured by a company. The government's role in construction and operations is to monitor and regulate the performance of the mine to ensure continued management of environmental and social impacts.

Construction of mine sites involves establishing required infrastructure and facilities for operations to proceed and implementing an environmental and social management system. Operations can commence once the construction activities are completed and any new or additional permits are approved. Operations include production and processing activities while continuing to implement the environmental and social management system. Where governments have set up a strong framework for environmental and social impact assessment and management, the construction and operations phases involve similar or continuous steps to implement management plans, progressive rehabilitation, reporting and—where changes to the mine plan are material—revising and implementing amended plans.

The construction activities of mine developments often create major changes to the landscape at the mine site, along transportation routes to the site, and in the surrounding natural environment. The effects of construction activities are specific to each mining project and can include many different and varying issues.

Operations activities must comply with applicable terms and conditions of all related approvals and permits.

Effects emanating from the operations add to those from construction and often affect water, air, and landscape at the mine site, along transportation routes to the site, and in the surrounding natural environment. All effects should have been evaluated and assessed at the ESIA stage, resulting in the development of appropriate monitoring and management measures. The legal framework needs to be inclusive of these requirements while outlining the government's role and capacity for enforcement and compliance to ensure the integrity of the environment and local communities.

Table 15 provides an overview of key government actions and requirements for company monitoring, inspections, and enforcement under the construction and operations phases.



**TABLE 15. KEY GOVERNMENT ACTIONS AND REQUIREMENTS FOR MONITORING, INSPECTION, AND ENFORCEMENT**

MONITORING / INSPECTING / ENFORCEMENT	
Construction	Operation
 <ul style="list-style-type: none"> <li>• Government reviews regular construction compliance reports and inspects for permit compliance</li> <li>• Government issues non-compliances if required and follows up on remedial actions</li> <li>• Government reviews and approves final ESMPs for operation</li> <li>• Government reviews regular construction compliance reports and inspects for permit compliance</li> <li>• Government issues non-compliances if required and follows up on remedial actions</li> </ul>	<ul style="list-style-type: none"> <li>• Government reviews regular operation compliance reports and inspects for permit compliance</li> <li>• Government issues non-compliances if required and follows up on remedial actions</li> <li>• Government reviews regular updates of reclamation and closure plan and ensures reclamation security is updated</li> <li>• Government reviews applications for renewals and amendments and either rejects or approves permits with conditions</li> </ul>
 <ul style="list-style-type: none"> <li>• Company implements ESMPs for construction</li> <li>• Company monitors environmental and social performance as per ESIA commitments and permit requirements</li> <li>• Company submits regular compliance reports and addresses any non-compliance issues</li> <li>• Company proposes changes to ESMPs as necessary ahead of operation</li> <li>• Company implements ESMPs in the transition to operation</li> <li>• Company monitors environmental and social performance as per ESIA commitments and permit requirements</li> <li>• Company submits regular compliance reports and addresses any non-compliance issues</li> </ul>	<ul style="list-style-type: none"> <li>• Company implements ESMPs for operation</li> <li>• Company monitors environmental and social performance as per ESIA commitments and permit requirements</li> <li>• Company submits regular compliance reports and addresses any non-compliance issues</li> <li>• Company adapts ESMPs as necessary as part of adaptive management program</li> <li>• Company regularly updates reclamation and closure plan and financial security</li> </ul>



## STATE OF PLAY

The construction phase can be challenging, as environmental impacts become greater and the main economic benefits from mining have not yet started to flow to governments and local communities, as they do under the operations phase. This is also where some of the negative impacts of mining on local communities can occur. Once construction starts, the proponent is typically under considerable pressure to move forward quickly. It is therefore important that necessary controls, consultative mechanisms and grievance processes be in place before this process starts; these are key elements in the ESIA process. Efforts to put these key ESIA elements in place after the fact typically have limited success. If communities are engaged prior to the construction phase, and engagement continues, expectations may be managed and community skills and knowledge can both inform and be informed by the project.

While there are many short-term jobs during the construction phase of mine development, proponents frequently do not know how to contract and train local labour, or they are not encouraged to do so, and construction phase labour may be imported from elsewhere. If the workers are from elsewhere and community members receive few opportunities, considerable tension can develop in community–company relations.

Review of monitoring reports, inspections, and enforcement is critical through construction and operations to ensure proponents remain vigilant and accountable. Governments are often challenged by limited human and financial resources. Construction occurs at a fast pace, has a high risk of adverse social impacts from worker influx into or through the communities, and has high potential for non-compliance with water criteria and other environmental permit conditions as land is quickly cleared and mine systems are commissioned. Governments may not have enough staff to do frequent inspections. Even if a non-compliance is identified, there is tremendous pressure to allow the proponent to continue to construct when they are bringing large financial benefits to the region and country. It is important that governments have systems and resources in place ahead of time and that strong precedence is set, enforcing compliance from the beginning of construction. The following sections provide the key government actions needed to ensure that government systems are in place ahead of mine construction and operation.

## KEY GOVERNMENT ACTIONS

### 1. ENGAGEMENT: ENSURE ONGOING STAKEHOLDER AND COMMUNITY ENGAGEMENT

Continued engagement through the construction and operations phases is needed to continue to monitor real and perceived impacts, maintain accountability by the proponent, and maintain community trust in government. Using community and worker grievance mechanisms, multistakeholder and participatory mechanisms, and continued public engagement can proactively identify and manage issues before they become serious. Overlooking these opportunities often leads to conflict between companies and communities that could otherwise be avoided. Participatory mechanisms and ongoing community engagement can be expensive for proponents, but failing to take these prudent steps can prove more costly in the long run (David & Franks, 2014).



There needs to be an ongoing process of communication, dialogue, and discussion with the community and stakeholders throughout the mine life. Governments can promote and provide guidelines for community advisory councils, participatory or independent monitoring programs, or regular community meetings for mutual exchange of information. These meetings can be coordinated by the proponent, but government representatives should be in attendance.

## **2. TRANSPARENCY: COMMUNICATE RESULTS OF COMPLIANCE AND ENFORCEMENT TO COMMUNITIES AND THE PUBLIC**

Governments need to be seen as independent, diligent, and working in the public's best interest to protect the environment and human needs. Regular and transparent communication on project compliance and enforcement is key to achieving public trust.

Communication can take many forms, but it needs to be accessible to all potential stakeholders. Communication can be through public registries on an EA process website during the planning stage and may move to the website of the department overseeing the permit (e.g., ministry responsible for mines) for communicating compliance reports, non-compliance orders, etc. However, governments should not only rely on digital communications, as this may not be accessible to all key stakeholders. Monitoring results should also be published and can reside in the same website. Ministries should also consider communicating compliance reporting and enforcement measures in newspapers or newsletters in local government offices for communities with limited Internet connectivity. Communication methods must be culturally appropriate. Communication should be regular and kept current, and it should tie into a government grievance mechanism.

## **3. REPORTING: PROVIDE CLEAR GUIDELINES FOR ENVIRONMENTAL AND SOCIAL REPORTING**

As the project moves into construction and operation, the plans should be reviewed and updated on a regular basis, taking into consideration monitoring, compliance, and performance data.

Reports on progress implementing ESMPs in the construction and operations phases should be made at least on an annual basis, and more frequently when the risk of impacts is higher. Environmental monitoring reports are especially important, and the results and implications should be discussed with stakeholders on an annual basis. Monitoring results should be made available on a more regular basis, with the frequency corresponding to the level of activity (e.g., monthly or quarterly during construction and annually during operations).

The monitoring results should be used to update the management plans on a regular basis. Companies should integrate feedback from the community and local government stakeholders into the reports. All ESIA reports and plans should be made readily available to the public and easily accessible to members of affected communities. Regulations should clarify the content, language, and methods of communicating information to the public and local communities.

The required content of reports should be linked to monitoring plans and metrics presented in the ESMPs to ensure compliance with permit requirements and follow-up to check that predicted impacts are occurring as expected. It should also present and track any adaptive management measures that have been implemented where impacts are not as predicted. Key indicators should cover the breadth



of potential environmental and social impacts of the mine. Social impact indicators should include both quantitative and qualitative metrics. Results in monitoring reports should track performance over time and provide an interpretation of results. Data submission requirements should also be specified in guidelines and provide for integration with government electronic databases. Government capacity to review and manage data is also critical.

#### **4. COLLABORATION: COLLABORATE WITH LOCAL GOVERNMENTS TO MANAGE THE IMPACTS AND BENEFITS OF THE WORKFORCE**

In the mine life cycle, an exploration workforce may be only 100 people, even at the stage of advanced exploration. Once the mine enters production, there may be only a few hundred employees, even at a big mine. By contrast, there may be several thousand workers present during the construction phase and hundreds of workers during operation.

It is possible to reduce these problems by recruiting and training more local labour in the construction phase that is also then employed in operations. This reduces the number of workers who must be imported while building capacity in the lead-up to operations, consequently stimulating economic activity in the local community—but it requires a focused effort. Governments must have reasonable requirements for local hiring to ensure that companies realize this is a priority. Governments can support building capacity for local skills development, including building the capacity of women to work for mines in the construction and operations phases. These issues and opportunities can be addressed in management plans, CDAs, and skills development programs.

National governments may support local development through local content policies. Local content policies may include mandatory targets, soft requirements, or supportive policies to achieve different sorts of objectives, such as increasing the mining operation's procurement of local goods and services and hiring of local community members, among others (IGF, 2018, p. vii). Where governments require mining companies to submit local content plans, they should then incorporate the review of such plans into their monitoring and compliance systems and ensure local development plans are aligned with ESMPs.

#### **5. PROGRESSIVE REHABILITATION: REQUIRE PROGRESSIVE REHABILITATION AND ONGOING PREPARATION FOR ENVIRONMENTAL AND SOCIAL ASPECTS OF THE POST-MINING TRANSITION**

The legal framework should establish that mine closure plans should be implemented in an ongoing and continuous manner to respond to temporary and permanent mine closures. Requiring progressive rehabilitation is important, as it is fairly common for mines to close during periods of economic downturn, then reopen when prices recover. A planned temporary closure can transition into an unplanned permanent closure. Dealing with these circumstances requires, at a minimum:

- Financial assurance, adequate to ensure a permanent closure, must remain in effect throughout the temporary closure.
- Frequent inspections of the site are needed to ensure that conditions are not deteriorating to the point that the financial assurance is no longer adequate.



- There needs to be some limit on the length of the period of temporary closure, and it needs to be enforced. The time limit should consider risks such as commodity price, company stability, environmental risks, etc.
- Closure plan requirements address both social and environmental aspects of mine closure.

Governments should regularly monitor the implementation of mine closure plans, require and review associated reports, and require updates to the mine closure plan. A variety of circumstances should trigger the amendment of closure plans. One is where inspections disclose some form of non-compliance that will add to the cost or difficulty of closure. An example might be the discovery, through closure/post-mining transition monitoring, that the mine-influenced or degraded water is affecting water quality locations not anticipated in the initial closure plan. Or newer technologies, such as leaching with cyanide, sulfuric acid, or other reagents, may have been introduced. Making these important changes without first seeking a permit amendment is a violation in most jurisdictions. But, in addition to whatever penalty may be appropriate, it will be necessary to amend the permit and possibly update the environmental and social impact report to ensure it corresponds to the actual circumstances on the ground. Most systems distinguish between small technical amendments to the closure plan, which typically require only limited analysis, and more significant amendments, which require public notice and consultation. Any time that there is an amendment to the permit, the closure plan should be reviewed to ensure it is still appropriate. And there should be a periodic review of the closure plan even where none of these circumstances is present. Such a review should be done regularly and at least every three years.

The process must ensure that regulators have up-to-date and adequate data for quality control of closure activities, including a current estimate of closure costs. Reporting on the implementation of mine closure and post-mining transition plans should also discuss ongoing engagement with community stakeholders, including actions taken by companies to address community concerns regarding mine closure and post-mining transition issues.

## **6. MONITORING: CONDUCT REGULAR REVIEW OF PROGRESS REPORTS AND MONITOR IMPLEMENTATION OF MANAGEMENT PLANS**

As part of enforcement of a given framework, regular reporting on monitoring results and compliance with regulatory requirements and applicable terms and conditions from permits and approvals are essential, along with the associated review and compliance checks by regulating authorities. The legal framework should clearly establish reporting requirements and timelines.

It is often inadequately understood how dynamic the mine operations phase might be. As mining continues, the orebody is better defined. Experience with processing the ore teaches a great deal about what grades and types of ore can lead to the most economic recovery. New technologies may appear. More sophisticated understanding of ground stability can lead to mine redesign. Higher (or lower) market prices may lead to the ability to recover lower (or higher) grades of ore. Cultural remains may be encountered that need to be preserved.

Good mine management will constantly evaluate ongoing management and reporting commitments and requirements, and make the necessary changes to ensure the protection of human health and



the environment. ESMPs and monitoring and reporting requirements must be regularly re-evaluated based on monitoring results and discussions with stakeholders.

Governments can also consider approaches to complement their monitoring actions. One approach is to promote participatory monitoring and issue guidelines. Using participatory monitoring mechanisms for environmental and social issues of greatest concern to local community members can support government efforts, particularly when human and financial resources are limited. Communities are close to the mining site, which is an asset, and they have high interest in the good management of environmental and social impacts. Furthermore, participatory monitoring is an effective way to avoid conflict and build trust among stakeholders. As noted above, these mechanisms work best when initiated very early in the life of the mine with the input and participation of local communities. Participatory mechanisms should be proactive rather than reactive and attempt to identify and solve problems collaboratively (IFC & On Common Ground, 2010). In some cases, these mechanisms are agreed to and established as part of CDAs.

## **7. INSPECTION: PROVIDE CLEAR INSPECTION REQUIREMENTS AND ADEQUATE HUMAN RESOURCES FOR COMPLIANCE CHECKS AND ENFORCEMENT**

Inspection requires clarity of legal requirements, and also highly trained human resources and sufficient financial resources for equipment, travel, continuing education, and other ongoing inspection requirements. Some legal frameworks set up a fund for independent third-party inspections to which companies provide funds, with clear methods for oversight and transparent use of funds. The regulatory framework should lay out the objectives of the inspection and monitoring as well as the expectations from regulators when undertaking those inspection activities. To avoid misunderstandings and denials of access to sites or data, regulators should explore the best ways to communicate with the mining company the goals of the inspections and monitoring activities. However, this should not prevent regulators from initiating unannounced inspection visits or activities. Having clarified the process of inspections, a process for review by the company and government and procedures for the company to dispute findings in inspection reports should also be defined. And again, the government must still have the capacity to do some inspection of its own, to “check the checkers.”

“Follow-up” is an umbrella term that has been used to describe various processes that are implemented following the authorization of a project and can include activities such as monitoring, audits, evaluation, and adaptive management (Morrison-Saunders, & Arts, 2004).

Ongoing funding and human resources capacity for inspection and related follow-up and compliance monitoring are key weaknesses in many countries’ management of the minerals sector. Government must have the financial, technological, and human resources capacity to conduct inspections at mine sites and undertake ongoing follow-up and monitoring to ensure that environmental, social, and other commitments are being met.



## 8. ENFORCEMENT: ENFORCE PERMIT CONDITIONS AND MANAGE NON-COMPLIANCE

Enforcement of a given framework can be much more difficult than getting the best framework in place. As with monitoring and inspections, enforcement requires adequate human resources and investment in their capacity building on an ongoing basis.

The government's role is in part to ensure that the project is staying within environmental regulatory limits, complying with applicable terms and conditions, and meeting social commitments that are essential components of its contribution to sustainable development. In part, the government's role is to build and maintain citizen confidence that the project is actually following the rules. While there is a role for self-reporting by the company, self-reporting alone is completely inadequate to assure compliance or to build citizen confidence. Where it is evident to the citizens that government is not inspecting and maintaining oversight, they will not have confidence that the mine is being appropriately managed, and the likelihood of conflict is much increased.

Governments can take proactive measures to promote compliance as a means to improve upon an effective tool in securing conformity with their environmental laws. Measures can take the form of education programs, training, provision of technical information, and issuing codes of practice. There are two compliance targets to be considered with large mines that have been through the ESIA review process: (1) compliance with permit limits and (2) conformance with commitments and the expected performance of the mine (including implementation of the ESMPs to meet the predicted level of impacts defined during the ESIA review).

The term "compliance" should be defined in the legal framework of environmental law, and generally means the state of conformity with the law. Governments may try to achieve compliance with their legal framework through various means, including enforcement.

As an example, Environment and Climate Change Canada's enforcement activities include:

- "Inspection to verify compliance
- Investigations of violations
- Measures to compel compliance without resorting to formal court action, such as directions by the minister or enforcement officers, ticketing and environmental protection compliance orders by enforcement officers
- Measures to compel compliance through court action, such as injunctions, prosecution, court orders upon conviction and civil suit for recovery of costs." (Government of Canada, 2013a)

Enforcement criteria and consequences should be clearly defined in the legislative framework. Enforcement measures can range from corrective action orders to stop work orders, revoking permits, fines, and criminal charges. However, the consequences should be commensurate with the level of impacts and risks. For example, a few exceedances of a metal concentration over a year of water quality monitoring data may be enforced by the applicable government agency issuing an order for the company to complete a report that analyzes the root cause of the excursion. The report should present a corrective action plan that defines the actions to be taken and a timeline for completing the action and submitting follow-up monitoring data. That data should demonstrate that the corrective action was implemented and effective in correcting the excursions. In the case of the



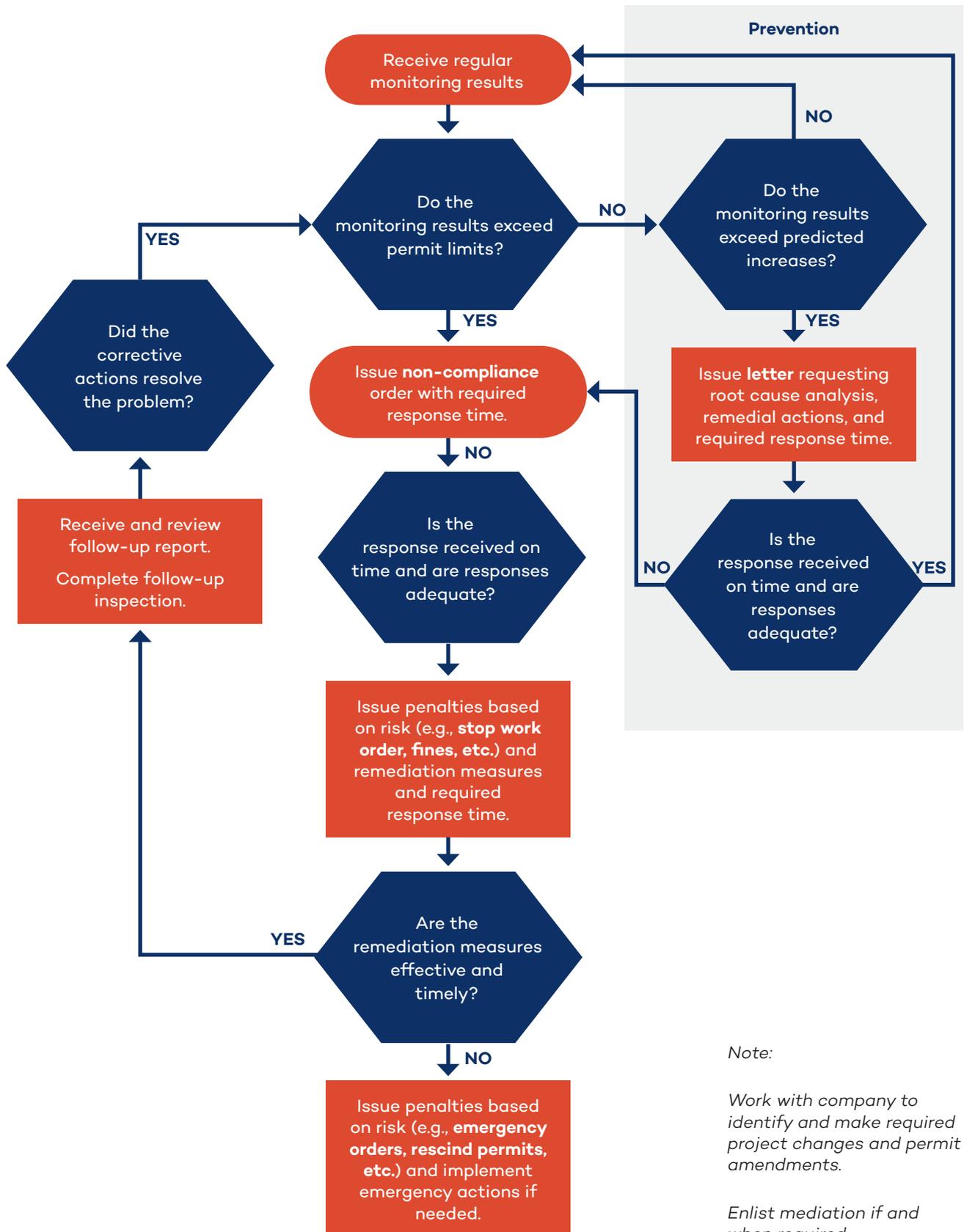
tragedy of the Brumadinho dam failure in Brazil in January 2019, a tailings dam failure resulted in deaths, massive fines, and criminal charges.

It is important that sufficient resources are allocated to monitoring and inspecting mines on a regular basis. The government can help avoid disasters by catching minor excursions early, issuing corrective action orders, and supporting companies with corrective actions by issuing timely permit amendments to allow effective corrective actions.

Note that it is important that the frequency of monitoring and inspecting mines during construction should be higher than operations. The risk of non-compliance is high when there is a high level of concurrent activities during construction and new ESMPs are just being implemented. It is important to issue and follow-up on non-compliance orders quickly during construction to set a strong precedent and expectation of high performance for the company. This not only results in the strong environmental and social performance of the mine but also helps governments meet their environmental and social sustainability objectives. An example of a compliance and enforcement decision tree is presented in Figure 5.



**FIGURE 5. ENFORCEMENT DECISION TREE**



Note:

Work with company to identify and make required project changes and permit amendments.

Enlist mediation if and when required.



## **9. PERMIT AMENDMENTS AND RENEWAL: REQUIRE UPDATED ASSESSMENTS AND AMENDED PLANS WHERE THERE ARE MATERIAL CHANGES TO MINE PLANS OR IMPACTS**

Permit amendments and renewals are important opportunities for governments to control mining activities and continue to manage environmental and social impacts. The transition may be government-imposed when a permit approaches expiration. An expiration period should be set as a checkpoint to ensure permit conditions are still relevant and applicable to current conditions, or the end of the period for which impacts were predicted. Government policies, legislation and/or permit terms also need to be in place to manage changes in project ownership, set triggers for permit amendments, and manage renewals. The permit term should be long enough to cover the life of the mine, allow for renewals in case the mine life is extended, and provide certainty for investors.

Company-triggered transitions can include permit amendments when a company proposes a material change to its mine operation, such as an increase in production rates, exploitation of a new mineral deposit, new infrastructure, new rock storage facilities, and/or new ore processes. Note that the state should have the discretion to reject applications for permit amendments. Trigger thresholds for review or revisions of permit conditions should be concrete and define a material change. Examples of triggers could include a percentage or absolute change in production rate or total material mined, or a percentage or absolute change in land disturbance. The triggers should be quantitative, consider the type of material being mined, the method of mining, and land planning and development metrics for the region or country. Trigger thresholds have been set in many countries based on a review of observed effects, which can provide a starting point for developing or revising triggers.

Regular review of permit compliance reports and observations of trends in monitoring data can be another trigger for review or revisions of permit conditions. For example, permit conditions of approved water management measures and effluent discharge criteria may need to be changed if there is an increasing trend in water quality parameters of potential concern. Even if the water quality is still in compliance, an increasing trend may result in future non-compliance. In this case, the permit terms related to the water management program should be reviewed, then a meeting should be set with the company to determine the root cause for the observed data trend and discuss what changes may be needed to the operations and/or permits. This is a proactive approach to governance that can work to maintain public and investor trust in the government.

Some legal frameworks also include annual or biannual updates to management plans, regardless of material changes, responding to any new information, data collected, stakeholder input, and lessons learned. An example is provided in Table 16.



**TABLE 16. EXAMPLE OF LEGAL REQUIREMENTS FOR MODIFICATIONS**

<p><b>Sierra Leone</b></p>	<p>Sierra Leone's Requirements for Modification of Environmental and Social Impact Assessments are provided in the country's Environmental and Social Regulations for the Mineral Sector of 2012, Section 85. The requirements state that "an EIA or ESIA shall be amended or modified in the following cases:</p> <ul style="list-style-type: none"> <li>a) for the implementation of mine development at completion of the exploration phase, and before the commencement of mining activities;</li> <li>b) for increments of mineral production greater than 50% of the production estimated in the original EIA, in small-scale mining operations;</li> <li>c) for increments of mineral production greater than 30% of the production estimated in the original EIA, in large-scale mining operations;</li> <li>d) for increments of mineral production in small-scale or large-scale mining operations having new environmental impacts or involving disturbance of new areas;</li> <li>e) for the construction and operation of new beneficiation facilities not included in the beneficiation plant original layout;</li> <li>f) for the modification of existing beneficiation facilities due to introduction of new mineral processes or increment of production capacity greater than 50%;</li> <li>g) for the construction of tailing ponds, rock deposits, furnaces, chimneys, leaching pads or other facilities not included in the beneficiation plant original layout;</li> <li>h) for the introduction of new equipment or variations of technology in mining or beneficiation facilities having new environmental impacts or affecting new areas."<sup>45</sup></li> </ul>
----------------------------	--

Government should require a mining project to have met its environmental and social obligations prior to obtaining a renewal or amendment, similar to when a project moves from exploration to exploitation, as outlined in the screening process. The project should be in full compliance with permits and approvals prior to issuing a permit renewal. This is also a point where permits can be updated to conform with any legislative updates. However, amendments may also be needed when there are unexpected effects or events that require changes in order to prevent or mitigate adverse environmental and social impacts. In these cases, the amendment should be issued even if there is not full compliance and should make adjustments to requirements depending on the root cause of the required change and the ongoing performance of the mine's compliance record. For example, if an amendment is needed to discharge more water than permitted to maintain the stability of a tailings dam structure, the amendment could be issued but include additional requirements for increased monitoring and reporting frequency. Depending on the severity of the risk, emergency approvals might be needed. However, a comprehensive ESIA review process should have resulted in a robust mine design to minimize the likelihood of a catastrophic event and emergency response measures and procedures to manage accidents and malfunctions.

The details required to be submitted to government for review for renewals and amendments will vary depending on the nature, magnitude, and extent of the change. A large change in the mine plan may require submission and review of a comprehensive ESIA and updated management plans; however, smaller changes may require submission of key details, an effects assessment limited to key details, and revisions to the related mitigation and management plans.

Following operations, impacts need to be controlled throughout closure, relinquishment, and post-closure, as presented in the next chapter.

<sup>45</sup> Environmental and Social Regulations for the Minerals Sector, 2012, sec. 85 (Sierra Leone). <http://mmmr.gov.sl/wp-content/uploads/2018/05/Sierra-Leone-Environment-and-Social-Regulations-for-Mining-March-2012.pdf>



**8.0  
ENSURE IMPACTS  
ARE MANAGED  
THROUGHOUT CLOSURE,  
RELINQUISHMENT, AND  
POST-CLOSURE**



**This chapter covers key government actions on the following topics for the post-mining transition:**

1. **Review and Update:** Require ongoing action to implement the mine closure plan and prepare for (temporary and permanent) mine closure
2. **Social and Environmental Closure:** Ensure that closure plans address both social and environmental aspects of mine closure
3. **Relinquishment:** Provide clear conditions for “exit tickets,” relinquishment, and management of residual risks
4. **Inspections:** Inspect and monitor closure plan implementation and complete final inspection prior to relinquishment

## OVERVIEW

The purpose of this chapter is to provide guidance to governments and policy-makers on crucial elements to consider through mine closure and relinquishment.

Mine closure is one of the most important aspects of environmental, social, and economic management in mineral resource governance, yet many jurisdictions do not have comprehensive legal frameworks for mine closure, nor do they effectively implement existing frameworks.

Mine closure involves the end of mineral extraction, processing, and transportation activities. It usually includes the removal of the mine site facilities and infrastructure and rehabilitation of the landscape as closely as possible to pre-mining conditions, and it may also incorporate productive land use agreed upon by local communities and government. Mine closure and reclamation, including ecosystem restoration, not only improve the landscape of the area but also aim to minimize soil, air, and water pollution.

A mine that cannot be closed properly should not be opened. Yet, mine closure and the economic and social dimensions of the post-mining transition are often not considered in the initial phases of mining projects, or they are inappropriately monitored and implemented during operations.

Planning for a sustainable mine closure and post-mining transition is a process that can last for decades or longer, the planning for which spans the entire life of the mine (IGF, 2013). There is now a consensus among practitioners that closure plans should be prepared before mining operations begin (APEC Mining Task Force, 2018; International Council on Mining & Metals [ICMM], 2019a). Mine closure and post-mining transition planning must address not only the environmental aspects of mine closure but also the social and economic aspects of closure. Planning for the environmental aspects of closure is now a policy approach that has been tested and used for several decades (APEC Mining Task Force, 2018; ICMM, 2019a). Planning for the social and economic aspects of



closure is a newer policy approach, however, and the effectiveness of related mechanisms and aspects may be less certain.

There can be a lot of uncertainty about mine closure that governments need to consider, as follows:

- The great majority of mines do not close because the ore body is exhausted—they close because of market conditions, accidents, or technological changes.
- Mine closure can be either temporary or permanent. The mine may reopen with improved technology and higher commodity prices, or exploitation of old mines may cause them to reopen since there is existing infrastructure.
- Mine closure can be long-anticipated, or it can be sudden, based on unforeseen events such as physical or market disasters.
- Where there are many mines in a region all producing the same commodity, multiple closures resulting from a price collapse may lead to regional or even national economic downturns, leaving government with few resources to combat the resulting unemployment or environmental problems.

When a mine closure is intended to be temporary, the dynamic is different from permanent closure.<sup>46</sup> Problems can occur when a mine closure is intended to be temporary but turns out to be permanent. Governments should be aware that problems occur when:

- A mine closes for what is believed to be a short period, but the closure goes on for many years.
- The conditions on the site deteriorate.
- It appears that the cost of reopening the mine is increasing because equipment is no longer usable, or major site work is necessary to reopen. At the same time, newer and more modern mines may have opened that can produce more efficiently at a lower cost.
- The company's financial condition deteriorates.

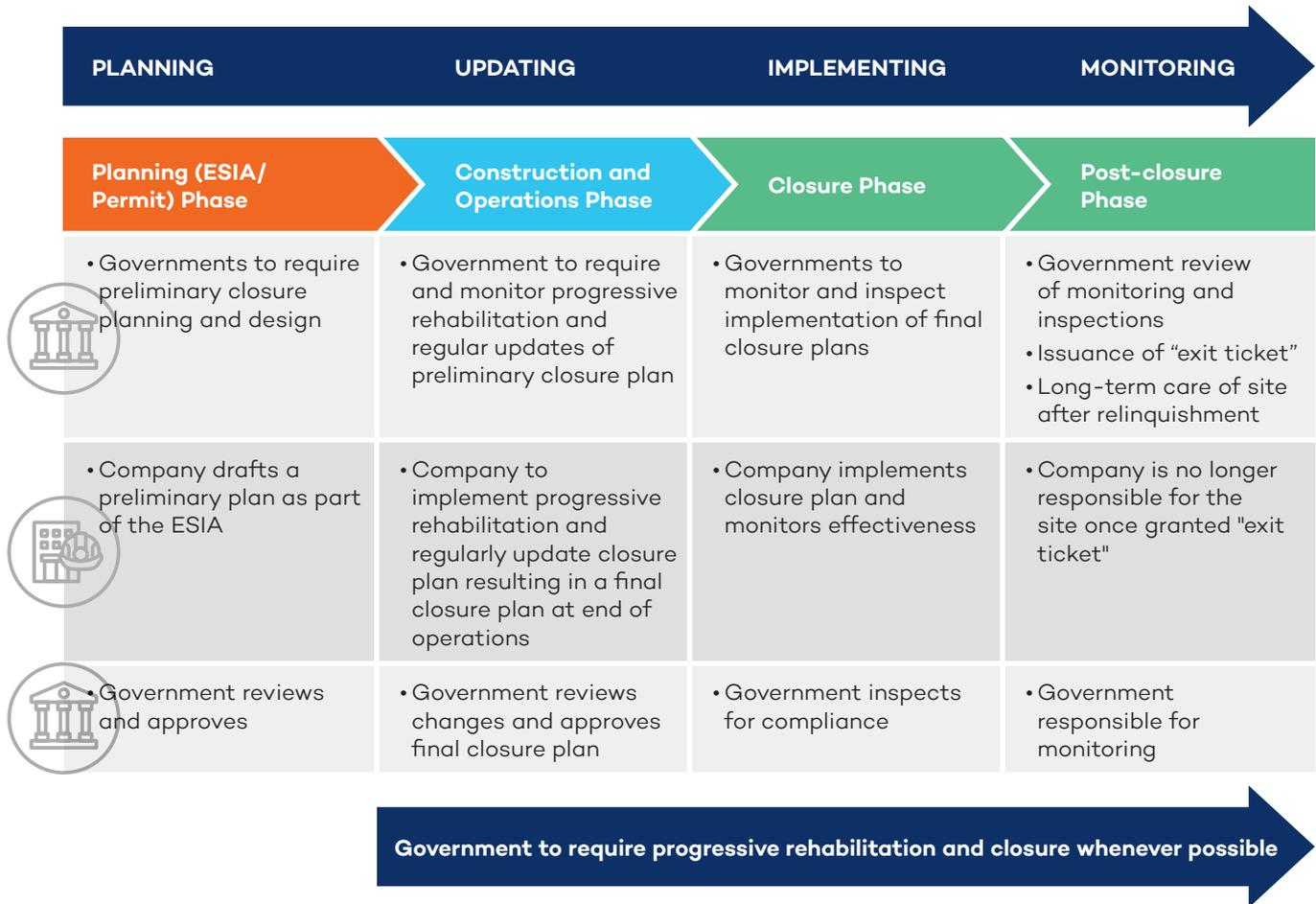
Financial assurances should be established prior to construction to cover the inevitable cost of mine closure or the unplanned interruption of mining activities. Table 17 provides an overview of key government actions and requirements, with corresponding actions for mine closure across the mine life cycle.

---

<sup>46</sup> A main objective of temporary closure is to preserve access to the remaining ore body and keep mining equipment and facilities protected and in good condition. Since it is presumed that the site will start operating again, actions such as covering the area with topsoil and reseeded it are generally not part of a temporary closure. This is quite different from a permanent closure, which usually involves things like removing mining equipment and revegetating disturbed areas.



**TABLE 17. MINE CLOSURE FRAMEWORK: PLANNING, MANAGEMENT, AND MONITORING ACROSS THE MINE LIFE CYCLE**



*Notes related to each phase and key action:*

<ul style="list-style-type: none"> <li>• The preliminary closure plan should be considered a requirement under the ESIA law and should be assessed as part of the assessment.</li> <li>• The company should consult with communities and Indigenous groups in designing the plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Adaptations and modifications to the preliminary closure plan may be due to: (1) changes to mine plan and/or operations; (2) new data or information; (3) new technologies or approaches; (4) effects on environment are not as predicted.</li> <li>• The company should continue to engage with communities, Indigenous groups on any proposed changes before they are included in the final plan.</li> </ul>	<ul style="list-style-type: none"> <li>• After implementation of the plan, the company continues to monitor and adapt to findings.</li> <li>• The government inspections should be verifying compliance with the agreed upon plan.</li> <li>• Continue to inform communities and Indigenous groups of progress.</li> </ul>	<ul style="list-style-type: none"> <li>• Long-term monitoring of the site will be determined by the government based upon any potential residual risks following closure.</li> </ul>
--	---	--	--



## STATE OF PLAY

The extensive research undertaken to support the development of this guidance document (Disney Bruckner, 2019) has shown that almost all the legal frameworks studied set out some requirements for rehabilitation and mine closure, with costs for rehabilitation and closure borne by the company.

Legal frameworks vary widely in the level of detail in requirements. Some legal frameworks require the ministry of environment to approve a mine closure plan, while others require approval from the ministry of mining or from both ministries. The timing of finalizing mine closure plans also varied widely in the jurisdictions studied. Some jurisdictions have few, if any, requirements for updating mine closure plans. Others provide more detailed requirements.

Most frameworks require an estimate of rehabilitation and mine closure costs in feasibility studies and/or the application for an environmental licence. Too often, costs are not based on engineering detail and, in practice, prove to be inadequate. This then means that the amount of the financial assurance is inadequate.

The timing of providing funds for financial assurance varies widely in existing legal frameworks. Most jurisdictions have little detail in their legal frameworks regarding oversight and decision-making related to mine closure funds, yet lack of clarity and transparency regarding the use of funds can be a source of conflict. Most jurisdictions also lack clear requirements regarding when a company's obligations for mine closure are fulfilled and under what terms any remaining financial assurance may be returned to the company.

A survey of more than 70 countries at the IGF Annual General Meeting in 2018 regarding their legal frameworks for rehabilitation and mine closure showed that only a few countries have clear guidelines for environmental clearance, or an "exit ticket," after closure and rehabilitation of the mine site. In most jurisdictions, either legislation is not clear on the issue, or the topic is not covered in the legal framework. In some instances, exit tickets are not required by national legislation.

In general, in most countries, the environmental elements of the plan tend to be better understood and developed than the economic and social portions. Most countries acknowledge the importance of the social and economic post-mining transition but are still challenged with how to do this. The key question in the economic and social dimension appears to depend on the circumstances of the mine. In some cases, the region around the mine has a diversified economy—or can develop one—and trying to build the local economy to absorb mine employees when the mine closes may be realistic. In other situations, the basic building blocks of a local economy are simply not present, and the plan needs to be oriented toward helping workers and other local residents transition to employment elsewhere.

## KEY GOVERNMENT ACTIONS

Good practices, including industry-leading practices (APEC Mining Task Force, 2018; ICMM, 2019a), require that planning for mine closure starts before operations and continues throughout the life of the mine until final closure and relinquishment. A closure plan should be required before governments



issue any mineral exploitation permit. Managing mine closure and post-mining transition activities implies that key steps have already been taken in the previous mine life phases to avoid creating ghost towns, ongoing water quality impacts, social dislocations, and the long-term environmental impacts of mining activities.

## **1. REVIEW AND UPDATE: REQUIRE ONGOING ACTION TO IMPLEMENT THE MINE CLOSURE PLAN AND PREPARE FOR (TEMPORARY AND PERMANENT) MINE CLOSURE**

Mine closure plans should be implemented in an ongoing and continuous manner to respond to temporary and permanent mine closures.

The closure of a mine is a dynamic process subject to changing technology, changes in climate and other variables. Review and revision of mine closure plans throughout the mine life cycle are necessary to adapt to change and to new information. Mine closure plans are thus living documents that need continuous improvement through regular revisions, audits, and updates during the life cycle of the mine.

Governments should make sure that requirements for mine closure are clearly set out in the legal framework and require the ongoing implementation of closure plans over the life of the mine. It is undeniable that all technical information will not be available at the mine planning stage or even at the beginning of operations. However, as information becomes available throughout the successive phases of the life cycle of the mine, a good regulatory framework will require that closure plans are updated based on current information. Mine closure plans should address economical, ecologically sound, and socially sustainable mine closure based on current data and informed by local communities. A good closure and post-mining transition plan is one that also involves input from affected communities and other local stakeholders in order to understand local priorities and opportunities for land use and sustainable development outcomes.



## LEGAL DISPUTE CASE STUDY

**Year initiated:** 1989

**Case name:** *Nauru v. Australia* (ICJ Rep 240)<sup>47</sup>

**Status:** Jurisdiction affirmed by ICJ

**Amount claimed in initial request:** AUD 91 million

**Amount awarded:** Settled out of court

**Year of award:** 1992

### Rehabilitation and Mine Closure

Nauru argued that Australia owed it financial compensation to rehabilitate its lands, which had been destroyed during phosphate mining conducted by the Australian government prior to Nauru gaining its independence. Nauru claimed Australia had breached international law when it failed to respect Nauru's sovereign claim over its own wealth and natural resources.<sup>48</sup> The ICJ concluded that it had jurisdiction to hear the case, but Nauru and Australia reached a settlement in 1993, so no further claims were heard by the Court.<sup>49</sup>

This dispute demonstrates the importance of rehabilitation and proper mine closure, including when mining is conducted by a government actor in a foreign jurisdiction.

## 2. SOCIAL AND ENVIRONMENTAL CLOSURE: ENSURE CLOSURE PLANS ADDRESS BOTH SOCIAL AND ENVIRONMENTAL ASPECTS OF MINE CLOSURE

Governments should collaborate with mining companies and local stakeholders to prepare for and manage the socioeconomic impacts of mine closure.

Some key considerations for the socioeconomic aspects of mine closure include:

- Where the mine is an important part of the national economy, the planning needs to occur at the national, not just the local, level. Some mines are the single largest taxpayers in the countries where they operate, and losing that revenue, while at the same time acquiring all the costs of dealing with unemployment and social dislocation, can be economically challenging for the country.
- In some locations, the local communities are diverse and resilient enough to adapt to the changing economy when a mine closes. However, some mines are simply so isolated and disconnected from the rest of the national economy that it is difficult or impossible to generate or maintain a local economy when the mine closes. In these situations, a strategy needs to be built around helping mine employees and other local residents transition to life in another location.

<sup>47</sup> *Nauru v. Australia*. Case concerning certain phosphate lands in Nauru. Preliminary Objections. Judgement of 26 June 1992 (International Court of Justice). <https://www.icj-cij.org/files/case-related/80/080-19920626-JUD-01-00-EN.pdf>

<sup>48</sup> Overview of *Nauru v. Australia*: <https://www.icj-cij.org/en/case/80>

<sup>49</sup> Summary of the decision: [https://www.mpil.de/en/pub/publications/archive/wcd.cfm?fuseaction\\_wcd=aktdat&aktdat=dec0204.cfm](https://www.mpil.de/en/pub/publications/archive/wcd.cfm?fuseaction_wcd=aktdat&aktdat=dec0204.cfm)



- Where communities existed before mining commenced, there may well be a basis for economic diversification and construction of a local economy that can survive mine closure. This takes the concerted action of numerous government agencies at all levels and all stakeholders, including communities, NGOs, institutions/academia, and industry over a long period of time. The scope of socioeconomic transition planning needs to be regional and prolonged from early on in the project planning and approvals.

There are many useful strategies governments may adopt, all of which are more successful when planning and implementation begin early in the life of the mine and build momentum over time. These strategies should be implemented continuously and updated regularly, including through the post-mining transition. Some useful strategies are provided in Table 18.

**TABLE 18. GOVERNMENT STRATEGIES FOR CLOSURE<sup>50</sup>**

<b>Stabilization funds</b>	Governments in areas that are highly dependent on revenue from natural resource extraction may establish a fund in which revenues are deposited when mineral prices are high and then utilized during periods of low mineral prices. Chile's Economic and Social Stabilization Fund is a well-known example at the national level (Ministry of Finance, n.d.), but there are such funds at the state or local level as well. These funds help governments maintain a stable tax base, sustain services over periods of low pricing, and avoid the temptation to overspend in periods when mineral prices are high.
<b>Permanent trusts</b>	National or local governments in jurisdictions around the world utilize permanent trusts to save a portion of revenue from natural resource development to benefit future generations. Norway's sovereign wealth fund, created largely with oil revenues, has a value of USD 1 trillion and is now the largest sovereign wealth fund in the world (Norges Bank Investment Management, n.d.).
<b>Employment and skills training</b>	Investment in preparing communities for employment and skills in areas that are likely to transcend the life of the mine should be a focus of funding and strategic effort early in the life of the mine and far in advance of mine closure. These strategies are time- and resource-intensive and have the greatest benefit if implemented early in the mine life.
<b>Planning for economic diversification</b>	Local governments and communities should lead the process of planning for relevant ways to diversify their local economies, aligned with local interests, objectives, and values. This work can be supported by funding from federal or regional sources or other donors and may be informed by broader development strategies.
<b>Technical assistance</b>	National governments can establish a fund through resource revenues and/or assistance from development banks, donors, and aid agencies, to help implement strategic-level initiatives.
<b>Post-mining use of the mine property</b>	There are some situations where the mine property can be used for other economic activities that can be the basis for local economic activity. There needs to be more imagination (Pearman, 2009) and more public involvement, to define opportunities for post-mining land use. Government agencies at all levels need to have regional land-use and economic strategies and ensure that closure plans align with these strategies.

<sup>50</sup> Strategies are based on those in Wilhelm, S. et al. (2016); see also Bauer (2014).



### **3. RELINQUISHMENT: PROVIDE CLEAR CONDITIONS FOR “EXIT TICKETS,” RELINQUISHMENT, AND MANAGEMENT OF RESIDUAL RISKS**

Relinquishment occurs when ownership, residual liabilities, and responsibility for a former mine site can be returned to the corresponding jurisdiction or original owner or transferred to a third party, following completion of closure activities and satisfying any agreed success criteria. An “exit ticket” or environmental clearance is meant to certify that the rehabilitation and closure plan has been fully completed, and the mine has reached physical, chemical, and biological stability. The idea is that mines can be brought to a state of physical, chemical, and biological stability after full closure, reclamation, and some post-mining transition monitoring period, which allows the government and the company to “walk away” from the site without future concerns.

As described below, there are pros and cons for providing an exit ticket system and undertaking relinquishment. Where such processes are provided, financial surety should be required for any long-term management liabilities or outstanding risks.

Governments should ensure that potential liabilities are checked, accounted for, and potentially managed beyond relinquishment. They may include, but are not limited to, the following:

- Long-term physical stability of tailings dams.
- Safety hazards from residual mine facilities, including underground mines, open pit high walls, pit lakes, unstable rock dumps, settling ponds, unmaintained access roads, etc.
- Potential acid generation and/or chemical leaching from underground mines, open pit wall rock, mine rock storage piles, tailings, leach pads, etc.
- Chemical leaching from buried waste and/or underground storage tanks or from residual materials left on-site.
- Residual hydrocarbon or chemical contamination from historic spills.
- Maintenance of long-term water treatment facilities.
- Continued maintenance requirements for reclaimed areas where the vegetation may not be self-sustaining.

Relinquishment should be determined at each project level after the determination that all closure objectives, activities, and criteria have been met. At the outset, the legal framework for the closure plan should require that the proponent indicate the expected timeline for relinquishment and publication of a notice. At the same time, regulatory frameworks should offer a pathway to final relinquishment (APEC Mining Task Force, 2018) or a relinquishment process that also includes what is expected from the proponent and the situation in which relinquishment might not be feasible. Responsibility for ongoing liabilities, transferable liabilities, and residual risks must be clear, especially for situations where relinquishment is a managed process, such as cases requiring passive or active long-term care. Uncertainty can lead to heavy financial, environmental, and social burdens for governments for abandoned mines (Cowan et al., 2010).

Governments should require the proponent to regularly report on the implementation of the closure and reclamation plan. For the final report in the request for relinquishment, the proponent should be required to report on the following:



- Confirmation that all objectives and targets of the closure and reclamation plan are met.
- Descriptions of all work completed to conform to the closure and reclamation plan to remove liabilities and ensure public safety in perpetuity.
- Evidence and supporting scientific and engineering studies to confirm the long-term physical and chemical stability of all components of the project with particular attention to tailings dams, waste rock storage facilities, open pits, underground workings, and potentially acid generating or metal leaching materials.
- Evidence to confirm revegetation success for the long term.

Calculations and financial surety requirements for long-term monitoring and management of the site.

Granting environmental clearance or exit tickets should be transparent and involve all relevant government and community stakeholders. For example, a notice or application for relinquishment can be made public as well as the formal acceptance of cessation of responsibility approved by regulators. Additional consideration to be integrated into the development of legislation and policies might include:

- Criteria for defining physical, chemical, and biological stability in the long term.
- Terms and evidence requirements for relinquishment.
- Criteria for calculating long-term monitoring and maintenance costs.
- Contingency plans and funding mechanisms to cover any uncertainty in the prediction of future liabilities (e.g., future unexpected acid generation and metal leaching).
- Mechanisms for returning or retaining financial guarantee and required self-sustaining financial mechanisms to pay for long-term monitoring and maintenance costs after relinquishment, if this is allowable.
- Requirements for post-mining transition monitoring and reporting to demonstrate readiness for relinquishment.
- Public notification requirements and a grievance mechanism.
- Final government and third-party expert inspection and audit requirements to verify property conditions prior to relinquishment.



## BOX 6. PROS AND CONS OF THE EXIT TICKET SYSTEM AND RELINQUISHMENT

Governments should carefully assess the pros and cons of the exit ticket system and relinquishment. This can help them determine if there are instances where an exit ticket and relinquishment might not be desirable.

Relinquishment is embedded in the mine closure legislation of many countries. Allowing for relinquishment provides the impetus for proponents to complete all closure and reclamation work. Also, after a mining project has reached the end of production, mining companies would like to reach a point where they can “relinquish” all legal and financial responsibility for the site.

However, relinquishment can leave governments with responsibility for any unexpected liabilities. As with contaminated sites legislation following the polluter-pays principle, the relinquishment legal framework could be structured to keep the proponent responsible for remediation of any liabilities that occur from the property in the future, even after relinquishment. The challenge is that the proponent can be difficult, if not impossible, to find in the future as companies change hands, go bankrupt, or dissolve. Government is responsible for completing or contracting a thorough technical due diligence and site inspection prior to contemplating granting relinquishment.

It is also important to note that the concept is proving difficult to apply. There are three basic challenges with relinquishment. First, there are a considerable number of sites where “walk away” closure cannot be achieved with any currently understood technical approaches. Maintaining acceptable conditions on the site and preventing off-site pollution will require ongoing human monitoring and remedial action at these sites, as well as expenditure of funds, often for a very long time. Second, there are some very significant limitations in the ability to predict future maintenance requirements. It appears that the predictions that companies make during the permitting stage are very frequently too optimistic (Kuipers & Maest, 2006). Third, given the inherent uncertainties, it is not at all clear what mechanisms exist that can ensure that ongoing costs of maintaining environmental conditions at a site are internalized and borne by the operators if we are talking about ongoing costs that need to be paid decades—or even centuries—after the mine closes.

As governments have become aware of the extent of these ongoing post-mining transition environmental liabilities, there have been legal changes, such as the United States’ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or “Superfund” legislation), which has allowed governments to pursue former operators for these costs many years after operations have ceased. Early planning should be the focus of legislation and policy to avoid this situation.

## 4. INSPECTIONS: INSPECT AND MONITOR CLOSURE PLAN IMPLEMENTATION AND COMPLETE FINAL INSPECTION PRIOR TO RELINQUISHMENT

In addition to clear reporting requirements, legal frameworks should allow regulators to conduct inspection and audits to determine whether a mining company’s mine closure obligations have been fulfilled or not. The regulatory framework should clarify the process and objectives of expectations as well as companies’ rights of response to the outcomes of inspections. Some jurisdictions have



set requirements for a performance measurement framework that describe the role of stakeholders involved in the process. The process of data collection and how it is used is also important. Access to closure monitoring data from the mining company and efficient data management from government agencies will be as important as the capacity to accurately analyze those data.

Several practical steps for preparing a cost-efficient and effective mine closure and post-mining transition monitoring program could include:

1. Having a full understanding of the objectives and requirements of the inspection/audit/monitoring program.
2. Requiring public access to key documentation and monitoring data in mine closure and post-mining transition reports.
3. Involving and empowering local communities through training and skills development to assist with monitoring and data interpretation related to mining activities affecting their communities. This role can be designed in addition to the traditional monitoring by governments, especially for socioeconomic issues and in areas with communities with traditional environmental monitoring knowledge. When local community members aid in data collection, there is greater trust in the resulting data. A tripartite approach comprised of local communities, the mining company, and central and local government representatives can also be contemplated (IGF, 2019b).
4. Building capacity within government to inspect and monitor closure plan implementation. Mining inspectors and auditors should be equipped to effectively evaluate the activities undertaken to implement the closure plan and determine if it was successful, needs improvement, or if there is a gap in implementation. Technical skills (engineering, social, environmental, etc.) are required to validate models or scenarios anticipated by companies and to assess risks.
5. Allocating considerable human, financial, and technical capacities to monitoring activities, including mine closure activities. A practical strategy might include allocating a portion of the mining revenue to monitoring and inspection activities, especially in the context of mine closure and post-closure.
6. Supporting mechanisms for information sharing with communities and opportunities for communities to provide feedback on mine closure plans.

Governments should monitor situations of temporary closure, in particular, as a planned temporary closure can transition into an unplanned permanent closure. Dealing with these circumstances requires, at a minimum:

- Financial assurance, adequate to ensure a permanent closure, remains in effect throughout the temporary closure.
- Frequent inspections of the site to ensure that conditions are not deteriorating to the point that the financial assurance is no longer adequate.
- Some limit on the length of the period of temporary closure, and enforcement of this period. Five years may be appropriate, or a five-year period with one five-year renewal.



In any case, when the time limit is up, it is time to implement permanent closure and ensure that all the elements in the closure plan are completed.

All government actions presented in this section are integral to the ability of governments to assess and mitigate the negative environmental and social impacts of mining and to optimize the contributions of their mining sectors to sustainable social and economic development. Where legal frameworks do not fully integrate these best practices, governments may decide to address existing gaps and shortcomings.

The next chapter presents strategies for how to assess and revise legal frameworks.





**SECTION D:**

**HOW TO IMPROVE  
YOUR LEGAL  
FRAMEWORK IN  
PRACTICE**

# 9.0

## STRATEGIES FOR ASSESSING AND REVISING YOUR LEGAL FRAMEWORK



This chapter covers the following tools and strategies for governments related to assessing and revising legal frameworks:

1. **Gap Analysis:** Review your legal framework for opportunities to improve environmental and social protection in the mining sector
2. **Preparation:** Scan for challenges and opportunities
3. **Risks:** Identify risks associated with an inadequate reform process
4. **Legal Instruments:** Determine the best instruments for change
5. **Process:** The legal framework revision steps
6. **Continuous Improvement:** Establish systems to continuously monitor, evaluate, manage change, and improve your framework

### OVERVIEW

The guidance presented in the previous chapters of this document describes good practices and key government actions for environmental and social management of the mining sector. But how does your government begin to assess what changes are needed, given your current legal framework and unique circumstances? Where do you begin to actually incorporate this guidance to make sure that your legal framework protects the environment while optimizing the social and economic benefits of your mining sector? The objective of this chapter is to aid your government with practical steps and guidance for review and revision of your legal framework for environmental and social impact assessment and management plans. It is important to recognize that the process by which laws are made and revised varies across jurisdictions. Governments should always follow the requirements of their national laws in amending or enacting new legislation, regulations, and policies. This chapter focuses on the common steps and tools that will help your policy-makers assess the current state of your legal framework for ESIA compared to international good practices and incorporate those that will improve the contributions of their mining sector to sustainable development.

# 1. GAP ANALYSIS: REVIEW YOUR LEGAL FRAMEWORK FOR OPPORTUNITIES TO IMPROVE ENVIRONMENTAL AND SOCIAL PROTECTION IN THE MINING SECTOR

This guidance document has provided many examples of the need for change and improvement of the ESIA legal frameworks in many jurisdictions. A major tool to support change or reform is a “gap analysis,” a comparison of international good practice with the law and practice in your jurisdiction. The gap analysis can be used to inform actions to be taken to improve the existing legal framework in a way that makes the most sense given unique national and subnational circumstances.

Gaps in your legal framework for environmental and social impact assessment and management can be identified using the good practice component of the legal framework presented in Chapter 3, governments’ key actions presented throughout Chapters 5 to 8, and the checklists provided in Chapter 10. Additional resources are also available in the annexes to this document, and additional guidance provided at [www.IGFMining.org](http://www.IGFMining.org).

Before undertaking a gap analysis, gather a team with collective knowledge of all laws and regulations that pertain to ESIA and environmental and social management of your mining sector to participate in the analysis. The gap analysis should consider domestic legislation; your country’s use of contracts, if any, for the mining sector; and the country’s legal obligations under international laws, such as international conventions and bilateral investment treaties. Very often, environmental and social impact assessment and management frameworks are governed by a suite of legal frameworks operating on multiple levels, and all levels should be reviewed in the gap analysis.

In countries where mining permits have already been issued and mining operations are underway, as is the case in most mineral-rich countries, good practices can be assessed and, where applicable, put into place before new permits for exploration or operations are issued. In addition, countries can also consider addressing shortcomings in ongoing projects by using the strategies and tools proposed in this guidance document. In addition to analyzing a country’s current legal and regulatory framework for ESIA, a gap analysis should include a scan of a country’s context. Generating strong political will and building and strengthening capacities and knowledge within government institutions are important enablers to fill the gaps.

## 2. PREPARATION: SCAN FOR CHALLENGES AND OPPORTUNITIES

The time is not always right to push for major reform, but regularly scanning for small and significant opportunities to introduce needed changes can lead to incremental and even major legal reforms. Scanning your country’s current legal, political, social, and economic context on national and subnational levels is critical to identifying key opportunities for reform.

Areas to scan for opportunities may include:

- **Securing political support:** Identify opportunities to gain support at the highest level of government and raise awareness that change is needed. Government leaders will often weigh the political costs and benefits in supporting legal reforms that impact the mining sector. In this situation, the gap analysis can be a key tool in raising awareness, providing evidence and data to demonstrate strengths and gaps in the country's legal framework for environmental and social impact assessment and management plans.
- **Gaining the support of industry:** Government may need support from mining investors and companies to ensure that reform will not inhibit or deter responsible resource development. Industry actors may resist new requirements for environmental and social impact assessment and management plans, as these may require additional time and financial resources, at least in the short term. Cash flow fluctuates dramatically over the life of the mine, and company spending on ESIA and implementation of management plans does not always align with periods of substantial revenue. Best practice requires companies to invest in ESIA and related management plans early in the life of the mine when the company is already making significant expenditures and well before the project results in revenue. While environmental and social management should start early in the life of the mine, some companies resist investing significantly in environmental and social impact assessment and management plans until they are certain the project is viable and will lead to production and related profits. However, in practice, mining companies are committed to respecting host countries' national laws and protecting their reputations by demonstrating best practices in environmental and social management. Many companies have decades of experience with environmental and social impact assessment and management plans under a range of legal frameworks and company protocols. In some instances, industry associations develop guidelines for their members that go beyond countries' national requirements on environmental matters. Some of these guidelines, available from the ICM and others, are provided in Annex 4, Additional Resources.
- **Coordination between government agencies:** Government agencies might have different visions and objectives for the mining sector. While some agencies may focus on attracting foreign investors and others on strengthened rules on environmental and social matters, government agencies or ministries in charge of mining can help align interests and identify opportunities for mutual gain. Developing a national vision for sustainable development in the mining sector and inter-agency collaboration are key components of a robust legal framework to foster coordination and alignment.
- **Dialogue with civil society and multistakeholder dialogue:** Understanding the needs and concerns of communities and civil society and providing opportunities for governments, companies, and civil society to share and discuss perspectives are important to identify opportunities and build common understanding.
- **Secure financial resources:** Adequate financial resources are needed to develop or revise legal frameworks for environmental and social impact assessment and management plans. Governments may request assistance from financial and technical partners and others to assess and upgrade frameworks.

## 3. RISKS: IDENTIFY RISKS ASSOCIATED WITH AN INADEQUATE REFORM PROCESS

Identifying and assessing potential risks associated with reform are critical for a successful reform process. Assessing possible risks and unintended impacts will help governments better navigate the reform process, develop a wider range of options for reform, secure a more accurate budget for the process, and make carefully thought out and well-informed decisions based on the best available information and views of a wide range of stakeholders.

Governments may wish to consider the following range of possible risks and impacts:

- **Conflict of laws and policies:** A new reform, particularly when not holistic, can bring some risks of contraction and confusion to the legal and regulatory system related to a particular issue. An assessment for possible incoherence with existing laws should be undertaken and addressed. Interaction with existing laws will need to be clarified and potential conflicts of laws resolved before implementation.
- **Implementation:** A new reform might not be effective if not commensurate with available financial and human resources or administrative and procedural systems.
- **Adequacy of budgets and human resources:** The implementation of a new law or regulations might require additional administrative, technical, and human capacities.
- **Shifting stakeholder concerns:** A communication strategy that includes a dialogue mechanism may be required to explain the main innovation of the changes and respond to stakeholder concerns.
- **Litigation:** Actions and measures taken by governments or a lack of these actions can be challenged by mining companies through a legal disputes process when they believe their rights have been infringed. The lack of a clear, predictable, transparent, and robust legal framework can play a significant role in the emergence and escalation of legal disputes. A proactive approach should be taken to avoid conflict.

## 4. LEGAL INSTRUMENTS: DETERMINE THE BEST INSTRUMENTS FOR CHANGE

Law and policy revision are often crucial parts of an effective regulatory system. However, identifying the right time to introduce legislative or regulatory changes in order to integrate international good practice could be a challenging task. In any given jurisdiction, several opportunities can be seized to improve the legal framework for ESIA. Reforms should always be undertaken in a collaborative manner with consideration of all stakeholder concerns.

### *Change Through Laws and Legislative Tools*

#### **Adoption of New Legal Instruments**

Where there is political and legislative support, and particularly in the absence of a comprehensive legal framework for ESIA, a new law may simply be adopted. Such a law should incorporate international and regional good practice relevant to the country's unique context.

A new legal instrument presents a unique opportunity to make things right from the very beginning and start with the best international standards. However, it will require resources, expertise, and coordination for design and implementation.

### Revision of Existing Legal Instruments

In the vast majority of countries, opportunities arise through the revision of existing ESIA laws or other major legislation governing the mining sector, such as mining codes or mineral acts, environmental laws, water and forestry acts, etc. One of the challenges of revising existing laws is the cost of implementation of reform for mining companies. To assist companies in adapting to changing legislative requirements, new legislation should include a schedule for implementation and compliance. In some cases, activities may need “grandfathering” (i.e., making an exemption) in the new legislation where the cost of bringing old facilities to new standards may be too costly for the benefits.

**Success factors:** Getting political support at the highest level to make the case for a change; collaboration with other governmental departments, the legislature, regional and local governments; involvement of the industry and civil society; removal of a legal stabilization clause covering environmental and social aspects.

## *Change Through Regulations and Other Administrative Tools*

### Strengthening Existing Laws

Regulations, ministerial ordinances, or orders have the unique characteristic of providing flexibility to administrative agencies to enact rules that govern how laws will be implemented and enforced. Where there is no leadership or political commitment to revisiting existing laws, regulations and orders can offer temporary alternatives to incorporate a number of good practices that can enhance and clarify the black-letter and the implementation of existing laws. This approach is particularly suitable in case of confusion between laws or lack of specificity in the law. This approach may create a risk of the non-conformance of revised regulations with existing laws, particularly when the laws are outdated.

### Addressing a Legal Void

Regulations have been used in some jurisdictions as a transitional step toward filling a legal void or vacuum on issues of importance that are not addressed at all in current legislation.

Research on and evidence of the deficiencies and gaps of existing laws should continue to be documented. Awareness should be raised regarding the costs of the status quo to build the momentum for the need for legal reform.

**Success factors:** A regulation as a “gap filler” should not come to contradict the black-letter or spirit of existing laws or create confusion over the interpretation of the law it is meant to facilitate. This can lead to problems in the implementation phase or some stakeholders challenging the regulations before the courts. A government should therefore find the right mechanisms within its legal system to prevent this issue.

### *Change Through Permitting, Contract Negotiation and Renegotiation*

There can also be opportunities to address gaps in contracts and permitting processes.

ESIA and related management plans have historically been governed, in part or fully, by mining contracts in some developing countries. This approach is less common today. As ESIA and related management practices have evolved, legal requirements have become cornerstones of national environmental laws and regulations, typically supported by mining laws and regulations and guidelines for the mining sector.

The best place to define company and government obligations for ESIA and related management plans is in domestic laws and regulations. However, some governments use contracts between the host government and companies (investor–state contracts) as a “gap filler” where the legal framework has significant shortcomings, is not comprehensive, does not incorporate good international practices, or is insufficient or unclear, for example, in response to a new form of mining technology.

#### **BOX 7. THE PROS AND CONS OF USING MINING CONTRACTS AS A TEMPORARY “GAP FILLER” TO ADDRESS UNIQUE ENVIRONMENTAL AND SOCIAL IMPACTS**

The approach of using contracts to manage environmental and social impacts has both strengths and weaknesses. On a positive note, a contract can more specifically respond to the unique environmental and social circumstances of a particular project and local communities. On the other hand, a piecemeal approach to environmental management, contract by contract, can result in greater difficulty inspecting and monitoring compliance. Furthermore, community conflict may result where there are higher or lower standards for one company than for a company operating near a neighbouring community.

Where contracts are used to manage environmental and social impacts, care should be taken to:

- Ensure provisions are included to allow revision, integration, and compliance with new laws.
- Provide a role for local governments and communities in environmental and social impact assessment and management plans. The roles and obligations should be perceived as fair by the parties to the contract and by interested communities. For examples of contractual language on environmental and social impact assessment and management plans, see the International Bar Association Model Mine Development Agreement (MMDA) Version 1.0 (2011), available in multiple languages at <http://www.mmdaproject.org/>.

## **5. PROCESS: THE LEGAL FRAMEWORK REVISION STEPS**

This section proposes procedural key phases and steps that governments can undertake to assess and revise their legal framework for environmental and social impact assessment and management plans. Overall, improvements to the legal system, stronger management of the process, partnerships with mining companies, and development of collective visions can help reinvigorate a commitment to managing environmental and social impacts and reach common development objectives. Likewise,

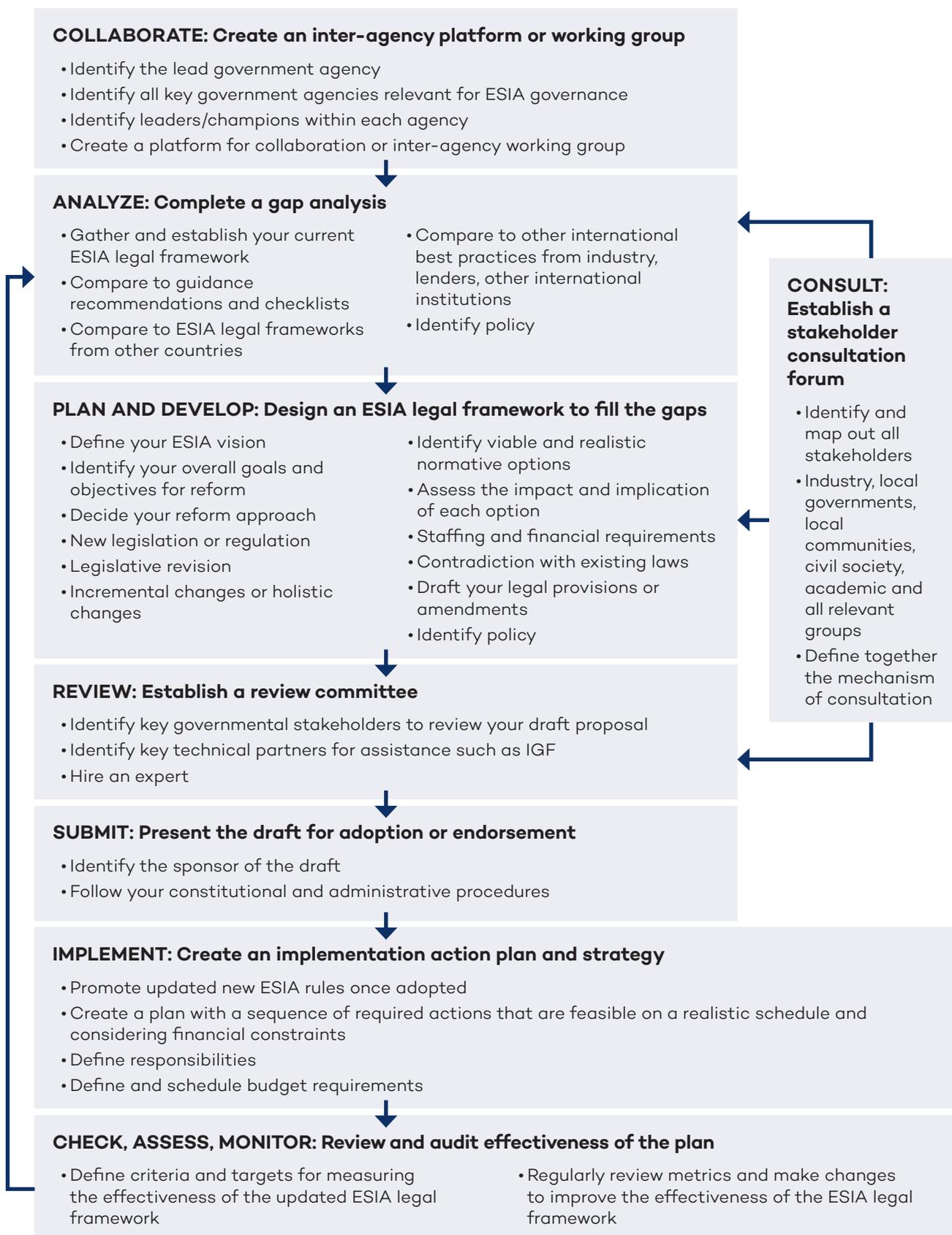
investing in the necessary human resources and capacity building to implement and assess the legal framework can aid employee satisfaction and retention and better project outcomes.

There are multiple avenues to incorporate good practices into your government's legal framework. Key steps may include:

- Creating a platform for collaboration between all relevant key government agencies at the national and subnational levels, such as an inter-agency task force or working group to share agencies' experiences and visions on ESIA matters.
- Identifying the champion and lead organization to promote and coordinate the process.
- Calculating the costs and creating a budget for the legislation or regulation.
- Scanning your political, social, and economic environment to identify opportunities and challenges.
- Undertaking a gap analysis to identify the current legal framework shortcomings based on the good governance checklist provided in the next chapter, including collecting mining companies and local communities' views about the shortcomings of the current legal framework.
- Defining vision, goals, and objectives for the improved ESIA framework.
- Planning, designing, and developing the legal tools that integrate all relevant good practices.
- Consulting with mining companies, the ESIA scientific community, civil societies, international partners, and donors on your proposed changes to make sure they are efficient and will not trigger unintended consequences or collateral damage.
- Analyzing the resources that the implementation of proposed legislation would require, including those needed to enforce and monitor it.
- Assessing the impacts and risks associated with your proposed framework.
- Mobilizing political leaders and the legislature on endorsing and approving the proposed changes.
- Defining a transitory period and timelines for the enforcement of the new rules.
- Securing funding for at least five years to effectively implement new or amended legislation.
- Developing training programs.
- Developing external advisory committees for providing input to governments on what is needed.
- Assessing and improving your new legal framework.

The good governance checklist below further details assessment questions, tools, and strategies governments may use to assess and revise their legal frameworks. The main key phases and steps are summarized in Figure 6.

**FIGURE 6. ESIA LEGAL FRAMEWORK REVISION PROCESS: KEY PHASES AND STEPS**



## 6. CONTINUOUS IMPROVEMENT: ESTABLISH SYSTEMS TO CONTINUOUSLY MONITOR, EVALUATE, MANAGE CHANGE, AND IMPROVE YOUR FRAMEWORK

A key step for creating an effective legal framework is to monitor, evaluate, and revise the framework. This meets an underlying goal of continual improvement. A regular review schedule should be defined, and consider adding internal and external audit programs. The purpose of audits can vary and should be explicitly defined. For example, the purpose may be to check:

- If the legal framework is being fully and effectively implemented.
- How each department is performing.
- The overall environmental and social performance of the country's mining industry.
- The performance of key components or aspects of the industry (e.g., water management, tailings dams, hazardous wastes, public safety, etc.).

System metrics need to be tracked to evaluate the legal framework. Examples of metrics that can be tracked include, but are not limited to:

- Number of major incidents.
- Number of minor incidents (Note: minor incidents are expected and, as with mine safety programs, it is better to have many near misses than one major incident).
- Number of new mines permitted.
- Number of amendments.
- Number of renewals.
- Number of enforcement actions taken.
- Length of time for ESIA review processes.
- Budget spent.
- Progress on implementing plans.
- Stakeholder grievances.

Results from the monitoring programs, reviews, and audits should then prompt changes in the legal framework design and implementation.

Additional guidance is provided in the good governance checklist in Chapter 10. The checklist focuses on each theme addressed in the guidance document to provide tailored questions, tools, and strategies for governments to consider when assessing or revising legal frameworks and processes.

# 10.0

## GOOD GOVERNANCE CHECKLISTS

This chapter provides “Good Governance Checklists” for the topics presented in Chapters 3 to 8. The purpose of these checklists is to serve as assessment tools in the gap analysis stage for governments who wish to evaluate their legal frameworks. This is not a prescriptive list but a list of questions and tools for consideration.

These lists are part of the gap analysis tools provided in Chapter 9 and can be used to generate discussion within lead agencies, in inter-agency dialogues, and among key stakeholders to evaluate current legal frameworks and processes for legal reforms. However, each jurisdiction will have its own unique characteristics to consider, thus some of the topics and tools may not be a good fit for a particular setting. This chapter, however, can help initiate evaluations, dialogue, and, where applicable, reform.

### CHAPTER 3 CHECKLIST: COMPONENTS OF A COMPREHENSIVE LEGAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT

#### QUESTIONS:

Does your legal framework include the following components?

1. A vision for sustainable development with a commitment to environmental and social protection is presented.
2. Consistency is maintained across all legal instruments.
3. Responsible authorities are clearly identified, along with their respective roles in review, decision-making, and monitoring processes.
4. Social and environmental requirements are defined for all phases of the mine life, commensurate with risks.
5. Requirements and guidelines for public engagement and consultation are provided, including ongoing requirements for public engagement throughout the life of the mine.
6. Requirements and guidelines regarding transparency and access to environmental and social information are provided.
7. Guidelines for grievance mechanisms are provided.
8. Standard requirements for the initial project proposal are clearly described.
9. Screening procedures are required to determine when a mining activity will require an ESIA and review process.

10. Requirements and procedures for scoping are provided, including requirements for stakeholder input.
11. The ESIA is part of project planning and is conducted before any decisions are made to approve a proposed large-scale mining project.
12. A reasonable timeline for the ESIA report review process is defined.
13. Environmental and social management plans are required in the review process, and guidelines are provided.
14. Preliminary mine closure and post-mining transition plans are required in the review process, and guidelines are provided.
15. Adequate financial assurance for remediation and mine closure is required and must be maintained by the mining licence holder.
16. Permits and approvals are subject to standard terms and conditions, including reporting and updating requirements.
17. Oversight of environmental and social impacts across the life of the mine is required through monitoring, inspections, and enforcement.
18. Sanctions for non-compliance are commensurate with the level of violation.
19. Existing permit conditions must be met prior to renewal and prior to approving a permit for large-scale mine development.
20. Clear conditions are provided for “exit tickets,” relinquishment, and management of residual risks.

## **TOOLS & STRATEGIES:**

- Conduct a comprehensive review of your legal framework.
- Discuss strengths and gaps in your legal framework with counterparts from other relevant ministries and key stakeholders.
- Consider Chapter 9 of this guidance document to further assess and revise your legal framework.

## CHAPTER 4 CHECKLIST: ENABLING FACTORS AND MECHANISMS OF A GOOD FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT

### 1. ALIGNMENT OF LAWS: ALIGN INTERNATIONAL, NATIONAL, AND SUBNATIONAL LAW AND POLICY

#### QUESTIONS:

- Are international, national and subnational sources of law aligned to avoid contradictions?
- Are national and subnational laws and policies, with input from key stakeholders, used to implement the goals, objectives, and obligations under international treaties?
- Where contracts are used, are they aligned with relevant international, national, and subnational laws and policies?

#### TOOLS & STRATEGIES:

- Conduct a review of international, national, and subnational laws and policies related to environmental and social impact management and the minerals sector to ensure alignment.
- Complete a legislation, policy, and capacity gap analysis. See Chapter 9 for suggested strategies.
- Develop an inter-ministerial working group to regularly review and monitor the alignment of international, national, and subnational laws.

### 2. STABILIZATION PROVISIONS: AVOID LEGAL STABILIZATION OF ENVIRONMENTAL AND SOCIAL PROVISIONS IN LAWS AND CONTRACTS

#### QUESTIONS:

- Does your legal framework discourage or prohibit the stabilization of environmental and social provisions in mining project terms and conditions?
- Does your legal framework discourage or prohibit the stabilization of environmental and social stabilization provisions in laws and contracts for the mining sector?
- Is the legal framework regarding stabilization clauses consistent across domestic laws and mining contracts?

#### TOOLS & STRATEGIES:

- Conduct an assessment on the scope, duration, impacts, and need for stabilization provisions in your legal framework.
- Remove environmental and social stabilization provisions from your legal framework.

- Limit the scope of stabilization provisions to fiscal matters and limit their duration.
- Consider removing any stabilization clauses from your legal framework.

### **3. STRATEGIC ASSESSMENT: CONDUCT A STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR THE MINING SECTOR**

#### **QUESTIONS:**

- What are existing environmental, social, and cultural constraints in land-use planning and mine permitting in key areas of mineral interest?
- What are the opinions and concerns of key stakeholders, including those in national government, local government, civil society organizations, communities in mineral-rich regions, companies, and others?
- Does the legal framework clearly specify where exploration activity may not take place (e.g., on cultural heritage sites and some types of protected areas)?
- Are the excluded zones integrated into the mining cadastre or territorial cadastre and accessible to the public and investors?

#### **TOOLS AND STRATEGIES:**

- Set the key objectives of the strategic assessment, which could include, for example:
  - Assessing the key environmental and social challenges and opportunities.
  - Assessing the cumulative impacts of mining in combination with other industries, infrastructure, and land uses, and developing associated land management plans for sustainable development.
  - Identifying the policy, legal, regulatory, institutional, and capacity needs for mining and associated infrastructure and industries.
  - Developing and assessing specific measures to improve sustainability.
- Discuss with and collect knowledge and input from key stakeholders.
- Draft recommendations regarding zones that will require special management regimes or designated as excluded from mining activity in the mining cadastre.
- Seek further input from the key stakeholders on the draft recommendations.
- Finalize the defined zones that will be excluded from mining activity.

### **4. INTER-MINISTERIAL COLLABORATION: ESTABLISH A COORDINATING AGENCY**

#### **QUESTIONS:**

- Has your government established a coordinating agency or Memorandum of Understanding among agencies to advance inter-ministerial collaboration and maintain clarity and consistency in roles across agencies?

- Are mechanisms for collaboration and communication between the authority responsible for granting environmental permits and the authority for granting mining permits in place?
- Are the roles of the environmental ministry and mining ministries and other organs of government in the ESIA and permitting process clear?

### **TOOLS & STRATEGIES:**

- Develop an inter-ministry working group that meets regularly to identify opportunities to collaborate, share experiences, and work together to improve responsible governance of environmental and social impacts and benefits in the minerals sector.
- Consider formalizing the inter-ministerial coordination through establishing a coordinating agency or a Memorandum of Understanding.

## **5. ENGAGEMENT AND CONSULTATION: ESTABLISH GUIDELINES FOR PUBLIC ENGAGEMENT AND CONSULTATION**

### **QUESTIONS:**

- Does the legal framework provide detailed requirements and guidelines for public engagement and consultation, particularly regarding consultation with Indigenous Peoples, where applicable?
- Do public engagement guidelines take into consideration international best practice, such as IAIA principles, including that the process be:
  - Initiated early and sustained?
  - Well planned and focused on negotiable issues?
  - Supportive to participants?
  - Open and transparent?
  - Context-oriented?
  - Culturally and gender sensitive ?
- Where the interests of Indigenous Peoples are affected, are the requirements and guidelines aligned with international frameworks, such as the ILO Indigenous and Tribal Peoples Convention 169 and the UNDRIP?
- Do the guidelines clarify:
  - Parties to be consulted?
  - Method of engagement and/or consultation?
  - Frequency and timing of consultations?
  - Role of government?
  - Required level of effort from the company?
  - Documentation and publication requirements?

## **TOOLS & STRATEGIES:**

- Conduct a review of public engagement and consultation requirements related to ESIA for the minerals sector compared with good practice.
- Use guidelines to clarify government and company obligations in public engagement and consultation processes.
- Identify critical timing to incorporate consultation in the updated legal framework for the ESIA process and permitting.
- Define responsibilities for consultation (i.e., government or company) in legislation or policy.
- Discuss with key stakeholders how public engagement and consultation requirements may be improved and develop plans to implement needed improvements.
- Provide guidelines for a range of culturally appropriate communication methods and strategies for public engagement during the ESIA and permitting processes. Methods could include radio, videos, social media, public forums, and the use of graphics and information presented in creative formats to communicate with a wide audience.
- Use the guidelines to explain how government will consider and incorporate public engagement and consultation results in the ESIA, permitting, and decision-making processes.

## **6. HUMAN RESOURCES: ENSURE THAT EFFECTIVE HUMAN RESOURCES ARE IN PLACE, ALONG WITH ONGOING TRAINING PROGRAMS**

### **QUESTIONS:**

- What human resources are currently available to implement the legal framework for ESIA and related ESMPs? On national levels? Subnational levels? What human resources are needed?
- Do subnational staff have adequate support to meet their obligations, particularly those who are working in remote areas?
- What are your training and retention strategies?
- What ongoing training and capacity-building support can you provide to government employees to ensure that they are prepared to manage environmental and social impacts in the mining sector?
- Do you have a sustainable source of funding for human resources training programs?
- Are the funds aggregated from different mines to avoid a direct link between a mining company and the financial support of a specific training program?
- Is use, management, and reporting of funds conducted in a transparent manner?
- Are mechanisms in place to ensure the durability of funds so that training programs are not entirely dependent on revenue from the mining sector?
- Is your government working to advance gender equality in procedures to recruit, train, and support human resources? How could this be improved?

## **TOOLS & STRATEGIES:**

- Establish ongoing training programs for inspectors and others to understand and monitor impacts of current and new technologies, social impacts and environmental impacts, taking into consideration current and anticipated impacts of climate change.
- Contract technical experts to help with inspections and review of monitoring reports where there are gaps in capacity.
- Continuously work to improve budgets for human resources and training programs.
- Identify additional sources of funding for budget shortfalls (e.g., requiring companies to pay into a fund for independent reviews, inspections, and/or audits).
- Establish programs to advance gender equality in recruiting, training, and retention of employees.

## **7. FUNDING: IDENTIFY SOURCES OF FUNDING FOR ASSESSING AND IMPROVING YOUR LEGAL FRAMEWORK**

### **QUESTIONS:**

- What sources of funding does your government have for ongoing assessment and improvement of your legal framework for ESIA and environmental and social management for the mining sector?
- How does your government continually assess the responsiveness of your legal framework to manage the environmental and social impacts of new technology, a changing climate, and other changing circumstances?
- Do you regularly consult with stakeholders regarding the strengths and gaps in your legal framework on the themes of ESIA and environmental and social management for the mining sector?

### **TOOLS & STRATEGIES:**

- Assess current funding sources available to your government for assessing and improving your legal framework for ESIA and environmental and social management for the mining sector. Sources may include:
  - Government revenue from mineral development
  - Technical and capacity-building support from international organizations and aid agencies
  - Budget appropriations from national and subnational budgets
- Set up an inter-ministerial committee to continually assess the responsiveness of your legal framework to manage the environmental and social impacts of new technology, a changing climate, and other changing circumstances.
- Ask stakeholders for feedback regarding the strengths and gaps in your legal framework on the themes of ESIA and environmental and social management for the mining sector.

## **CHAPTER 5 CHECKLIST: THE SCREENING PROCESS: GOVERNMENT ACTIONS THROUGH EXPLORATION AND DEFINING WHEN A PROPOSED MINE NEEDS AN ESIA REVIEW PROCESS**

### **1. SCREENING PROCESS: DECIDE IF AN ESIA REVIEW PROCESS IS REQUIRED FOR THE PROJECT**

#### **QUESTIONS:**

- Does your legal framework require that government be informed of and screen all exploration activity and mining activity to determine when an ESIA review process is required for the project?
- Does the legal framework define the government's review process for mineral prospecting, exploration, and exploitation/mine development, to determine when an ESIA review process will be required?
- Are screening criteria clear, defining components such as the type and scale of mining activity; impacts on local populations, including vulnerable groups; and impacts on the environment, such as biodiversity?
- Do large-scale mining projects require an ESIA review and public hearing process?

#### **TOOLS & STRATEGIES:**

- Review your requirements for project proposals for mineral exploration and exploitation. Are all proposals subject to a screening process to determine when a full ESIA will be required, based on the level of risk?
- Consider developing a decision tree or other clear process to determine when a full ESIA will be required.

### **2. TERMS AND CONDITIONS: ENSURE THAT PERMITS AND APPROVALS ARE SUBJECT TO STANDARD TERMS AND CONDITIONS**

#### **QUESTIONS:**

- Are exploration permits time-limited?
- Do exploration permits include conditions and reporting requirements, including on environmental and social impacts where applicable, to appropriate regulators?
- Do exploration permits require monitoring to evaluate environmental and social impacts and effectiveness of applied mitigation and management measures?

### **TOOLS & STRATEGIES:**

- Review the terms and conditions of issued exploration permits to ensure that they are time-limited and include management of environmental and social factors.
- Transition permit renewals and new permits to include any identified gaps in the management of adverse environmental and social impacts.

## **3. SPECIAL CONDITIONS: SPECIFY SOCIAL AND ENVIRONMENTAL REQUIREMENTS FOR EXPLORATION COMMENSURATE WITH PROJECT RISKS**

### **QUESTIONS:**

- Does your legislative framework include appropriate minimum requirements for exploration licences, commensurate with the level of environmental and social risk of the given exploration plan?
- Does your framework require at least the following requirements for an exploration licence:
  - Statement of anticipated environmental and social impacts?
  - Mitigation and rehabilitation plan?
  - Record of public engagement and participation of local communities where environmental and social impacts are high?
  - Costing and a timeline of measures to be implemented to prevent, reduce, or mitigate environmental and social impacts?
- Does the legal framework prohibit exploration activity without written government approval?

### **TOOLS & STRATEGIES:**

- Review your social and environmental requirements for the exploration phase to ensure that they are not so rigorous that they deter exploration but are rigorous enough to manage environmental and social impacts that may be associated with some advanced exploration techniques.
- Provide training to key ministries regarding exploration techniques and emerging technologies.
- Seek feedback from local communities and Indigenous groups regarding how they wish to be engaged or consulted regarding exploration activities.

## 4. COMPLIANCE: REQUIRE EXISTING PERMIT CONDITIONS TO BE MET PRIOR TO RENEWAL AND LARGE-SCALE MINE DEVELOPMENT

### QUESTIONS:

- Does the application or request for renewal or extension of an exploration permit require certification of compliance with environmental and social obligations in the exploration phase?
- Do permit denials follow clear guidelines?
- Where permits are denied, does the legal framework allow for company appeals?

### TOOLS & STRATEGIES:

- Create guidelines for environmental and social management in the exploration phase that are focused on advanced exploration.
- Create standard permit conditions for exploration.

## CHAPTER 6 CHECKLIST: ESIAs: GOVERNMENT REQUIREMENTS THROUGH THE MINE PLANNING PHASE

### 1. DEVELOPMENT PLANS: REVIEW THE MINE DEVELOPMENT PLAN AND INITIATE THE ESIA REVIEW PROCESS

#### QUESTIONS:

- What government agencies need to be involved in the ESIA review process and which one is best suited to lead the review process?
- Are there regulatory guidelines to determine what infrastructure components and what extent of activities need to be included in the ESIA review?
- Does the regulatory framework include an opportunity for potential stakeholders to be identified and to review the proposed project to determine, if they have an interest, what is their level of interest in the project?

#### TOOLS & STRATEGIES:

- Define the regulatory agency with the most linkages to other ministries, capacity to lead the ESIA review process, and decision authority. Most often, this is the ministry of environment.
- Review the regulatory framework and add provisions as needed that provide decision criteria for what infrastructure components should be included in the ESIA review; allow for stakeholder identification; and determine how to manage international boundary stakeholders.

## 2. SCOPING: SET OUT CRITERIA FOR PROJECT SCOPING

### QUESTIONS:

- Does the legal framework include a robust process for obtaining stakeholder input on what components need to be assessed for a project?
- Does the process take into consideration the stakeholders' technical and sociopolitical perspectives when defining what indicators will be measured to determine effects?
- Do procedures include checking resources to help identify the full range of potential environmental and social impacts for the types of mines and activities that will be assessed?

### TOOLS & STRATEGIES:

- Ensure that the legal framework includes a process for identifying all potential issues and components of interest from all stakeholders—from government agencies to vulnerable or disadvantaged groups (based on sex and gender, age, place of residence, ethnicity, socioeconomic status, employment status or disability), Indigenous Peoples, local communities, and interest groups. A range of engagement should be employed for this purpose (e.g., workshops, public review periods, community meetings, etc.).
- A screening process should be included to remove overlapping or inconsequential components to help make the assessment as effective and understandable as possible.
- Recognize that the ESIA review process must accommodate both technical and sociopolitical aspects since the decisions are inherently political.

## 3. ENGAGEMENT: REQUIRE AND OVERSEE MEANINGFUL ENGAGEMENT AND CONSULTATION, INCLUDING BUILDING STAKEHOLDER CAPACITY FOR PARTICIPATION

### QUESTIONS:

- Is a public engagement plan in place that includes capacity building for community stakeholders?
- Is capacity building provided both early in the project and throughout the life of the mine?
- Is the capacity building directly responsive to the needs and objectives of the community?
- Where have CDAs been utilized in your country? What do stakeholders have to say about these agreements?
- If utilized, are the agreements negotiated to respond to the unique objectives, circumstances, and desires of affected communities?
- Would it benefit your government to increase support for such agreements to manage the impacts and benefits of mining?
- Are multistakeholder mechanisms utilized in your mineral sector?
- Are government stakeholders active in these mechanisms?

### **TOOLS & STRATEGIES:**

- Develop a budget for capacity building.
- Conduct a survey of community needs and objectives for capacity building.
- Develop a capacity-building program with input from community stakeholders.
- Implement the capacity-building program, modifying as needed at periodic intervals based on further input from community stakeholders.
- Meet with stakeholders to discuss the use of CDAs in the minerals sector.
- Consider drafting or improving guidelines for multistakeholder mechanisms in the minerals sector.
- Prepare guidelines for how stakeholder input is integrated into the ESIA review and decision process.

## **4. TERMS OF REFERENCE: AGREE TO THE CONTENT OF THE ESIA THROUGH TOR**

### **QUESTIONS:**

- Have standard ToR templates that can be adjusted for the project-specific details been prepared?
- Does the review process include an opportunity for stakeholder input into the ToR?

### **TOOLS & STRATEGIES:**

- Have a standard, customizable ToR template available and accessible for mine proponents.
- Incorporate all project-specific components and indicators identified in the scoping stage into the ToR for each project.
- Provide a process and timeline for stakeholder input or feedback on the project ToR.
- Focus the stakeholder consultation on the ToR on what stakeholders need to be presented in the ESIA report and not on the actual results or technical content of the report.
- Ensure the ToR includes requirements for preparation of the necessary ESMPs to help ensure the avoidance, mitigation, and management measures committed to in an ESIA will be implemented in mine construction.

## **5. REVIEW COORDINATION: COORDINATE GOVERNMENT AGENCIES AND STAKEHOLDER REVIEW OF THE ESIA**

### **QUESTIONS:**

- Is there a system in place to allow for stakeholders to review the ESIA report?
- Is there adequate time allowed for stakeholder review?
- Is there a program in place to receive, compile, and summarize comments?
- Is there a process to consider stakeholder concerns in the project review?

### **TOOLS & STRATEGIES:**

- Create or revise the government website to allow for stakeholders to be kept advised of the stage of the project review and allow for effective dissemination of the ESIA report in a manner that is easily accessible and searchable.
- Provide for online receipt of stakeholder comments to the ESIA report.
- Define methods to effectively consider and integrate pertinent stakeholder input into the review process.

## **6. REVIEW TIMELINES: ESTABLISH A REASONABLE TIMELINE FOR THE ESIA REVIEW PROCESS**

### **QUESTIONS:**

- Is there a clear process and timelines for completing the proposal review, scoping, the ToR, report preparation, review and comment periods, and decision stages of the ESIA process?
- Are any time limits for government action reasonable in light of the scope of the particular project and the human and financial resources of the reviewing agencies? Are you regularly meeting timelines? Why or why not?
- Do time limits begin only when a complete ESIA report has been submitted?
- Is the legal and procedural framework free of any “automatic” approvals where the time frame for review of an ESIA or related management plan has lapsed?

### **TOOLS & STRATEGIES:**

- Review the ESIA process and make amendments with clear timelines.
- Prepare or revise guidance on the ESIA process and requirements for each stage.
- Review actual timelines for review of ESIA's and modify legislation and government resources and capacity to ensure reasonable timelines are expected and followed.
- Assess the current level of human resources for review of ESIA's and related plans. Where gaps in the level of resourcing and needed skills are identified, develop a plan to address these gaps.

## **7. ESIA REPORT EVALUATION: REVIEW THE ESIA REPORT, THE MANAGEMENT PLANS, THE CLOSURE PLANS, AND OTHER RELEVANT PLANS**

### **QUESTIONS:**

- Has the government selected a lead agency for review of the ESIA and related management plans? Are government roles across agencies clear in the legal framework? Does the legal framework clarify the roles of other agencies in the review process?
- Does the legal framework require that applicants submit the ESIA together with an ESMP and preliminary mine closure plan?

- Does the government review of the ESIA include the review of related ESMPs and a preliminary mine closure plan?
- Would other environmental and social management tools help optimize sustainable development benefits from the mining sector in your country? CDAs? CSR? Multistakeholder mechanisms?

### **TOOLS & STRATEGIES:**

- Review your legal framework to ensure that the roles of government agencies and other stakeholders in the review process are clear and that the ESIA report is reviewed together with the related ESMP and preliminary mine closure plan.
- Consider the use of an impact analysis grid for tracking environmental and social impacts (see Chapter 5 for an example).
- Consider the use of other environmental and social management tools such as CDAs, CSR, or the use of multistakeholder mechanisms.

## **8. FINANCIAL ASSURANCE: ASSESS AND SPECIFY FINANCIAL ASSURANCE FOR REMEDIATION AND MINE CLOSURE**

### **QUESTIONS:**

- Does the legal framework clearly state that exploitation activities may not begin without written authorization or certification from the environmental ministry and ministry of mines?
- Do the requirements for authorization or certification include:
  - A full ESIA?
  - An ESMP with a corresponding budget?
  - A rehabilitation and mine closure plan with a corresponding budget?
- Does the legal framework contain clear procedures for evaluating applications and for approving or denying the environmental licence and the exploration permit?
- Where a licence or permit is not approved, is there a clear process for administrative appeal?

### **TOOLS & STRATEGIES:**

- Review your legal framework for gaps in the ESIA process.
- Consider drafting guidelines, if not already available, for the development of (a) ESMPs and (b) mine closure plans in the mine planning phase.
- Review the process for approval, denials, and appeals of environmental certificates and related permits to ensure that the process is clear and transparent.
- Develop comprehensive standard approval terms and conditions that can be revised and added to on a project-specific basis.

## 9. DECISIONS: APPROVE OR DENY THE ENVIRONMENTAL AUTHORIZATION

### QUESTIONS:

- Is there a process to connect the conditions from the ESIA approval to specific permits?
- Is there sufficient legislation in place to allow for monitoring compliance and enforcing all conditions?

### TOOLS & STRATEGIES:

- Include requirements for ESMPs in approval conditions.
- Check that all conditions have a monitoring and enforcement pathway.

## 10. CONDITIONS: TRANSFER ESIA AND PROJECT APPROVAL CONDITIONS TO SUBSEQUENT PERMITS

### QUESTIONS:

- Are procedures in place to ensure that ESIA and project approval conditions are transferred to all subsequent permits?
- Does your ESIA review team and permitting team work together to ensure continuity, monitoring, and enforcement of conditions?

### TOOLS & STRATEGIES:

- Review your legal framework to ensure that it clarifies a process for transferring ESIA and project approval conditions to subsequent permits.
- Consider establishing a committee with members of the ESIA review team and permitting the team to ensure continuity and oversight of conditions.

## **CHAPTER 7 CHECKLIST: MONITORING, INSPECTIONS, AND ENFORCEMENT: ENSURE ENVIRONMENTAL AND SOCIAL IMPACTS ARE CONTINUALLY MANAGED THROUGH CONSTRUCTION AND OPERATIONS**

### **1. ENGAGEMENT: ENSURE ONGOING STAKEHOLDER AND COMMUNITY ENGAGEMENT AND CAPACITY BUILDING**

#### **QUESTIONS:**

- Are you ensuring that companies are meeting obligations for community engagement and capacity building?
- Is the government actively fulfilling its role in multistakeholder mechanisms?
- Are mechanisms for community engagement and capacity building being implemented? What are the lessons learned for this project? For other projects? Can these lessons be incorporated into your legal framework or guidance?
- Does your legal framework support the development of local-level grievance mechanisms early in the life of the mine?
- Are such mechanisms in your country designed in a way that is culturally relevant and accessible to the community?

#### **TOOLS & STRATEGIES:**

- Conduct an assessment of community engagement and capacity-building requirements and guidelines.
- Learn from other stakeholders about their experience utilizing engagement and participatory mechanisms.
- Consider providing or improving guidelines for local-level grievance mechanisms.
- Ensure a system is in place to effectively respond to and track grievances.

### **2. TRANSPARENCY: COMMUNICATE RESULTS OF COMPLIANCE AND ENFORCEMENT TO COMMUNITIES AND THE PUBLIC**

#### **QUESTIONS:**

- Is there public trust in government control over the mining industry?
- Are mining permits and results from inspections and monitoring made available to the public?
- Are important ESIA steps and monitoring information easily accessible to the public and affected communities? Are all appropriate means of communications considered?

### **TOOLS & STRATEGIES:**

- Consider having an online portal for communicating permit information.
- Ensure there is a simple mechanism for public access.

## **3. REPORTING: PROVIDE CLEAR GUIDELINES FOR ENVIRONMENTAL AND SOCIAL REPORTING**

### **QUESTIONS:**

- Are reports on the implementation of ESMPs in the exploitation phase made at least on an annual basis?
- Are reports required more frequently where high- to medium-range risks have been identified?
- Are reports made readily available to the public? Are they easily accessible to members of affected communities?

### **TOOLS & STRATEGIES:**

- Develop or amend your guidelines for environmental and social reporting to ensure that they are aligned with good practice.
- Set up or improve methods for disseminating monitoring information.

## **4. COLLABORATION: COLLABORATE WITH LOCAL GOVERNMENTS TO MANAGE THE IMPACTS AND BENEFITS OF THE WORKFORCE**

### **QUESTIONS:**

- Does your law and policy framework promote recruiting and training local labour in the construction phase?
- What requirements do you have for local hiring? Are these reasonable given the capacity and availability of the local workforce?
- What is your government doing to build the skills of communities around mines, particularly to build the capacity of women to work for mines in the construction and operations phases?
- Do the ESIA and related management plans capture impacts and potential benefits of roads, power plants, and other related projects?

### **TOOLS & STRATEGIES:**

- Review your requirements for local hiring.
- Assess and improve support for local skills development for the mining sector, including programs that support training women to work in the sector.
- Ensure the ESIA process includes impact assessment and development of mitigation and management plans for all related activities (e.g., roads, power lines, transportation), resulting in more streamlined environmental and social management.

## 5. PROGRESSIVE REHABILITATION: REQUIRE PROGRESSIVE REHABILITATION AND ONGOING PREPARATION FOR ENVIRONMENTAL AND SOCIAL ASPECTS OF THE POST-MINING TRANSITION

### QUESTIONS:

- How is your government working to ensure that environmental rehabilitation and action toward socioeconomic objectives of mine closure proceed over the life of the mine? Do these requirements need to be clarified in your legal framework and policies?
- Does your government regularly:
  - Monitor implementation of mine closure plans?
  - Require and review periodic reports?
  - Require updates to the mine closure plan?
- Does your legal framework require periodic updates to the mine closure plan, particularly when there are changes to the mine plan?
- Do you require regular reporting on the adequacy of the financial assurance, given current and anticipated conditions of the site?
- Does your legal framework require that the financial assurance:
  - At every stage, remain adequate to pay for the rehabilitation of the site if the company should fail?
  - Be calculated based on sound engineering rather than negotiated or determined politically?
  - Is in a form that allows the government to access the funds promptly and efficiently when they are needed?
- Are mine sites inspected frequently enough for early detection of any changes in mine operations that will affect the closure plan or the cost of implementing it?
- Does the legal framework require that companies re-evaluate the adequacy of the financial assurance any time there is a significant change in mining operations?
- Does legislation require regular updates of mine closure plans and cost estimates?

### TOOLS & STRATEGIES:

- Consider issuing guidance on progressive rehabilitation and progress toward the socioeconomic objectives of mine closure.
- Provide guidance to companies and other stakeholders regarding the benefits of progressive rehabilitation and management of the socioeconomic effects of closure.
- Review and amend your legal framework to ensure that requirements for monitoring, periodic reports, and updates to the mine closure plan are clear, including clear roles for government.
- Review your legal framework to ensure that the closure plan and financial assurance are regularly reviewed and adjusted to cover the costs of mine closure.

## 6. MONITORING: CONDUCT REGULAR REVIEW OF PROGRESS REPORTS AND MONITOR IMPLEMENTATION OF MANAGEMENT PLANS

### QUESTIONS:

- What are the requirements and timelines for progress reports in your legal framework?
- What guidelines for review are provided in your legal framework? Do these need to be updated?
- Are monitoring results tracked over time and linked to actual impacts?
- Are non-compliance orders issued and corrective action tracked when needed?
- Does your legal framework provide guidelines for participatory environmental and social monitoring involving local community members?
- Do the guidelines cover capacity building? Health and safety precautions? What other criteria are important to local communities and should be monitored?
- Is the government actively promoting the use of participatory environmental and social monitoring mechanisms?
- Are the participatory mechanisms proactive and not reactive, attempting to identify and solve problems collaboratively?

### TOOLS & STRATEGIES:

- Review requirements for progress reports and updates to management plans in your legal framework.
- Develop programs to improve the efficiency of reporting and tracking monitoring and implementation of management plans.
- Share examples of successful participatory monitoring mechanisms in your minerals sector.
- Support opportunities for communities to learn from one another and to share experiences.
- Set guidelines and/or conditions for participatory monitoring in consultation with stakeholders and the company.
- Set up a transparency mechanism for sharing the results of the participatory monitoring.
- Periodically review the participatory monitoring program and make revisions based on the results. The periodic review could be considered as a requirement of the company's adaptive management plan.
- Consider elaborating guidelines and/or principles for effective participatory mechanisms.

## 7. INSPECTION: PROVIDE CLEAR INSPECTION REQUIREMENTS AND ADEQUATE HUMAN RESOURCES FOR COMPLIANCE CHECKS AND ENFORCEMENT

### QUESTIONS:

- What follow-up programs do you have in place, such as monitoring, audits, evaluation, and adaptive management programs? Do these programs evaluate the success of mitigation actions to achieve intended outcomes?
- Does your government promote compliance through education programs, training, provision of technical information, and issuing codes of practice?
- Do you have not only clear legal requirements but also highly trained human resources and sufficient financial resources for inspection in place?
- If your government utilizes third-party inspectors who are paid with company funds, are the appropriate methods for oversight and transparency of these funds in place?

### TOOLS & STRATEGIES:

- Conduct a review of your inspection requirements and related human resources.
- Develop programs to promote compliance, such as trainings, technical guidance, and issuing codes of practice.

## 8. ENFORCEMENT: ENFORCE PERMIT CONDITIONS AND MANAGE NON-COMPLIANCE

### QUESTIONS:

- Are sufficient human and financial resources allocated to conducting mine inspections and following up on non-compliance issues?
- Are instruments and procedures in place for responding to permit excursions?
- Are penalties linked to the level of risk?
- Are procedures in place to respond to emergencies?

### TOOLS & STRATEGIES:

- Ensure legislation and enforcement procedures are in place to identify and respond to permit non-compliances.
- Secure sufficient budget for effectively monitoring reports, conducting inspections, and following up on non-compliance responses.
- Train staff on enforcement procedures.
- Prepare procedures and practise responses to emergency situations.

## **9. PERMIT AMENDMENTS AND RENEWAL: REQUIRE UPDATED ASSESSMENTS AND AMENDED PLANS WHERE THERE ARE MATERIAL CHANGES TO MINE PLANS OR IMPACTS**

### **QUESTIONS:**

- Do material changes in the mine plan trigger requirements for review or addendums to the ESIA and related plans?
- Does your legal framework require annual or biannual updates to management plans regardless of material changes, responding to any new information, data collected, stakeholder input, and lessons learned?

### **TOOLS & STRATEGIES:**

- Review your legal requirements for updating ESIA and related plans.

## **CHAPTER 8 CHECKLIST: POST-MINING TRANSITION: ENSURE IMPACTS ARE MANAGED THROUGHOUT CLOSURE, RELINQUISHMENT, AND POST-CLOSURE**

### **1. REVIEW AND UPDATE: REQUIRE ONGOING ACTION TO IMPLEMENT THE MINE CLOSURE PLAN AND PREPARE FOR (TEMPORARY AND PERMANENT) MINE CLOSURE**

#### **QUESTIONS:**

- Does your legal framework require the ongoing implementation of mine closure plans?
- Are frequent inspections of the mine site required during temporary closure to ensure that conditions are not deteriorating to the point that the financial assurance is no longer adequate?
- Does your legal framework require financial assurance adequate to ensure permanent closure to remain in effect throughout temporary closure?
- Does your legal framework place a limit on the period of temporary closure and enforce this limit?
- Does your legislation define temporary and permanent closure triggers?

#### **TOOLS & STRATEGIES:**

- Review and amend your legal framework to ensure that it adequately addresses both permanent and temporary mine closure.

## **2. SOCIAL AND ENVIRONMENTAL CLOSURE: ENSURE CLOSURE PLANS ADDRESS BOTH SOCIAL AND ENVIRONMENTAL ASPECTS OF MINE CLOSURE**

### **QUESTIONS:**

- How is the environmental and social performance of existing mining projects?
- How is the performance of existing mines tracked?

### **TOOLS & STRATEGIES:**

- Set up or revise the system to track mine compliance and performance.
- Ensure that reporting requires sufficient analysis to track trends in data and mine compliance over time.
- Include requirements for information on compliance and management systems in permit renewal and amendment applications.

## **3. RELINQUISHMENT: PROVIDE CLEAR CONDITIONS FOR “EXIT TICKETS,” RELINQUISHMENT, AND MANAGEMENT OF RESIDUAL RISKS**

### **QUESTIONS:**

- Does your legal framework provide clear guidelines and recommendations for relinquishment?
- Is the process transparent, involving both government and community stakeholders?

### **TOOLS & STRATEGIES:**

- Review and amend requirements for relinquishment and exit tickets in your legal framework to ensure they are clear and require input from affected communities and local government stakeholders.

## **4. INSPECTIONS: INSPECT AND MONITOR CLOSURE PLAN IMPLEMENTATION AND COMPLETE FINAL INSPECTION PRIOR TO RELINQUISHMENT**

### **QUESTIONS:**

- Does your legal framework require government to conduct inspections and audits to determine whether a mining company’s mine closure obligations have been fulfilled?
- Does your regulatory framework detail the objectives of the inspection and monitoring goals, as well as government’s expectations when undertaking inspection activities?
- Are unannounced inspection visits allowed under your legal framework?
- Do you require access to key documentation to confirm data shared by mining companies under reporting requirements?

- Do you have the human resources and skills needed to inspect and monitor closure plan implementation?
- Do you have mechanisms to support information sharing with communities and opportunities for them to provide feedback?

### **TOOLS & STRATEGIES:**

- Consider allocating a portion of the mining revenue to monitoring and inspection activities related to mine closure and post-mining transition plans.
- Support mechanisms for information sharing with communities and opportunities for communities to provide feedback on mine closure plans. Considerable human, financial, and technical capacities should be allocated to monitoring activities, including mine closure activities. A practical strategy might include allocating a portion of the mining revenue to monitoring and inspection activities, especially in the context of mine closure and post-mining transition.

# REFERENCES

- AccountAbility, United Nations Environment Programme, & Stakeholder Research Associates Canada Inc. (2005). *The stakeholder engagement manual: Volume 2: The practitioner's handbook on stakeholder engagement*. <http://www.mas-business.com/docs/English%20Stakeholder%20Engagement%20Handbook.pdf>
- AMEC Perú S.A. (2012). *Estudio de Impacto Ambiental Semidetallado de Proyecto de Exploración Minera "Cañariaco."* Cañariaco Copper Perú S.A.
- André, P., Delisle, C.-E., & Reveret, J.-P. (2010). *L'évaluation des impacts sur l'environnement: Processus, acteurs et pratique pour un développement durable* (3rd ed.). Presses Internationales Polytechnique.
- André, P., Enserink, B., Connor, D., & Croal, P. (2006). *Public participation: Best practice principles*. International Association for Impact Assessment. <https://www.iaia.org/uploads/pdf/SP4.pdf>
- Anton, D., Makgill, R., & Payne, C. R. (2011). Seabed mining: Advisory opinion on responsibility and liability. *Environmental Policy and Law*, 41(2), 60–65. <https://biblio.ugent.be/publication/3035656/file/3035657>
- APEC Mining Task Force. (2018). *Mine closure checklist for governments*. Asia-Pacific Economic Cooperation. [https://www.apec.org/-/media/APEC/Publications/2018/3/Mine-Closure-Checklist-for-Governments/218\\_MTF\\_Mine-Closure\\_Checklist-for-Governments.pdf](https://www.apec.org/-/media/APEC/Publications/2018/3/Mine-Closure-Checklist-for-Governments/218_MTF_Mine-Closure_Checklist-for-Governments.pdf)
- Arnold, L. & Hanna, K. S. (2015). Environmental impact assessment: Process, setting and efficacy. In K.S. Hanna (Ed.), *Environmental impact assessment: Practice and participation* (3rd ed.). Oxford University Press Canada.
- Arnold, L. & Hanna, K. (2017). *Best practices in environmental assessment: Case studies and application to mining* (CIRDI Report 2017-003). Canadian International Resources and Development Institute. <http://ok-cear.sites.olt.ubc.ca/files/2018/01/Best-Practices-in-Environmental-Assessment.pdf>
- Bankwatch Network. (n.d.). *Outline of a resettlement action plan*. [https://bankwatch.org/documents/Outline\\_RAP.pdf](https://bankwatch.org/documents/Outline_RAP.pdf)
- Bauer, A. (Ed.) (2014). *Managing the public trust: How to make natural resource funds work for citizens*. Natural Resource Governance Institute (formerly Revenue Watch Institute) & Vale Columbia Center on Sustainable International Investment. <https://academiccommons.columbia.edu/doi/10.7916/D8WS92XC/download>
- Bekhechi, M. A. & Mercier, J. (2002). *The legal and regulatory framework for environmental impact assessments: A study of selected countries in sub-Saharan Africa*. World Bank.
- Benabidès, P. (2011, April 11). *Plan de gestion environnementale et sociale: Obligation et performance pour un développement durable* [Paper presentation in French]. Centre universitaire de formation en environnement, Université de Sherbrooke. [https://www.usherbrooke.ca/environnement/fileadmin/sites/environnement/documents/Essais2011/Essai\\_Pierre-Benabides\\_PGES\\_VF.pdf](https://www.usherbrooke.ca/environnement/fileadmin/sites/environnement/documents/Essais2011/Essai_Pierre-Benabides_PGES_VF.pdf)

- Bernasconi-Osterwalder, N., & Johnson, L. (Eds.). (n.d.). *International investment law and sustainable development: Key cases from 2000–2010*. International Institute for Sustainable Development. [https://www.iisd.org/sites/default/files/publications/int\\_investment\\_law\\_and\\_sd\\_key\\_cases\\_2010.pdf](https://www.iisd.org/sites/default/files/publications/int_investment_law_and_sd_key_cases_2010.pdf)
- BMC Minerals (No.1) Ltd. 2020. *Kudz Ze Kayah project initial response to YESAB on draft screening report and recommendation*. <https://yesabregistry.ca/projects/5942a72b-b77d-403d-83d6-bc2ffffc0c7b/documents>
- Brown Weiss, E. (Ed.) (1992). *Environmental change and international law: New challenges and dimensions*. United Nations University Press. <http://archive.unu.edu/unupress/unupbooks/uu25ee/uu25ee00.htm#Contents>
- Burnett, H. G., & Bret, L.-A. (2017). *Arbitration of international mining disputes: Law and practice*. Oxford University Press.
- Canadian Environmental Assessment Agency. (2018). *Assessing cumulative environmental effects under the Canadian Environmental Assessment Act, 2012: Interim technical guidance*. <http://publications.gc.ca/site/eng/9850454/publication.html>
- Canadian Institute of Mining, Metallurgy and Petroleum. (2014). *CIM definition standards for mineral resources and mineral reserves*. [https://mrmr.cim.org/media/1092/cim\\_definition\\_standards\\_20142.pdf](https://mrmr.cim.org/media/1092/cim_definition_standards_20142.pdf)
- Candente Copper Corporation. (2019). *Projects*. <https://www.candentecopper.com/projects/canariaco-norte-copper-gold-silver/>
- Chen, L. (2016). Realizing the precautionary principle in due diligence. *Dalhousie Journal of Legal Studies*, 25(1), 1–23. <https://digitalcommons.schulichlaw.dal.ca/cgi/viewcontent.cgi?article=1319&context=djls>.
- Comité sectoriel de main-d'œuvre de l'industrie des mines. (2016). *Mining cycle*. <https://www.exploreslesmines.com/en/mining-industry/mining-cycle.html>
- Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), June 25, 1998, 38 I.L.M. 517. <http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf>
- Cowan, W. R., Mackasey, W. O., & Robertson, J. G. A. (2010). *The policy framework in Canada for mine closure and management of long-term liabilities: A guidance document*. National Orphaned/Abandoned Mines Initiative. <http://www.abandoned-mines.org/pdfs/PolicyFrameworkCanforMinClosureandMgmtLiabilities.pdf>
- Danish Institute for Human Rights. (2016). *Human rights impact assessment: Guidance & toolbox*. [https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/business/hria\\_toolbox/hria\\_guidance\\_and\\_toolbox\\_final\\_may22016.pdf\\_223795\\_1\\_1.pdf](https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/business/hria_toolbox/hria_guidance_and_toolbox_final_may22016.pdf_223795_1_1.pdf)
- Davis, R. & Franks, D. M. (2014). *Costs of company-community conflict in the extractive sector*. Harvard Kennedy School CSR Initiative. <https://www.csr.uq.edu.au/publications/costs-of-company-community-conflict-in-the-extractive-sector>
- Davis, R. A., Welty, A. T., Borrego, J., Morales, J. A., & Pendon, J. G. (2000). Rio Tinto estuary (Spain): 5000 years of pollution. *Environmental Geology* 39(10), 1107–1116. [http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1157&context=gly\\_facpub](http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1157&context=gly_facpub).

- Desjardins, J. (2018, March 5). *The mineral exploration roadmap*. Visual Capitalist. <https://www.visualcapitalist.com/mineral-exploration-roadmap/>
- Disney Bruckner, K. (2019). *Environmental and social impact assessment and management plans in legislative frameworks and mining contracts*. Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development.
- do Rosário Partidário, M. (2012). *Strategic environmental assessment: Better practice guide – Methodological guidance for strategic thinking in SEA*. Portuguese Environment Agency & Redes Energéticas Nacionais. [https://ec.europa.eu/environment/eia/pdf/2012%20SEA\\_Guidance\\_Portugal.pdf](https://ec.europa.eu/environment/eia/pdf/2012%20SEA_Guidance_Portugal.pdf)
- Dolo, S. & Nikièma, H. S. (2019). *Impact of the mining sector on local development: Will institutional mining funds for local development be a game-changer?* <https://www.igfmining.org/impact-of-the-mining-sector-on-local-development-will-institutional-mining-funds-for-local-development-be-a-game-changer/>
- Donohue, K. (2017, March). Innovation in clean technologies is turning the mining industry green. *Media Planet*. <http://www.industryandbusiness.ca/development-and-innovation/innovation-in-clean-technologies-is-turning-the-mining-industry-green>
- Downing, T. E. (2002, April). *Avoiding new poverty: Mining-induced displacement and resettlement* (Report no. 58). International Institute for Environment and Development & World Business Council for Sustainable Development. <https://pubs.iied.org/pdfs/G00549.pdf>
- Eggert, R. G. (2010, May 27–28). *Mineral exploration and development: Risk and reward* [Paper presentation]. International Conference on Mining, Phnom Penh, Cambodia. [http://www.miningnorth.com/\\_rsc/site-content/library/education/Mineral\\_Exploration\\_&\\_Development\\_Roderick\\_Eggert\\_Eng.pdf](http://www.miningnorth.com/_rsc/site-content/library/education/Mineral_Exploration_&_Development_Roderick_Eggert_Eng.pdf)
- Environmental Governance Programme. (2019, June 18). *Webinar on Gender Gaps & Mining*. <https://www.environmentalgovernanceprogramme.org/webinar-on-gender-gaps-mining>
- Equator Principles. (2020). *The Equator Principles*. <https://equator-principles.com/about/352/>
- Esposito, I & Daaji, S. (2019, September 30). *Gender impact assessment of the Council of Europe Youth for Democracy Programme* (DDP-YD/ETD(2019)118). Council of Europe. <https://rm.coe.int/gender-impact-assessment-youth-for-democracy/168098008d>
- European Bank for Reconstruction and Development. (2014). *Performance requirements and guidance*. <https://www.ebrd.com/who-we-are/our-values/environmental-and-social-policy/performance-requirements.html>
- European Commission. (2017). *Environmental impact assessment of projects: Guidance on screening* (Directive 2011/92/EU as amended by 2014/52/EU). European Union. [https://ec.europa.eu/environment/eia/pdf/EIA\\_guidance\\_Screening\\_final.pdf](https://ec.europa.eu/environment/eia/pdf/EIA_guidance_Screening_final.pdf)
- European Court of Human Rights. (2009, January 27). *Chamber judgment: Tătar v Romania* [Press release]. <http://hudoc.echr.coe.int/fre-press?i=003-2615810-2848789>
- Extractive Industries Transparency Initiative. (n.d.). *Contract transparency: Revealing the terms under which resources are extracted*. <https://eiti.org/contract-transparency>

- Fondriest Environmental, Inc. (2014, October 23). *Telemetry: Fundamentals of environmental measurements*. <https://www.fondriest.com/environmental-measurements/monitoring-equipment/telemetry/>.
- Garcia, D. H. (2008, September 20–24). *Overview of international mine closure guidelines* [Paper presentation]. Meeting of American Institute of Professional Geologists, Arizona Hydrological Society, and 3rd International Professional Geology Conference, Flagstaff, AZ, United States. [https://www.srk.com/sites/default/files/file/DGarcia\\_InternationalMineClosureGuidelines\\_2008.pdf](https://www.srk.com/sites/default/files/file/DGarcia_InternationalMineClosureGuidelines_2008.pdf)
- Glasson, J., Therivel, R., & Chadwick, A. (2013). *Introduction to environmental impact assessment* (3rd ed.). Routledge. [http://site.iugaza.edu.ps/sghabayen/files/2013/02/John\\_Glasson\\_Riki\\_Therivel\\_Andrew\\_Chadwick\\_IntBookos.org\\_.pdf](http://site.iugaza.edu.ps/sghabayen/files/2013/02/John_Glasson_Riki_Therivel_Andrew_Chadwick_IntBookos.org_.pdf)
- Government of Canada. (2013a, July 24). *Compliance and enforcement policy for the Canadian Environmental Protection Act: Chapter 1*. <https://www.canada.ca/en/environment-climate-change/services/environmental-enforcement/publications/compliance-policy-canadian-protection-act/chapter-1.html>
- Government of Canada. (2013b). *Exploration and mining guide for Aboriginal communities*. <https://www.nrcan.gc.ca/mining-materials/aboriginal/bulletin/7823>
- Government of Canada. (2015, March). *Operational policy statement: Addressing “purpose of” and “alternative means” under the Canadian Environmental Assessment Act, 2012*. <https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=1B095C22-1&pedisable=true>
- Government of Canada. (2016a, December 23). *Guidelines for the assessment of alternatives for mine waste disposal*. <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/publications/guidelines-alternatives-mine-waste-disposal.html>
- Government of Canada. (2016b, July 6). *Technical guidance for assessing cumulative environmental effects under the Canadian Environmental Assessment Act, 2012*. <https://www.ceaa.gc.ca/default.asp?lang=en&n=B82352FF-1&offset=3&toc=hide>
- Government of Yukon. (n.d.). *Find out how the government manages Type II abandoned mines sites*. [http://www.emr.gov.yk.ca/aam/remediation\\_planning.html](http://www.emr.gov.yk.ca/aam/remediation_planning.html)
- Grant, T. (2018, May 15). Driverless trucks could mean ‘game over’ for thousands of jobs. *Globe and Mail*. <https://www.theglobeandmail.com/report-on-business/autonomous-trucks-could-transform-labour-market-eliminate-driver-jobs/article25715184/>
- Gurmendi, A. (2019, August 4). *Indigenous “social license” in investment projects: A pending challenge in ISDS*. <http://opiniojuris.org/2019/04/08/indigenous-social-license-in-investment-projects-a-pending-challenge-in-isds/>
- Heffron, R. J., Downes, L., Ramirez Rodriguez, O. M., & McCauley, D. (2018). The emergence of the ‘social licence to operate’ in the extractive industries? *Resources Policy*. <https://doi.org/10.1016/j.resourpol.2018.09.012>
- Herbert Smith Freehills. (2018, November 8). *ICSID Tribunal declines jurisdiction due to claimant’s failure to obtain environmental impact assessment in breach of local law*. <https://hsfnotes.com/publicinternationallaw/2018/11/08/icsid-tribunal-declines-jurisdiction-due-to-claimants-failure-to-obtain-environmental-impact-assessment-in-breach-of-local-law/#page=1>

- Hill, C., Madden, C. & Collins, N. (2017). *A guide to gender impact assessment for the extractive industries*. Oxfam Australia. [https://www.oxfam.org.au/wp-content/uploads/2017/04/2017-PA-001-Gender-impact-assessments-in-mining-report\\_FA\\_WEB.pdf](https://www.oxfam.org.au/wp-content/uploads/2017/04/2017-PA-001-Gender-impact-assessments-in-mining-report_FA_WEB.pdf)
- Initiative for Responsible Mining Assurance. (2018). *IRMA standard for responsible mining: IRMA-STD-001*. [https://responsiblemining.net/wp-content/uploads/2018/07/IRMA\\_STANDARD\\_v.1.0\\_FINAL\\_2018.pdf](https://responsiblemining.net/wp-content/uploads/2018/07/IRMA_STANDARD_v.1.0_FINAL_2018.pdf)
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2013). *IGF mining policy framework: Mining and sustainable development*. <https://www.igfmining.org/wp-content/uploads/2018/08/MPF-EN.pdf>
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. (2017). *IGF guidance for governments: Managing artisanal and small-scale mining*. <https://www.igfmining.org/guidance-for-governments/artisanal-and-small-scale-mining/>
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. (2018). *IGF guidance for governments: Local content policies*. <https://www.iisd.org/sites/default/files/publications/igf-guidance-for-governments-local-content.pdf>
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. (2019a, January). *Background document: Legal framework of environmental and social impact assessment in the mining sector*. <https://www.iisd.org/sites/default/files/publications/igf-esia-background-en.pdf>
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. (2019b, February 4). *IGF Sustainability Roundtables: Environmental and social impact assessment* [Meeting report]. <https://www.igfmining.org/wp-content/uploads/2019/04/igf-meeting-report-indaba-2019-en.pdf>
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. (2020). *Framework*. <https://www.igfmining.org/mining-policy-framework/framework/>
- Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, International Institute for Sustainable Development, & State of Sustainability Initiatives. (2018). *State of Sustainability Initiatives review: Standards and the extractive economy* <https://www.iisd.org/sites/default/files/publications/igf-ssi-review-extractive-economy.pdf>.
- International Association for Impact Assessment. (n.d.). *Cumulative effects assessment and management*. <https://www.iaia.org/wiki-details.php?ID=9/Inform>
- International Association for Impact Assessment. (1999). *Principles of environmental impact assessment best practice*. [https://iaia.org/uploads/pdf/principlesEA\\_1.pdf](https://iaia.org/uploads/pdf/principlesEA_1.pdf)
- International Association for Impact Assessment. (2020). *Gender impact assessment*. <https://www.iaia.org/wiki-details.php?ID=13>
- International Council on Mining & Metals (ICMM). (n.d.). *Tailings management*. <https://www.icmm.com/en-gb/environment/tailings>
- International Council on Mining & Metals. (2012). *Water management in mining: A selection of case studies*. <https://www.icmm.com/website/publications/pdfs/water/water-management-in-mining-case-studies>
- International Council on Mining & Metals. (2019a). *Integrated mine closure: Good practice guide*. [http://www.icmm.com/website/publications/pdfs/closure/190107\\_good\\_practice\\_guide\\_web.pdf](http://www.icmm.com/website/publications/pdfs/closure/190107_good_practice_guide_web.pdf)

- International Council on Mining & Metals. (2019b). *Reducing greenhouse gas emissions*. <https://www.icmm.com/en-gb/environment/climate-change/reducing-greenhouse-gas-emissions>.
- International Finance Corporation (IFC). (n.d.a). *A guide to biodiversity for the private sector*. <https://www.ifc.org/wps/wcm/connect/79ed91e7-740a-4063-958b-3c70b9a08d98/Holcim.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-79ed91e7-740a-4063-958b-3c70b9a08d98-jqery.Y>
- International Finance Corporation. (n.d.b). *Performance standards*. [https://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards](https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards)
- International Finance Corporation. (n.d.c). *Stakeholder involvement in project monitoring*. <https://www.yumpu.com/en/document/read/22523975/stakeholder-involvement-in-project-monitoring-ifc>
- International Finance Corporation. (2002). *Handbook for preparing a resettlement action plan*. <https://www.ifc.org/wps/wcm/connect/ee19f150-f505-41db-891f-6ef5557195b6/ResettlementHandbook.PDF?MOD=AJPERES&CACHEID=ROOTWORKSPACE-ee19f150-f505-41db-891f-6ef5557195b6-jkDOCRL;>
- International Finance Corporation. (2007). *Stakeholder engagement: A good practice handbook for companies doing business in emerging markets*. <https://www.scribd.com/document/16903354/Stakeholder-Engagement-A-Good-Practice-Handbook-for-Companies-Doing-Business-in-Emerging-Markets-May-2007#fullscreen>
- International Finance Corporation. (2009, September). *Addressing grievances from project-affected communities: Guidance for projects and companies on designing grievance mechanisms* (Good Practice Note No. 7). <https://www.ifc.org/wps/wcm/connect/f9019c05-0651-4ff5-9496-c46b66dbee6b/IFC%2BGrievance%2BMechanisms.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-f9019c05-0651-4ff5-9496-c46b66dbee6b-jkDO-.g>
- International Finance Corporation. (2012a). *Guidance notes to performance standards on environmental and social sustainability*. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_policy\\_gn-2012](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_gn-2012)
- International Finance Corporation (2012b). *Performance Standard 5, Land Acquisition and Involuntary Resettlement*. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/policies-standards/performance-standards/ps5](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps5)
- International Finance Corporation & On Common Ground. (2010). *International lessons of experience and best practice in participatory monitoring in extractive industry projects: Guidance note on designing participatory monitoring programs*. <https://www.commddev.org/wp-content/uploads/2015/05/Guidance-Note-on-Participatory-Monitoring-and-Extractive-Industries.pdf>
- International Institute for Environment and Development. (2002). *Breaking new ground: Mining, minerals, and sustainable development*. <https://www.iied.org/mmsd-final-report>
- International Institute for Sustainable Development. (n.d.). *The 7 steps to an EIA: Step 1: Screening*. <https://www.iisd.org/learning/eia/eia-7-steps/step-1-screening/>
- International Labour Organization. (1989, June 27). C169 – Indigenous and Tribal Peoples Convention (No. 169). [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:C169](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C169)

- International Network for Acid Prevention. (2014). *Global acid rock drainage guide*. <http://www.gardguide.com/images/5/5f/TheGlobalAcidRockDrainageGuide.pdf>
- Investment Arbitration Reporter. (n.d.). Home. <https://www.iareporter.com>
- Jamasmie, C. (2018, January 30). *Rio Tinto autonomous trucks now hauling a quarter of Pilbara material*. Mining[dot]com. <https://www.mining.com/rio-tinto-autonomous-trucks-now-hauling-quarter-pilbara-material/>
- Kriebel, D., Tickner, J., Epstein, P., Lemons, J., Levins, R., Loechler, E. L., Quinn, M., Rudel, R., Schettler, T., & Stoto, M. (2001). The precautionary principle in environmental science. *Environmental Health Perspectives*, 109(9), 871–876. <https://ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.01109871>.
- Kuipers, J. & Maest, A. (2006). *Comparison of predicted and actual water quality at hardrock mines: The reliability of predictions in environmental impact statements*. Kuipers & Associates and Buka Environmental. <https://pebbleprojecteis.com/files/81bbe585-36ce-49d3-a782-ea43a574f09f>
- Lahlou, Y., Willard, R. & Craven, M. (2019, July 31). *The rise of environmental counterclaims in mining arbitration*. Global Arbitration Review. <https://www.lexology.com/library/detail.aspx?g=bbc29b22-4e33-4d55-810f-296765e218d2>
- Lanmafankpotin, G., André, P., Samoura, K., Côté, L., Beaudet, R., & Bernier, M. (2013). *La participation publique dans l'évaluation environnementale en Afrique francophone* [in French]. Organisation internationale de la Francophonie & Institut de la francophonie pour le développement durable. [https://www.sifee.org/static/uploaded/Files/publications/membres/Part\\_publicque\\_EE\\_Afrique\\_franco.pdf](https://www.sifee.org/static/uploaded/Files/publications/membres/Part_publicque_EE_Afrique_franco.pdf)
- Lawrence, D. (2010). Choices for EIA process design and management. In W. R. Sheate, (Ed.). *Tools, techniques & approaches for sustainability: Collected writings in environmental assessment policy and management* (pp. 33–60). World Scientific. (Reprinted from “Choices for EIA process design and management,” 2001, *Journal of Environmental Assessment Policy and Management* 3[4], 437–464).
- Leduc, G. & Raymond, M. (1999). *L'évaluation des impacts environnementaux: Un outil d'aide à la décision* [in French]. Editions MultiMondes.
- Loayza, F. & Albarracin-Jordan, J. (2010, March). *Mining sector strategic environmental and social assessment (SESA)*. Environment Department, World Bank. <https://www.semanticscholar.org/paper/Mining-sector-strategic-environmental-and-social-Loayza-Albarracin-Jordan/dfc4b9be018ea4ae7bef886fec29c88ae526eb86>
- Mann, H. (2011, October 7). Stabilization in investment contracts: Rethinking the context, reformulating the result. *Investment Treaty News*. <https://www.iisd.org/itn/2011/10/07/stabilization-in-investment-contracts-rethinking-the-context-reformulating-the-result/>.
- Maystre, L., Pictet, J., & Simos, J. (1994). *Méthodes multicritères ÉLECTRE*. Presses Polytechniques et Universitaires Romandes.
- Ministère de l'énergie et des ressources naturelles. (2018). *Guide for the preparation of a scoping and market study for processing in Québec*. Government of Quebec. [https://mern.gouv.qc.ca/english/publications/mines/guide\\_processing\\_en.pdf](https://mern.gouv.qc.ca/english/publications/mines/guide_processing_en.pdf)
- Mining Association of Canada. (2018). *Towards sustainable mining: Progress report 2018*. <https://mining.ca/wp-content/uploads/2019/02/Progress-Report-2018-English-Final.pdf>

- Mining Association of Canada. (2019a). *A guide to the management of tailings facilities: Version 3.1*. [https://mining.ca/wp-content/uploads/2019/03/MAC-Tailings-Guide\\_2019.pdf](https://mining.ca/wp-content/uploads/2019/03/MAC-Tailings-Guide_2019.pdf)
- Mining Association of Canada. (2019b). *Towards sustainable mining: Water stewardship protocol*. [https://mining.ca/wp-content/uploads/2019/02/Water-Stewardship-Protocol\\_Nov2018.pdf](https://mining.ca/wp-content/uploads/2019/02/Water-Stewardship-Protocol_Nov2018.pdf)
- Ministry of Finance. (n.d.). *Economic and Social Stabilization Fund*. Government of Chile. <https://www.hacienda.cl/english/sovereign-wealth-funds/economic-and-social-stabilization-fund.html>
- Morrison-Saunders, A. & Arts, J. (2004). Introduction to EIA follow-up. In *Assessing impact: Handbook of EIA and SEA follow-up*. Routledge.
- National Environmental Commission. (2012). *Environmental assessment guidelines for mines and quarries*. Royal Government of Bhutan. <http://www.nec.gov.bt/resources/>
- Natural Resources Canada. (2014). *Stakeholder engagement guide with worksheets: District energy systems*. [https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/engagementguide\\_eng\\_12.pdf](https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/engagementguide_eng_12.pdf)
- Natural Resources Canada. (2016, May 6). *Managing mine wastes for ecosystem restoration and mine closure*. Government of Canada. <https://www.nrcan.gc.ca/mining-materials/green-mining/18290>
- Netherlands Commission for Environmental Assessment. (n.d.). *Strategic environmental assessment*. <https://www.eia.nl/en/our-work/why-esiasea/sea>
- Netherlands Commission for Environmental Assessment. (2017a). *ESIA and SEA for a responsible and inclusive mining sector*. [https://www.commissiemer.nl/docs/mer/diversen/esia\\_and\\_sea\\_for\\_a\\_responsible\\_and\\_inclusive\\_mining\\_sector\\_-\\_april\\_2017.pdf](https://www.commissiemer.nl/docs/mer/diversen/esia_and_sea_for_a_responsible_and_inclusive_mining_sector_-_april_2017.pdf)
- Netherlands Commission for Environment Assessment. (2017b, June). *Gender in environmental assessment*. [https://www.eia.nl/docs/mer/diversen/ks\\_21\\_gender\\_in\\_environmental\\_assessment\\_-\\_june\\_2017.pdf](https://www.eia.nl/docs/mer/diversen/ks_21_gender_in_environmental_assessment_-_june_2017.pdf)
- Newmont. (2013). *Lifecycle of a mine*. <https://www.newmontgoldcorp.com/lifecycle-of-a-mine/>
- Nevada Division of Environmental Protection. (n.d.). *Mining closure guidance, policies, references, and requirements*. <https://ndep.nv.gov/land/mining/closure/guidance-policies-and-applications>.
- Nilsson, M. & Dalkmann, H. (2010). Decision-making and strategic environmental assessment. In W.R. Sheate (2010), *Tools, techniques & approaches for sustainability: Collected writings in environmental assessment policy and management* (pp. 197–219). World Scientific. (Reprinted from “Choices for EIA process design and management,” 2001, *Journal of Environmental Assessment Policy and Management* 3[4], 305–327).
- Nordstrom, K. & Alpers, C.N. (1999). Geochemistry of acid mine waters. In G. S. Plumlee & M. J. Logsdon (Eds.), *The environmental geochemistry of mineral deposits* (pp. 133–160). Society of Economic Geologists.
- Norges Bank Investment Management. (n.d.). *The fund*. <https://www.nbim.no/>
- Nyamori, B. (2019, June 27). The Kenyan Parliament and investment treaty making. *Investment Treaty News*. <https://www.iisd.org/itn/2019/06/27/the-kenyan-parliament-and-investment-treaty-making-bosire-nyamori/>

- OECD Policy Dialogue on Natural Resource-based Development. (2019, June 20–21). *Guiding principles for durable extractive contracts*. OECD Development Centre, Organisation for Economic Co-operation and Development. [http://www.oecd.org/dev/Guiding\\_Principles\\_for\\_durable\\_extractive\\_contracts.pdf](http://www.oecd.org/dev/Guiding_Principles_for_durable_extractive_contracts.pdf)
- Office of the Compliance Advisor/Ombudsman. (2008). *A guide to designing and implementing grievance mechanisms for development projects*. <http://www.cao-ombudsman.org/howwework/advisor/documents/implemgrieveng.pdf>
- Organisation for Economic Co-operation and Development. (2006). *Applying strategic environmental assessment: Good practice guidance for development co-operation*. <https://www.oecd.org/environment/environment-development/37353858.pdf>
- Otto, J. (2009). Global trends in mine reclamation and closure regulation. In J. Richards (Ed.), *Mining, society, and a sustainable world* (pp. 251–288). Springer
- Owens, S., Rayner, T., & Bina, O. (2004). New agendas for appraisal: Reflections on theory, practice, and research. *Environment and Planning A*, 36(11), 1943–1959. <https://dx.doi.org/10.1068/a3628>
- Peletz, N., & Hanna, K. (2019). *Gender analysis and impact assessment: Canadian and international experiences*. University of British Columbia & Canadian International Resources and Development Institute. [https://cirdi.ca/wp-content/uploads/2019/07/WEB\\_Gender\\_Analysis\\_Impact\\_Assessment.pdf](https://cirdi.ca/wp-content/uploads/2019/07/WEB_Gender_Analysis_Impact_Assessment.pdf)
- Pearman, G. (2009). *101 things to do with a hole in the ground*. Eden Project.
- Prospectors and Developers Association of Canada. (n.d.). *e3 Plus: A framework for responsible exploration*. [https://www.pdac.ca/docs/default-source/priorities/responsible-exploration/e3-plus---principles/respect-human-rights-operational-procedures-for-exploration.pdf?sfvrsn=c66237f0\\_6](https://www.pdac.ca/docs/default-source/priorities/responsible-exploration/e3-plus---principles/respect-human-rights-operational-procedures-for-exploration.pdf?sfvrsn=c66237f0_6)
- Resource Contracts (n.d.). *A directory of petroleum & mineral contracts*. <https://www.resourcecontracts.org/>
- Ricks, G., Steffen, O., Robertson, A. & Kirsten, H. (1999, January). Les aspects environnementaux de la programmation de la fermeture des mines [in French]. *Annales des Mines*, 64–76.
- Rogers, S. (2017, February 20–22). Climate change vulnerability and resettlement. In International Association for Impact Assessment. *IAIA Special Symposium: Resettlement and Livelihoods* (pp. 99–100). <https://www.iaia.org/uploads/pdf/ResettlementManilaCompendium.pdf>
- Sands, P. (2000). The precautionary principle: A European perspective. *Human and Ecological Risk Assessment*, 6(3), 445–458.
- Saxe, D. (2015, September 7). *Canada: Precautionary principle stronger part of Canadian law*. Mondaq. <https://www.mondaq.com/canada/environmental-law/424958/precautionary-principle-stronger-part-of-canadian-law>.
- Schacherer, S. (2018, October). *International investment law and sustainable development: Key cases from the 2010s*. (N. Bernasconi-Osterwalder & M. Dietrich Brauch, Eds). International Institute for Sustainable Development. <https://www.iisd.org/sites/default/files/publications/investment-law-sustainable-development-ten-cases-2010s.pdf>

- Secretariat of the Pacific Regional Environment Programme. (n.d). *Understanding and applying the precautionary principle to deep sea minerals mining in the Pacific Islands Region: A socio-cultural and legal approach*. [https://www.sprep.org/attachments/2012SM23/english/noumea-convention/11N.4.1\\_Annex\\_1\\_Prec\\_Princ\\_and\\_DSM\\_mining.pdf](https://www.sprep.org/attachments/2012SM23/english/noumea-convention/11N.4.1_Annex_1_Prec_Princ_and_DSM_mining.pdf)
- Servicio Nacional de Certificación Ambiental para las Inversiones Sostenibles (SENACE; updated 26/07/2017). In *Administrative Registry Catalogue of Environmental Certifications – Cañariaco Coppoer Perú S.A. Approval for the Modification of the semi-detailed Environmental Impact Study (MEIAsd) for the “Cañariaco” Mining Exploration Project* (09/09/2014 per R.D. No. 462-2014-MEM/DGAAM [Catalogue No. M-14-0097]). [http://www.senace.gob.pe/wp-content/uploads/2017/07/Catalogo\\_RCA\\_Nacional.pdf](http://www.senace.gob.pe/wp-content/uploads/2017/07/Catalogo_RCA_Nacional.pdf);
- Sheate, W. R., & Partidario, M. R. (2010). Strategic approaches and assessment techniques—Potential for knowledge brokerage towards sustainability. *Environmental Impact Assessment Review* 30(4), 278–288. <https://www.sciencedirect.com/science/article/abs/pii/S0195925509001279?via%3Dihub>
- Shemberg, A. (2008, March 27–28). *Stabilization clauses and human rights* [Paper presentation]. OECD Global Forum on International Investment, Paris, France. <http://www.oecd.org/investment/globalforum/40314647.pdf>
- Spitz, K., & Trudinger, J. (2009). Acid rock drainage: A widespread problem. In *Mining and the environment: From ore to metal* (pp. 696–697). CRC Press.
- Strosnider, W., Llanos, F., & Nairn, R. (2007). *A legacy of nearly 500 years of mining in Potosi, Bolivia: Acid mine drainage source identification and characterization*. 25th Annual Meetings of the American Society of Mining and Reclamation and 10th Meeting of IALR 2008. <https://www.asmr.us/Portals/0/Documents/Conference-Proceedings/2007/0788-Strosnider.pdf>
- Sustainable Development Goals Knowledge Platform. (2019). *Sustainable Development Goal 13: Taking urgent action to combat climate change and its impacts*. <https://sustainabledevelopment.un.org/sdg13>
- Surtees, J. (2018, December 12). *Important concepts in environmental law—The precautionary principle*. LawNow. <https://www.lawnow.org/important-concepts-in-environmental-law-the-precautionary-principle/>
- Tremblay, G. A., & Hogan, C. M. (2016, December 4–6). *Managing orphaned and abandoned mines: A Canadian perspective* [Paper presentation]. Dealing with Derelict Mines Summit, Singleton, NSW, Australia. [http://www.abandoned-mines.org/wp/wp-content/uploads/2018/02/Tremblay\\_Hogan\\_DerelictMines\\_2017.pdf](http://www.abandoned-mines.org/wp/wp-content/uploads/2018/02/Tremblay_Hogan_DerelictMines_2017.pdf)
- UN General Assembly. (2007). *United Nations Declaration on the Rights of Indigenous Peoples: resolution/adopted by the General Assembly, October 2, 2007, A/RES/61/295*. <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>
- United Nations. (2019). *“Conservation and the rights of indigenous peoples” (Articles 29 and 32 of the United Nations Declaration on the Rights of Indigenous Peoples)*. [https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/12/EGM\\_2019\\_ConceptNote.pdf](https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/12/EGM_2019_ConceptNote.pdf)

- United Nations Conference on Environment and Development. (1992, June 3–14). Rio Declaration on Environment and Development (A/CONF.151/26 (Vol. 1). [https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A\\_CONF.151\\_26\\_Vol.I\\_Declaration.pdf](https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf)
- United Nations Conference on Trade and Development. (n.d.). Investment Dispute Settlement Navigator. <http://investmentpolicyhub.unctad.org/isds>
- United Nations Development Programme. (2016). *Social and environmental screening procedure*. <https://www.undp.org/content/dam/undp/library/corporate/Social-and-Environmental-Policies-and-Procedures/UNDP-Social-Environmental-Screening-Procedure-1January2015.pdf>
- United Nations Educational, Scientific and Cultural Organization. (n.d.). World Heritage list. <https://whc.unesco.org/en/list/>
- United Nations Environment Programme. (2020). *Mineral resource governance in the 21st century: Gearing extractive industries towards sustainable development*. <https://www.resourcepanel.org/reports/mineral-resource-governance-21st-century>
- United Nations Framework Convention on Climate Change. (2015, December 12). *Paris Agreement* (T.I.A.S. No. 16-1104). <https://unfccc.int/process/conferences/pastconferences/paris-climate-change-conference-november-2015/paris-agreement>
- United Nations Human Rights Office of the High Commissioner. (2015). *Principles for responsible contracts: Integrating the management of human rights risks into state–investor contract negotiations. Guidance for negotiators*. United Nations. [https://www.ohchr.org/Documents/Publications/Principles\\_ResponsibleContracts\\_HR\\_PUB\\_15\\_1\\_EN.pdf](https://www.ohchr.org/Documents/Publications/Principles_ResponsibleContracts_HR_PUB_15_1_EN.pdf)
- United Nations Sustainable Development Goals (UN SDGS). (n.d.). *Goal 5: Achieve gender equality and empower all women and girls*. <https://www.un.org/sustainabledevelopment/gender-equality>
- Vanclay, F. (2003). International principles for social impact assessment. *Impact Assessment and Project Appraisal*, 21(1), 5–11. <https://www.iaia.org/uploads/pdf/IAIA-SIA-International-Principles.pdf>
- Vinti, C. (2018). The power to declare a prohibition or restriction on prospecting or mining to protect the environment: A critical assessment of section 49 of the Mineral and Petroleum Resources Development Act 28 of 2002 and section 24(2A) of the National Environmental Management Act 107 of 1998. *Journal of Energy & Natural Resources Law*, 36(4), 411–432.
- Wachenfeld, M. (2018). *Extracting good practices: A guide for governments and partners to integrate environment and human rights into the governance of the mining sector*. United Nations Development Programme.
- Wilhelm, S., Danielson, L., Disney Bruckner, K., Gulley, A., Nutgrass, C., & Madison, D. (2016). *Planning for the economic future of Colorado's coal communities*. The Mountain Pact & Sustainable Development Strategies Group. <https://static1.squarespace.com/static/5bb24d3c9b8fe8421e87bbb6/t/5c3bcda04ae237c24652e709/1547423143083/CoalPlanningReport3.pdf>
- World Bank. (n.d.). *The environmental and social safeguard policies*. <https://projects-beta.worldbank.org/en/projects-operations/environmental-and-social-policies#safeguards>
- World Bank. (2004). *Involuntary resettlement sourcebook: Planning and implementation in development projects* (30118, v.1). <http://documents.worldbank.org/curated/en/206671468782373680/pdf/301180v110PAPE1ettlementOsourcebook.pdf>

- World Bank. (2010). *West Africa mineral sector strategic assessment (WAMSSA): An environmental and social strategic assessment for the development of the mineral sector in the Mano River Union* (Report No. 53738-AFR). <http://documents.worldbank.org/curated/en/939851467990086600/West-Africa-Mineral-Sector-Strategic-Assessment-WAMSSA-as-environmental-and-social-strategic-assessment-for-the-development-of-the-mineral-sector-in-the-Mano-river-union>
- World Bank. (2013). *Design and implementation: Monitoring and evaluation*. <http://www.worldbank.org/en/topic/communitydrivendevelopment/brief/cdd-monitoring-evaluation>
- World Bank. (2018, October 1). *Environmental and social framework*. <https://projects-beta.worldbank.org/en/projects-operations/environmental-and-social-framework>
- World Bank (2020). *Environment and Social Framework (ESF): ESF Guidance Note 5: Land acquisition restrictions on land use and involuntary resettlement*. <http://documents.worldbank.org/curated/en/294331530217033360/ESF-Guidance-Note-5-Land-Acquisition-Restrictions-on-Land-Use-and-Involuntary-Resettlement-English>
- World Bank & International Finance Corporation. (2003). *Mining reform and the World Bank: Providing a policy framework for development*. <http://siteresources.worldbank.org/INTOGMC/Resources/miningreformandtheworldbank.pdf>
- Wredberg, A., (2009, August 12). *Glamis Gold: NAFTA tribunal rejects claims against USA*. [https://uk.practicallaw.thomsonreuters.com/9-422-1927?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/9-422-1927?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1)
- Zhu, Y. (2018). Fair and equitable treatment of foreign investors in an age of sustainable development. *Natural Resources Journal* 58(2).





**ANNEX**

# ANNEX 1.

## INVESTOR-STATE DISPUTE SETTLEMENT CASES IN THE MINING SECTOR INVOLVING ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS, AS OF DECEMBER 2019

YEAR INITIATED	CASE NAME (WITH LINK)	STATUS	COMPENSATION AWARDED		YEAR OF AWARD
			CLAIMED IN THE INITIAL REQUEST	AWARDED	
<b>Cases arising from the rejection of an ESIA report or denial of environmental permit</b>					
2008	<a href="#">Clayton/Bilcon v. Canada</a> (PCA Case No. 2009-04)	Award in favour of the investor	USD 300 million	Deferred to a later decision	2015
2009	<a href="#">Pac Rim v. El Salvador</a> (ICSID Case No. ARB/09/12)	Award in favour of the state (dismissed on the merit grounds)	USD 314 million	None	2016
2011	<a href="#">Crystallex v. Venezuela</a> (ICSID Case No. ARB(AF)/11/2)	Award in favour of the investor	USD 3.16 billion plus interest	USD 1.202 billion plus interest	2016
2014	<a href="#">Corona Materials v. Dominican Republic</a> (ICSID Case No. ARB(AF)/14/3)	Award in favour of the state (dismissed on jurisdictional grounds)	USD 342 million	None	2016
2015	<a href="#">Gabriel Resources v. Romania</a> (ICSID Case No. ARB/15/31)	Pending	USD 4.4 billion	Not applicable	Not applicable
2019	<a href="#">Odyssey Marine Exploration, Inc. and Exploraciones Oceánicas S. de R.L. de C.V. v.</a>	Pending	USD 3.540 billion	Not applicable	Not applicable

YEAR INITIATED	CASE NAME (WITH LINK)	STATUS	COMPENSATION AWARDED		YEAR OF AWARD
			CLAIMED IN THE INITIAL REQUEST	AWARDED	
<b>Cases arising from cancellation of mining permits and related to environmental and social issues</b>					
2003	<a href="#">Glamis Gold v. United States</a> (UNCITRAL)	Award in favour of the state (dismissed on the merits)	USD 50 million	None	2009
2010	<a href="#">Beijing Shougang &amp; others v. Mongolia</a> (PCA Case No. 2010-20)	Award in favour of the state (dismissed on jurisdictional grounds)	USD 60 million	None	2017
2011	<a href="#">Copper Mesa v. Ecuador</a> (PCA Case No. 2012-2)	Award in favour of the investor	USD 69.7 million	USD 19.3 million plus interest	2016
2013	<a href="#">South American Silver v. Bolivia</a> (PCA Case No. 2013-15)	Award in favour of investor	USD 385 million	USD 27.7 million plus interest	2018
2014	<a href="#">Infinito Gold v. Costa Rica</a> (ICSID Case No. ARB/14/5)	Pending	USD 321 million	Not applicable	2017
2019	<a href="#">Valentyn Drozdenko, Artem Kadomskyi, Igor Kompanets and others v. Republic of North Macedonia</a> (ICSID Case No. ARB/19/9)	Pending	USD 423.30 million	Not applicable	Not applicable

Source: Compilation based on data from UNCTAD's Investment Dispute Settlement Navigator (n.d.) and from the Investment Arbitration Reporter (n.d.).

# ANNEX 2. KEY TERMS

## ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND RELATED PROCESSES FOR THE MINING SECTOR

KEY TERM	DEFINITION
<b>Abandoned and orphaned mines</b>	“Orphaned or abandoned mines are those mines for which the owner cannot be found or for which the owner is financially unable or unwilling to carry out clean-up” (Tremblay & Hogan, 2016, p. 1). Such mines often lead to serious negative environmental, social, and economic impacts, and might result in high costs for governments and communities.
<b>Alternatives assessment</b>	Alternatives assessments for projects are typically undertaken as part of the ESIA process and legislated as such in some countries (Government of Canada, 2016a), though they are sometimes undertaken ahead of the ESIA as part of mine planning through prefeasibility feasibility studies (International Finance Corporation [IFC], 2012a; European Bank for Reconstruction and Development, 2014). The alternatives assessment process should objectively and rigorously assess all feasible options and methods for project development (Government of Canada, 2015). Screening criteria include potential environmental effects, social acceptability, engineering feasibility, and cost.
<b>Closure and rehabilitation plan</b>	<p>The process of closing a mine involves converting an operating mine into a closed mine in an orderly, safe, and environmentally sound manner. The closure and rehabilitation plan, which is always applicable to the particular mine site and separate from environmental and social management plans (ESMPs), explains how the site will be closed and returned to a usable landform after exploitation (Government of Canada, 2013b). This plan is concerned with the mining facilities themselves, the conditions of the immediate environment, and the socioeconomic parameters. As part of the environmental and social impact study (ESIA) process in most jurisdictions, a conceptual or preliminary closure plan is presented to facilitate the impact assessment, based on standard industry practices. Plans are revised post-ESIA based on input from public and stakeholder engagement. They will account for any changes required through adaptive management strategies to address site-specific conditions ahead of mine closure and to fulfill legislative requirements that may fall under separate acts (e.g., environmental impact assessment [EIA] vs. mining acts; see the mine closure and post-mining transition definition).</p> <p>The closure plan and final rehabilitation should include: (i) a summary of the main points and conclusions, including closure targets, timetables, and financial assurance; (ii) a description of the context of the closure that includes the history of the mining company and its operations; (iii) a detailed description of the mining facilities; (iv) a description of the social and environmental characteristics of the area concerned, including the resources most likely to be affected by the closure; and (v) a presentation of the closure plan that includes the Schedule of Operations, the cost, plans (schematics) of an appropriate scale and detail to clearly display the proposals, including the final provisions for the site, and the technical appendices, which must provide the research details concerning the proposed techniques and methods (Ricks, et al., 1999).</p> <p>Success criteria entail specifications, measurements, and requirements that, if met, denote success of the closure activities in meeting closure objectives. These criteria may be numerical or narrative and may include a time component or be linked to specific management or monitoring activities (International Council on Mining &amp; Metals [ICMM], 2019a).</p>

KEY TERM	DEFINITION
<b>Construction and development</b>	The construction and development phase involves building all infrastructure needed for the mine, potentially including pre-stripping for open pits, underground development, a process plant, leach pads, tailings dams, roads, powerlines, maintenance shops, an administration building, water and waste control, management facilities, and employee housing (Newmont, 2013).
<b>Decommissioning</b>	Decommissioning is “the process of taking infrastructure out of active service, which begins at the end of its utility for site activities and ends with the removal of unwanted infrastructures and services.” This can include demolition or disassembly of buildings and other structures, or divestment of a part or all assets to a third party (ICMM, 2019a, p. 67).
<b>Divestment</b>	Divestment is the “process by which the company sells a part or all of its assets. This can occur during any stage of the mining project, and entails a process of transfer of ownership, infrastructure, liabilities and closure responsibility” (ICMM, 2019a, p. 67).
<b>Ecosystem restoration</b>	Ecosystem restoration is the “re-establishment of ecosystem structure and function to an image of its prior near-natural state [i.e., similar to baseline conditions], or replication of a desired reference ecosystem,” facilitated by human intervention (ICMM, 2019a, p. 68). This activity can take several years, depending on the complexity of baseline conditions or the reference ecosystem and may include reintroduction of native species and revegetation, removal of non-native species, erosion control measures, and associated monitoring activities. <sup>51</sup>
<b>Environmental and social impact study</b>	The environmental and social impact study is a step in the ESIA process and is also referred to as the ESIA report, EA report, or EIS in some jurisdictions. The study refers to the process of environmental authorization instituted in national legislation that usually obliges large-scale projects to carry out an impact assessment and hold consultations. It involves several stages: preliminary sorting, framing or analysis of the scope of the study, carrying out the impact study, and developing management and monitoring plans. A proper impact study is a rigorous scientific process that aims to: (i) document the different issues and how the environment functions to better appreciate its vulnerability in regards to the project; (ii) integrate environmental and social concerns into project design; (iii) inform and raise public awareness and involve the community in the decision-making process in order to enhance the social acceptability of the project and ensure its sustainability; (iv) inform the administrative authority as related to the approval or rejection of the project, taking into account economic, environmental, and social issues, as well as mitigation or improvement and monitoring measures; (v) provide the technical, human and financial resources necessary for implementing the monitoring plan, the monitoring itself, and its integration into local development actions (André et al., 2010; Glasson et al., 2013; Leduc & Raymond, 1999).

<sup>51</sup> Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 69 available at <https://www.cbd.int/doc/legal/cbd-en.pdf>

KEY TERM	DEFINITION
<b>Environmental and social management plan (ESMP)</b>	<p>The enforcement of a mining project ESIA should lead to the development of an ESMP as part of the ESIA process, which allows the mining operator to devise actions that will enable it to: respect the regulatory framework applicable to the project; mitigate the negative impacts of the project on the biophysical and human environments; monitor activities and project impacts; make any necessary corrections or improvements as appropriate; and maximize the project's benefits (Benabidès, 2011). ESMPs provide an understanding of the potential for mitigation and the extent to which mitigation measures may address potential environmental effects (Canadian Environmental Assessment Agency, 2018), which is necessary to meaningfully determine the level of impact of a project. The ESMP constitutes the project's environmental specifications and serves as a reference document for the holder of the exploitation permit as well as for the state's monitoring body. The ESMP should include at least: (i) the mitigation, compensation, and enhancement implementation plan; (ii) the environmental and social monitoring program; (iii) the stakeholder capacity-building plan; (iv) the ESMP's budget; and (v) the process by which the ESMP will be integrated into the project.</p>
<b>Environmental and social monitoring</b>	<p>Environmental and social monitoring is the collection and analysis of quantitative and qualitative environmental and social data over the life of the project. Monitoring is conducted to document project baseline conditions and is subsequently a key component of ESMPs developed through the ESIA process to track the performance of the project against pre-established criteria. The monitoring programs may be periodically updated through applicable adaptive management strategies to ensure compliance with environmental and socioeconomic legislative requirements and/or commitments made by a company (Glasson et al., 2013).</p>
<b>Environmental audits</b>	<p>This systematic and documented verification process works to objectively obtain and evaluate collected evidence (audit evidence) to determine whether activities, events, conditions, environmental management systems or any related information is in accordance with the pre-established criteria (audit criteria) (IFC, 2007).</p>
<b>Environmental impact assessment (EIA)</b>	<p>EIA can be defined as “the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made” (International Association for Impact Assessment, 1999, p. 2). EIA is more recently often referred to as ESIA, especially when there is a specific social and/or community aspect to it. When EIA includes health impacts, it may be referred to as environmental, social, and health impact assessment.</p>
<b>Environmental release or environmental exit ticket</b>	<p>When the mining company meets the decommissioning requirements of the government authorities and fulfills all the commitments of its closure plan, it receives from the authorities a written certificate called an “Environmental Release” or “Environmental Exit Ticket,” which releases the company from its responsibilities. The site is then considered to be closed (Government of Canada, 2013b).</p>

KEY TERM	DEFINITION
<b>Exploration</b>	Exploration involves rock and soil sampling and the use of small to heavy machinery to identify and quantify mineral resources (Newmont, 2013). More intrusive methods to obtain bulk samples and to carry out testing are usually referred to as advanced exploration to further define mineral reserves from a mineral resource or further evaluate the geologic discovery to determine whether it should proceed to scoping and feasibility assessments (Eggert, 2010). Exploration in its entirety may last a year or many years and does not necessarily lead to mine development (Newmont, 2013).
<b>Feasibility studies</b>	Feasibility studies gather the information required for a decision on the technical and economic viability of a project and whether and how to proceed further in the development of a potential mineral resource. They may vary from a prefeasibility study to a feasibility study (Newmont, 2013). These studies include mineral resource and reserves estimates, mine designs, material scheduling, milling process designs, supporting infrastructure design, logistics, scheduling, environmental and social considerations, cost estimates, and economic analysis. A feasibility study will have a higher level of detail and confidence level than a prefeasibility study.
<b>Financial assurance for mine closure and rehabilitation</b>	<p>Financial assurance is a written agreement under which a mining company agrees to pay a certain amount of money if it does not perform certain activities properly at closure (e.g., restoration) (Government of Canada, 2013b). This is an insurance mechanism, an element of governance, a solution to the bankruptcy or failure of the operator and any resulting abandoned mines, a question central to the post-mine issues, and a question of responsibility for future generations.</p> <p>Several other forms of acceptable financial assurance exist and should be considered carefully in terms of their financial implications for the mining company. “Third-party guarantees such as irrevocable/unconditional bank guarantees and insurance bonds are common, as are renewable letters of credit. Cash deposits, trust funds, collateral and insurance policies are also used, as well as alternative options such as parent company guarantees, balance sheet tests and financial strength ratings” (ICMM, 2019a, p. 49).</p>
<b>Mine closure and post-mining transition</b>	<p>Mine closure is a process that begins at an early stage of mine development to manage the environmental, social, and economic impacts (ICMM, 2019a) and benefits of mine closure and the impacts that will remain after the mine has closed. Mine closures may be temporary and sudden (ICMM, 2019a), for example in the case of a severe weather event or major downturn in the market for a particular commodity, and/or may be permanent. This phase involves implementing a mine closure plan, ensuring adequate funding to implement the plan, monitoring the plan, and planning for the social transition for mine employees, local communities, and future generations (ICMM, 2019a).</p> <p>“National and local legislation may provide specific closure design requirements and regulatory standards for some environmental aspects” (e.g., soil and groundwater) (Garcia, 2008, p. 3). Mine closure plans and financial assurance are typically completed as part of the ESIA process and form part of overall approvals for mine development. Closure plans developed during the ESIA process are often conceptual. They evolve and are updated per final mine plan designs. Ensuring regulatory compliance and risk analysis through adaptive management strategies by companies is critical to achieving mine closure and post-mining transition objectives.</p>

KEY TERM	DEFINITION
<b>Mine reclamation</b>	Mine reclamation is the process of rehabilitating land that has been mined to a natural and usable state that is stable and self-sustaining, after considering beneficial uses of the site and surrounding land. This includes reinstatement of degrees of ecosystems and function where ecosystem restoration is not the objective (Garcia, 2008). This process may also include remediation and ecosystem restoration activities, which may require a few to many years to complete.
<b>Mine waste management</b>	Mine waste management relates to the handling and storage of rock or mineral of no economic value that must be removed from a mine to keep the mining scheme practical and economical (Natural Resources Canada, 2016). Mine waste management includes storage facilities that are planned, designed, constructed, operated, and closed to prevent impacts on the environment, human health and safety, and infrastructure. Mine waste management is sometimes referred to as mine rock management, waste rock management, or waste management, and can also include tailings management. Waste can also refer to hazardous waste, non-hazardous waste, putrescible waste, and/or non-putrescible waste, which are generally managed in separate management plans from the mine rock.
<b>Operations</b>	Typically the longest phase of the mine life cycle, the operations phase “involves extracting ore from the deposit and processing it to obtain mineral products of value to society, such as metals” (Comité sectoriel de main-d'œuvre de l'industrie des mines, 2016). Operation includes management of wastes and other resources, as well as monitoring, typically in line with the ESMPs.
<b>Participatory monitoring and evaluation</b>	Participatory monitoring and evaluation may include the involvement of stakeholders in scientific sampling methods and analysis and/or observation, group discussions, or adaptation of engagement techniques by a company, all with the aim of strengthening validation of methods and results or to track changes in the physical and socioeconomic environment over time in relation to a project (IFC, n.d.c.; World Bank, 2013).
<b>Permitting</b>	National and local regulatory permits, licences, and other authorizations for common activities related to mining construction and operation are usually required, and this process typically follows the ESIA process (World Bank & IFC, 2003). This requires applications to different regulatory bodies or ministries at different governmental levels, which generally rely on the information presented through the ESIA process and/or additional information specific to regulatory approvals.
<b>Post-mining transition</b>	Post-mining transition refers to “the period after the completion of all works needed to implement the closure of the site” and includes monitoring and maintenance activities. Monitoring and maintenance are required to maintain and manage infrastructure and rehabilitation until relinquishment is possible, and to check environmental and socioeconomic performance against success criteria (ICMM, 2019a, p. 68). This phase can last a few to several years depending on monitoring and maintenance needs and associated environmental commitments made during the ESIA and closure plan development.

KEY TERM	DEFINITION
<b>Progressive closure</b>	Progressive closure “involves the implementation of closure activities during the operating life of a mine providing opportunities to test and demonstrate the effectiveness of closure activities, validate success criteria and build trust with communities and regulators. It provides opportunities to generate learnings that can be incorporated into closure planning throughout the mine life cycle” (ICMM, 2019a, p. 6).
<b>Public and stakeholder engagement</b>	<p>Public and stakeholder engagement is a legislated requirement of the ESIA process in several countries and financial institutions. It is emerging as a means of describing a broader, more inclusive and continuous process between a company and those potentially affected by a range of activities and approaches that span the entire life cycle of a project (IFC, 2007; Mining Association of Canada, 2018).</p> <p>“Public [and stakeholder] participation may be defined as the involvement of individuals and groups that are positively or negatively affected by [or interested in] a proposed intervention (e.g., a project, a program, a plan, a policy) subject to a decision-making process” (André et al., 2006, p. 1). Its purpose in the ESIA process is to enable citizens to participate in making decisions that impact their quality of life. In addition to taking into account the concerns of the communities in the establishment and implementation of policies and development projects, it also allows for citizen participation and the sharing of local and traditional knowledge related to the physical environment and the social fabric (Lanmafankpotin et al., 2013).</p> <p>A stakeholder engagement plan is a formal strategy to communicate with project stakeholders to seek their input and ultimately gain their support for a project. It is generally developed for the ESIA process (AccountAbility, United Nations Environment Programme &amp; Stakeholder Research Associates Canada Inc., 2005; Natural Resources Canada, 2014).</p>
<b>Relinquishment</b>	<p>“Relinquishment occurs when ownership, residual liabilities and responsibility for a former mine site can be returned to the corresponding jurisdiction or original owner, or transferred to a third party, following completion of closure activities and satisfying any agreed success criteria. If ongoing maintenance and management is required [in continuation of post-mining transition activities], the responsibility for this under relinquishment would also transition to the new responsible party” (ICMM, 2019a, p. 59).</p> <p>Partial relinquishment refers to “a part of the site [being] transferred to a third party, and the remaining area or areas remain the responsibility of the mining company” (ICMM, 2019a, p. 68). Relinquishment of a site can occur in a stepwise process, taking a number of years as discrete portions of the site are closed and brought to a condition suitable for relinquishment (ICMM, 2019a, p. 68).</p>
<b>Remediation</b>	Remediation is the process of treating or removing contaminants from a site and may include the treatment and removal of soil, groundwater, sediment, or surface water for the general protection of human health and the environment (Government of Yukon, n.d.).

KEY TERM	DEFINITION
<b>Resettlement action plan</b>	<p>This process can occur during any phase of the project but mostly occurs during closure and post-closure phases.</p> <p>The resettlement action plan specifies the procedures that should be followed and measures that should be taken to relocate and adequately compensate affected individuals and communities (IFC, 2002, 2012b). It identifies all the people affected by the project and justifies their physical and/or economic displacement, having taken into consideration any alternatives that would minimize or avoid this relocation. Additionally, it defines the eligibility criteria applicable to the parties concerned, sets the compensation rates for the loss of assets and defines the levels of support for relocation and reconstruction of affected households (Bankwatch Network, n.d.). It should be remembered that the fundamental principle of resettlement activities is that they must result in tangible improvements in the economic situation and social well-being of the affected individuals and communities.</p>
<b>Scoping</b>	<p>Scoping under the ESIA process, as opposed to scoping/preliminary economic assessment at the exploration and feasibility phase of a project, determines which impacts are likely to be significant and should become the main focus of the impact assessment. Scoping identifies data availability and gaps, and it documents scientific evidence and advice as well as public and stakeholder feedback. It also identifies valued components and determines the appropriate spatial and temporal scopes for the assessment (Government of Canada 2016b; IFC, n.d.a).</p> <p>This step can drive other steps that typically form part of the ESIA process, such as the development of Terms of Reference or helping to inform alternatives assessments.</p>
<b>Scoping/preliminary economic assessment (PEA)</b>	<p>A scoping study or PEA is an early-stage conceptual-level assessment of the potential technical and economic viability of mineral resource and reserve extraction and recovery (Canadian Institute of Mining, Metallurgy and Petroleum, 2014; Ministère de l'énergie et des ressources naturelles, 2018).</p>
<b>Screening</b>	<p>This review determines whether a project has potentially significant adverse effects or risks that require an ESIA process to make a decision on whether the project should proceed or not (International Institute for Sustainable Development, n.d.; United Nations Development Programme, 2016).</p>
<b>Social impact assessment (SIA)</b>	<p>SIA is “the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions” (Vanclay, 2003, p. 6).</p>
<b>Stakeholder</b>	<p>A person or group that is influenced by, or can influence, an operation (Vanclay, 2003). Stakeholders typically include national and local government representatives, conservation groups, authorities, Indigenous Peoples, non-governmental organizations, and representatives of vulnerable groups.</p>

KEY TERM	DEFINITION
<b>Strategic environmental assessment (SEA)</b>	<p>SEA is a formal and comprehensive systematic process for assessing the environmental effects of policies, plans, or programs, as well as any alternatives, which results in a written report, the conclusions of which are used in decision making by the relevant public authorities (Glasson et al., 2013). It is a tool to help development planners design investment strategies, programs, and projects that are environmentally sustainable for a region/state/province or country as a whole. “SEA is a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the interlinkages with economic and social considerations” (OECD, 2006, p. 17). “More specifically, SEA is a tool to: structure public and government debate in the preparation of policies, plans and programmes; feed this debate through a robust assessment of the environmental and, where required, social and economic consequences; ensure that the results of assessment and debate are taken into account during decision making and implementation” (Netherlands Commission for Environmental Assessment, n.d.).</p> <p>“The purpose of SEA is therefore to help understand the development context of the strategy being assessed, to appropriately identify problems and potentials, address key trends, and to assess environmental and sustainable viable options (i.e. that act cautiously or prevent risks and stimulate opportunities) that will achieve strategic objectives” (do Rosário Partidário, 2012, p. 11).</p>
<b>Tailings management</b>	<p>“Tailings are a by-product of mining consisting of the processed rock or soil left over from the separation of the ore from the rock or soil within which they occur” (Mining Association of Canada, 2019a, p. 1). Tailings are managed in engineered facilities that are planned, designed, constructed, operated, closed, and maintained in the long-term post-mining transition period to prevent impacts on the environment, human health and safety, and infrastructure (ICMM, n.d.). This includes aspects of water management activities.</p>
<b>Valued component</b>	<p>For the purposes of impact assessment, valued components are components of the natural and human environment considered by a company, the public, stakeholders, Indigenous Peoples, and other technical specialists involved in the assessment process to have scientific, ecological, economic, social, health, cultural, archaeological, historical, aesthetic or other importance (Government of Canada, 2016a; International Association for Impact Assessment, n.d.).</p>
<b>Water management</b>	<p>Mining uses water for activities such as mineral processing, drilling, dust suppression, tailings slurry transport, and employee needs. Water management objectives are generally to minimize potential impacts on the quantity and quality of surface water and responsible water use (ICMM, 2012; Mining Association of Canada, 2019b).</p>

## **ANNEX 3.**

# **KEY ISSUES RELATED TO ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT IN MINING**

The following provides a brief summary of key issues in mining that should be considered in environmental and social impact assessment (ESIA), environmental and social management plans, and related legal frameworks. This section raises awareness of these important issues in mining. Readers can find more information and guidance on the issues in Annex 4, Additional Resources.

### **ACID ROCK DRAINAGE AND METAL LEACHING**

Acid rock drainage (also known as acid mine drainage) and metal leaching are challenging, persistent, and costly environmental problems affecting mines and mining operations worldwide (Spitz & Trudinger, 2009).

Acid generation is fundamentally a natural process that occurs when sulphides in mineralized rocks oxidize and then wash off with surface or groundwater (Nordstrom & Alpers, 1999). Mining greatly increases the surface area available for chemical reaction by breaking and grinding the ore and waste rock during the mining process, and the rate of acid generation increases dramatically.

As the pH lowers, the leachate will dissolve metals and other constituents from the mined materials and the surrounding rocks it encounters. The result is an acidic, metal- and sulphate-rich solution. This is a simplified description, as there are many complexities that affect the reaction rates and resulting leachate quality. In addition, other materials oxidize and metals can also be leached under neutral pH conditions. Mines that operated during the Bronze Age in Spain and 500 years ago in Bolivia are still producing acid drainage (Davis et al., 2000; Strosnider et al., 2007). Therefore, there are long-term management concerns associated with acid rock drainage and metal leaching in the closure plan and that may only occur after the mine is closed.

Geochemical characterization of residual materials from mining and ore processing should be completed and incorporated into the mine design and materials management plans, which are assessed in the ESIA and addressed in permitting conditions. Geochemical characterization can be complex and should be completed by experts following international best practices (e.g., using the *Global Acid Rock Drainage Guide* [International Network for Acid Prevention, 2014]). Studies can take more than two years to complete and predictions should be used for materials management and in the effects assessment to predict water quality and water treatment requirements.

## BIODIVERSITY

Biodiversity conservation is gaining importance due to increasing threats from habitat loss and fragmentation. Countries that are signatories to the Convention on Biological Diversity and international financiers of mining projects require impacts on biodiversity to be effectively managed and offsets created for losses in critical habitat. In many cases, governments will be asked to assist companies with managing land tenure and creating legally protected areas for offsets. The governance framework needs to accommodate these requirements. This topic will be further developed in the upcoming guidance on environmental management.

## CLIMATE CHANGE

A changing climate poses significant challenges for the mining sector, both from adaptation and mitigation perspectives.

Mines are now using climate data to aid in risk assessment and are identifying how climate change interacts with mining infrastructure across all phases of a project. Climate projections can prove beneficial for health and safety planning, understanding the impacts on and appropriately sizing mining infrastructure, efficiently managing water supplies, and protecting against extreme weather events or disruptions to transportation.

Climate change is resulting in higher risk for operations and environmental protection. For example, more frequent rainfall with higher levels of precipitation can result in unexpected releases of untreated water from tailings and water management facilities. Therefore, climate change analyses must be incorporated into mine design and into the impact assessment to ensure that adequate measures are in place to manage extremes in water shortages, surpluses, and increasing incidence of extreme events occurring over the life of the mine and after closure.

The Mining Association of Canada has recognized that climate change adaptation presents an opportunity for the mining industry. There are many benefits for mines in incorporating climate data into scalable risk-based mining frameworks and decision-making processes. A compelling argument can be made to practitioners, regulators, and mining organizations of the cost savings, health and safety benefits, and strategic adaptation advantages over the life cycle of a mine. The next step for every mine operator is to incorporate climate change considerations into mine designs and for climate change to be a part of the continuous improvement programs. One of the most important issues is sizing mine facilities such as contact water ponds and diversion systems to hold water from larger storm events. The state of Nevada in the United States, for example, recommends designing such facilities for the 500-year, 24-hour storm event rather than the 100-year, 24-hour storm event required by the International Finance Corporation (Nevada Division of Environmental Protection, n.d.).

The mining sector is currently an energy-intensive sector but is advancing strategies to increase energy efficiency and reduce greenhouse gas emissions. As discussed previously, the transition to electric vehicles is one example of such efforts. The sector is also working to improve energy efficiency and use of renewable energy, as well as adopt low-emission technologies (ICMM, 2019b). It is also improving strategies for sharing efficient and renewable energy sources with communities

around mines. All of this work and collaboration with mining companies is necessary to help progress toward Sustainable Development Goal 13: climate action (Sustainable Development Goals Knowledge Platform, 2019).

## EMERGING TECHNOLOGY<sup>52</sup>

It is important for new technologies to be adopted to improve environmental and social performance. However, studies are required to prove the technology and assess any risks prior to adoption. Innovative and technological advancements have the capacity to significantly change some of the potential effects of mine developments on both the environment and people. New technologies can reduce some environmental and social concerns but may have some unexpected effects. Some new technologies are described below as examples, but many others are also being adopted as the industry evolves.

The increased use of robots and autonomous vehicles in mining may mean fewer mine-related accidents, increased efficiency of operations, lower unit costs, and decreased environmental impact. It could simultaneously result in a dramatic drop in training and hiring of employees from the local communities. Mines have historically sourced both skilled and unskilled workers. However, the onset of autonomous technological advances in the mining industry could rapidly decrease the number of human workers needed to perform the same amount of work (Grant, 2018). This poses an important challenge for mine companies, which have historically relied upon the economic and social benefits that they bring to a community through job creation to attain community and government support (Jamasmie, 2018)

As autonomous and electric vehicles, robotics, telemetry, fibre optics, alternative energy, and other technologies quickly emerge in the sector, governments will need to continually build capacity to understand and manage new technologies, as well as understand the associated environmental and social repercussions. For many reasons, governments should welcome such technological advances that adopt cleaner or energy-efficient technologies.

Telemetry is also becoming a cost-effective and efficient method for real-time environmental monitoring from mining exploration to closure. Three telemetry options exist—radio, cellular, and satellite—all of which require data loggers that quickly communicate local information to a base station. Radio telemetry is only possible if pieces of equipment are in relative proximity to one another, transferring data by spread-spectrum radio technology. Cellular telemetry allows for equipment to be farther apart, relying entirely on cellular signals for data transfers. Satellite telemetry is capable of transferring real-time data from a remote Iridium satellite modem to a base station anywhere on Earth (Fondriest Environmental Inc., 2014). Real-time monitoring through telemetry can be quite economical across the entire life cycle of a mine.

Another major technological shift with regards to health, safety, and environment is the emergence of clean or energy-efficient technology at mines. Recently, Goldcorp has eliminated diesel fuel and

---

<sup>52</sup> Additional information is available on IGF's New Tech New Deal program: <https://www.igfmining.org/new-tech-new-deal/>

opted to rely on electric power for subsurface vehicles at the Borden Mine in Ontario, Canada. This transformation not only provides workers with a work environment with better atmospheric conditions than traditional mines, it has the potential to reduce overall emissions by 50% (Donohue, 2017). Several incentives exist for mining companies to discontinue the use of diesel fuel and integrate clean technologies in mines: cleaner and sustainable mining projects are likely to increase government and community acceptance if efficient technologies are implemented (Donohue, 2017). Governments should acknowledge pro-environmental efforts and utilize mining as an outlet to assist in reducing the effects of climate change by including appropriate requirements and measures in applicable legislation. Using new and cleaner energy-efficient technologies may prove more challenging for mines in highly remote areas or in less developed countries where access or opportunities for alternative energy technologies are not yet available.

## GENDER IN MINING

Mining often has different impacts on and benefits for men and women and marginalized groups. According to Oxfam, “while some progress has been made in recent years, the extractive industries continue to undermine women’s rights and contribute to gender inequality, which hampers the development potential of the sector” (Hill et al., 2017, p. 3). Many of these gender issues stem from inequitable opportunities, poor financial compensation, and exacerbated living environments as a result of mining projects.

Because mining is a historically male-dominated work environment, women have struggled to have a voice and gain access to employment. Indicative of this, only 5–10% of the global mining workforce is composed of women. These numbers also reflect the percentage of women who are given opportunities to make high-level decisions in mining. Overall, fewer opportunities for women, little access to resources, poor benefits, and lack of awareness that gender issues exist all make it difficult for women to engage in mining (Environmental Governance Programme, 2019). Equitable opportunities for women in mining must be highly promoted.

Additional economic issues persist, as men who work in mining receive at least 17% greater financial compensation than women (Environmental Governance Programme, 2019). Circumstances may arise, for example, where payments or benefits are conferred directly to a male “head of household” and not equitably shared with a female partner (United Nations Sustainable Development Goals, n.d.). This inequitable financial imbalance denies women the financial freedom created by economically fruitful mining projects. In turn, this increases women’s reliance on men, which then amplifies existing gender problems in the mining sector (Hill et al., 2017).

Furthermore, women also are exposed to environmental, health, and safety constraints. Mining projects can lead to unpredictable and potentially harmful living conditions for women, as either damaged or restricted access to land can displace residents. This can lead to increased workloads specifically for women, who are traditionally responsible for nutrition and caretaking in households. The effects of resettlement typically impact women more, as connections to traditional support networks are severed and dependence on men can intensify (Hill et al., 2017).

In most cases, a transient male workforce and security forces are needed to accommodate the demands of large-scale mining projects. This can further result in the following issues that affect women disproportionately: the spread of diseases, increased violence, sexual exploitation and abuse, and increased stress levels due to unsafe living conditions (United Nations Sustainable Development Goals, n.d.).

In summary, impacts disaggregated by gender should be represented in the ESIA laws, and gender equality objectives ought to be included in environmental and social management plans including gender-based violence prevention action plans. These efforts would help build inclusive societies and advance progress toward Sustainable Development Goal 5 on gender equality (United Nations Sustainable Development Goals, n.d.). Women in mining can be effectively empowered through systemic change. The most effective solution is social norms being overcome by positive social progress. Governments have an obligation to protect all citizens potentially affected by industrial development, including all inhabitants. There must be an onus on mining companies to train and sensitize men and women employees, local communities, and children. They should provide information that instills gender equity as a value and principle and encourage women to have a prominent role in advocacy spaces. It is essential that the work of women also be dignified at the political level and displayed to their communities by mining companies. Policies, procedures, and protocols in mining companies and organizations could effectively spearhead gender equality initiatives (United Nations Sustainable Development Goals, n.d.).

## **HUMAN RIGHTS, SAFETY, AND SECURITY**

Human rights, safety, and security are key issues in mining that need to be addressed through the ESIA review and management plans. Mine safety is important for people at the mine working around heavy equipment and vehicles and high-risk areas such as underground, in open pits, around steep slopes, around water storage facilities, using hazardous materials, etc. There are similar safety risks for people in the surrounding areas from these same hazards when the effects of failures and accidents extend out past the mine's boundaries of control and after the mine has closed (e.g., tailings dam failures, spills of hazardous materials during transportation, mine openings after mine closure).

Human rights issues can arise when there are competing needs for land and water. It is important to put legislation and processes in place governing the actions of both proponents and the government for managing access to and use of water and land, such as where resettlement is required or artisanal mining is competing for access to minerals. Human rights issues may also arise as a result of the political and social setting of the mine. This can range throughout the mine operations, from working conditions of contracting companies to denying access to lands for subsistence activities by community members.

Security issues also depend on the political and social setting of the mine and overlap with human rights and safety issues. Security may be needed to protect workers, contractors, mineral resources, mine products (e.g., gold doré), equipment, and supplies. Security may require armed security, which carries risks unless the security program is well designed, implemented, and managed. Many

international companies and governments participate in the Voluntary Principles on Security and Human Rights that lay out best practices for security and protecting human rights. Governments can also follow the UN Guiding Principles on Business and Human Rights.<sup>53</sup>

## INDIGENOUS RIGHTS AND CONSULTATION

As noted throughout this guidance document, international frameworks such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and International Labour Organization (ILO) Indigenous and Tribal Peoples Convention 169 provide special rights for Indigenous Peoples, including the right to Free, Prior and Informed Consent (FPIC). While the UNDRIP is non-binding, it has universal support and provides a comprehensive framework of “minimum standards for the survival, dignity and well-being of the indigenous peoples of the world” (UN General Assembly, 2007). ILO Convention 169 is an international treaty that governs Indigenous rights and is binding on the 23 countries that have ratified it. Although many examples are provided in this guidance document and additional references are provided in Annex 4, the topic of Indigenous rights and consultation requires more comprehensive coverage than is possible in the limited pages of this document. Legal frameworks, government-led consultation processes, requirements to provide evidence of consent,<sup>54</sup> and other measures related to Indigenous rights, FPIC, and consultation continue to evolve and deserve special attention.

## LABOUR AND WORKING CONDITIONS

Labour and working conditions are generally addressed in legislation outside of the ESIA legal framework. Nonetheless, the ESIA is an opportunity to ensure that systems and measures are in place for protecting workers’ health, safety, and rights for the proposed mine. The legal framework pertaining to labour and working conditions should be compatible with international conventions, including human rights conventions and ILO conventions regarding child labour, forced labour, rights of workers to organize, and the right to a safe and healthy working environment.

## LAND RIGHTS

Land rights are a leading social and political issue in many mineral-rich developing countries. Where rights to land are unclear or undocumented, the economic, cultural, and social well-being of

---

<sup>53</sup> See the UN Guiding Principles on Business and Human Rights here: [https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr\\_en.pdf](https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf)

<sup>54</sup> See e.g., International Finance Corporation (IFC) Performance Standard 7, *Indigenous Peoples*, (2012) which requires documentation of “(i) the mutually accepted process between the client and Affected Communities of Indigenous Peoples, and (ii) evidence of agreement between the parties as the outcome of the negotiations,” [https://www.ifc.org/wps/wcm/connect/c02c2e86-e6cd-4b55-95a2-b3395d204279/IFC\\_Performance\\_Standards.pdf?MOD=AJPERES&CVID=kTjHBzk](https://www.ifc.org/wps/wcm/connect/c02c2e86-e6cd-4b55-95a2-b3395d204279/IFC_Performance_Standards.pdf?MOD=AJPERES&CVID=kTjHBzk). The IFC works with the private sector in developing countries. In this context, the “client” is the party responsible for implementing and operating a project financed through IFC funds, or the recipient of that funding. IFC Standards have been adopted by at least 105 financial institutions in 38 countries through the Equator Principles. See <https://equator-principles.com/about/>.

individuals and even entire communities can be severely undermined. Governments must ensure that land rights are well defined before permitting any mining activity. This can take time and even require significant legal reform to ensure the protection of human rights.

## RESETTLEMENT

Resettlement is a key issue for the mining sector and warrants more coverage than the limited pages of this guidance document allows. Resettlement should be avoided where possible, whether physical displacement of people and homes or economic displacement, due to the likelihood of severe socioeconomic disruptions and conflict. Where resettlement cannot be avoided, it should proceed only in a manner that closely involves displaced persons in resettlement planning and leaves communities better off (IFC, 2012b). Additional references are provided in Annex 4 for further study of this key topic.

## TAILINGS MANAGEMENT

Tailings storage facilities can be a source of high risk for companies, governments, and communities due to their potential for failure and the catastrophic consequences if they are not designed, managed, and monitored effectively. Tailings are a fine particle residual product from mineral processing. There are many ways to manage tailings, depending on the mine facilities, schedule, type of processing, environment, and characteristics of the tailings. Tailings can be backfilled in areas of underground or surface mines where all the ore has been extracted, and stored on land as dry or wet tailings. Tailings are often stored wet to prevent them from oxidizing and releasing acid and metals (i.e., for long-term chemical stability); however, wet storage can sometimes challenge the physical stability of the dams.

From a governance perspective, when the mining project includes tailings, it is important to ensure that the company has completed a thorough alternatives assessment, physical and chemical characterization, robust design, water balance, and water quality predictions as part of the impact assessment. Approval and permit conditions should be commensurate with the complexity and risk of the facility. International lenders and some governments now require a periodic technical review of tailings facilities by an independent panel of experts that assesses the design, construction, and operation of the dam to help ensure the long-term physical and chemical stability of the dam.

## WATER RIGHTS, USE, AND PROTECTION

Access to clean water is a fundamental human right that can come into conflict with proposed mine developments with large water requirements. Water rights and use must be carefully controlled and managed to fairly allocate the water supply while maintaining human rights and the needs of aquatic and terrestrial life in the surrounding environment, taking into consideration the dynamic nature of surface and groundwater flows and a changing climate.

Water use and management in mining is a complex and challenging aspect of the majority of mineral projects and mining operations. Drilling uses and discharges water during exploration. The risk of erosion and release of sediments to creeks and rivers is high during the construction stage. Open pit and underground mines are often below the groundwater table and accumulate water that requires pumping and treatment before being discharged to the surface. Mineral processing usually requires water that is then recycled, goes to tailings, or needs to be treated. Water that infiltrates mine rock storage facilities needs to be collected and often treated before being released to the environment. Tailings from mineral processing contain water and are often stored in facilities requiring water management and treatment facilities. Mineralized rock typically releases metals once it is exposed to oxygen, and sulphidic rocks can produce acid rock drainage. These contaminants are usually in high concentrations and need to be treated before being discharged to protect the aquatic life in the receiving environment and downstream users of the water. Therefore, community consultation and water management, including the mine water balance and water quality modelling, are critical components in the impact assessment process and for setting permit conditions. Water use and management issues then need to continue to be addressed at all stages of the project.

## ANNEX 4. ADDITIONAL RESOURCES

1.0 Climate Change and Impact Assessment.....	183
2.0 Cultural / Heritage Impact Assessment.....	183
3.0 Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plans (ESMP).....	183
4.0 Gender and Impact Assessment.....	185
5.0 Health Impact Assessment.....	186
6.0 Human Rights Impact Assessment (HRIA).....	186
7.0 Indigenous People and Impact Assessment.....	187
8.0 Legal Frameworks.....	187
9.0 Mine Closure.....	188
10.0 Resettlement and Livelihood Restoration.....	188
11.0 Social Impact Assessment (SIA).....	189
12.0 Social Licence to Operate (SLO).....	190
13.0 Other Useful Resources.....	191
14.0 Websites.....	191

*User Note: This Table of Contents section acts as a reference point for the Record of Issue, Executive Summary and Study Limitations sections as and when they might be required. Therefore, the structure of this section must not be altered in any way.*

This document comprises the results of a literature review on relevant good practice guidance and standards on technical issues of environmental and social impact assessment (ESIA) in the mining sector. As the list comprises literature from many sources, the terminology and acronyms used to describe ESIA are variable and also include environmental assessment (EA), environmental impact assessment (EIA) and impact assessment (IA). Most of the documents referenced are freely available and accessible on the Internet. In a few cases, articles were identified but were only available for purchase; for these references, the hyperlinks to the abstract and the page with information for purchasing the full article are provided.

Due to the extensive diversity of subtopics within the realm of ESIA, the literature is broken down into various categories of types of impact assessment and related emerging issues such as gender and climate change. For several of these topics, there is no mining-specific guidance (such as in health impact assessment) or references, and so more generic guidance documents on the subject have been provided. As mining closure is an increasingly important topic, these references are separated out in the bibliography. This bibliography is not meant to represent an exhaustive list of references on the various topics included in it, but rather is meant to provide some of the more recent articles, papers, and reports that may provide a solid basis for anyone who is starting to investigate and research these areas of interest, particularly as they relate to large-scale mining development.

## 1.0 CLIMATE CHANGE AND IMPACT ASSESSMENT

- International Association for Impact Assessment & Netherlands Commission for Environmental Assessment. (2017). *Environmental assessment for climate smart decision making: Good practice cases*. [http://www.commissiener.nl/docs/mer/diversen/2017environmental-assessment-for-climate-smart-decision-making\\_good-practice-cases.pdf](http://www.commissiener.nl/docs/mer/diversen/2017environmental-assessment-for-climate-smart-decision-making_good-practice-cases.pdf)
- International Council of Mining and Minerals. (2019). *Adapting to a changing climate: Building resilience in the mining and metals industry*. [https://www.icmm.com/website/publications/pdfs/climate-change/191121\\_publication\\_climate\\_adaptation.pdf](https://www.icmm.com/website/publications/pdfs/climate-change/191121_publication_climate_adaptation.pdf)
- Ohsawa, T. & Duinker, P. (2014). Climate-change mitigation in Canadian environmental impact assessments. *Impact Assessment and Project Appraisal*, 32(3), 222–233. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.913761>
- Sparling, E., Byer, P., Cobb, P., & Auld, H. (2017). *Best practices for consideration of the effects of climate change in project-level environmental assessments*. Ontario Centre for Climate. <http://www.climateontario.ca/doc/reports/BestPracticesForConsiderationOfEffectsOfClimateChangeInProjectEAs2017.pdf>

## 2.0 CULTURAL / HERITAGE IMPACT ASSESSMENT

- Davis, M. J., Gdaniec, K. L. A., Brice, M., & White, L. (2004). *Mitigation of construction impact on archaeological remains. Volume 1: Main report*. Museum of London Archaeology Service for English Heritage. <https://www.mola.org.uk/sites/default/files/downloads/Mitigation%20of%20construction%20impact%20A4.pdf>
- Hanna, P., Vanclay, F., Langdon, E. J., & Arts, J. (2016). The importance of cultural aspects in impact assessment and project development: Reflections from a case study of a hydroelectric dam in Brazil. *Impact Assessment and Project Appraisal*, 34(4), 306–318. <https://www.tandfonline.com/doi/full/10.1080/14615517.2016.1184501>
- International Finance Corporation & World Bank Group. (2012). *Performance Standard 8: Cultural heritage*. [https://www.ifc.org/wps/wcm/connect/a02b1f32-1d64-4454-a7c4-aac49c9daa04/PS8\\_English\\_2012.pdf?MOD=AJPERES&CVID=jiVQJ7k](https://www.ifc.org/wps/wcm/connect/a02b1f32-1d64-4454-a7c4-aac49c9daa04/PS8_English_2012.pdf?MOD=AJPERES&CVID=jiVQJ7k)
- Partal, A. & Dunphy, K. (2016). Cultural impact assessment: A systematic literature review of current methods and practice around the world. *International Association for Impact Assessment*, 34(1), 1–13. <https://www.tandfonline.com/doi/full/10.1080/14615517.2015.1077600>
- Rio Tinto. (2018). *Why cultural heritage matters: A resource guide for integrating cultural heritage management into Communities work at Rio Tinto*. [https://www.csr.uq.edu.au/media/docs/168/Why\\_Cultural\\_Heritage\\_Matters.pdf](https://www.csr.uq.edu.au/media/docs/168/Why_Cultural_Heritage_Matters.pdf)

## 3.0 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS (ESMP)

- André, P., Claude, E. & Delisle, Revéret, J.-P. (2010). *L'évaluation des impacts sur l'environnement : processus, acteurs et pratique pour un développement durable* [in French]. Presses internationales Polytechnique.

- Arnold, L. & Hanna, K. (2017). *Best practices in environmental assessment: Cases studies and application to mining* (Report 2017-003). Canadian International Resources and Development Institute. <http://ok-cear.sites.olt.ubc.ca/files/2018/01/Best-Practices-in-Environmental-Assessment.pdf>
- Australian Government, Department of the Environment. (2014). *Environmental management plan guidelines*. Commonwealth of Australia. <https://www.environment.gov.au/system/files/resources/21b0925f-ea74-4b9e-942e-a097391a77fd/files/environmental-management-plan-guidelines.pdf>
- Australian Government. (2016). Assessing the risk posed by AMD. In *Preventing acid and metalliferous drainage: Leading practice sustainable development program for the mining industry* (pp. 78–96). <https://www.industry.gov.au/sites/default/files/2019-04/lpsdp-preventing-acid-and-metalliferous-drainage-handbook-english.pdf>
- British Columbia Mining Law Reform, University of Victoria Environmental Law Centre. (2019). *A plan of action for change: Summary recommendations*. <https://reformbcmining.ca/wp-content/uploads/2019/05/BCMLR-Summary-Recommendations.pdf>
- Côté, G., Waaub, J.-P. & Mareschal, B. (2015, April). *Évaluation des impacts sur l'environnement en péril : La nécessité d'agir* [in French]. Les Cahiers du GÉRAD. Université de Montréal. [https://www.crcde.ulaval.ca/sites/crcde.ulaval.ca/files/eie\\_en\\_peril\\_la\\_necessite\\_dagir.pdf](https://www.crcde.ulaval.ca/sites/crcde.ulaval.ca/files/eie_en_peril_la_necessite_dagir.pdf)
- Environmental Law Alliance Worldwide. (2010). *Guidebook for evaluating mining project EIAs*. <https://www.elaw.org/files/mining-eia-guidebook/Full-Guidebook.pdf>
- Freudenburg, W. & Olsen, D. (1983). Public interest and political abuse: Public participation in social impact assessment. *Journal of the Community Development Society*, 14(2), 67–82.
- Gariépy, M., Domon, G. & Jacob, P. (1990). *Développement viable et évaluation environnementale en milieu urbain*. Université de Montréal.
- Hanna, K. S. (2015). Environmental impact assessment: Process and efficacy. In K.S. Hanna (Ed.), *Environmental impact assessment: Practice and participation* (3rd ed.). Oxford University Press Canada.
- International Association for Impact Assessment. (2018). *IAIA Special Symposium: Improving impact assessment and management in the mining sector*. <https://www.iaia.org/symposia.php>
- International Council of Mining and Minerals. (n.d.). *A practical guide to catchment-based water management*. [https://www.icmm.com/website/publications/pdfs/water/practical-guide-catchment-based-water-management\\_en](https://www.icmm.com/website/publications/pdfs/water/practical-guide-catchment-based-water-management_en)
- International Council of Mining and Minerals. (n.d.). *Good practice guidance for mining and biodiversity*. <https://www.cbd.int/development/doc/Minining-and-Biodiversity.pdf>
- International Council of Mining and Minerals. (2017). *A practical guide to consistent water reporting*. <https://www.tratamentodeagua.com.br/wp-content/uploads/2017/06/relatorios-de-agua-icmm.pdf>
- International Network for Acid Prevention. (2014). *Global acid rock drainage guide*. <http://www.gardguide.com/images/5/5f/TheGlobalAcidRockDrainageGuide.pdf>
- Kvam, R. (2017). *Meaningful stakeholder consultation*. <https://publications.iadb.org/en/meaningful-stakeholder-consultation>
- Lacoste, Paul, et al. (1988). *L'évaluation environnementale: Une pratique à généraliser, une procédure d'examen à parfaire* [in French]. Comité d'examen sur la procédure d'évaluation environnementale.

- Martel, J.-M., & Rousseau, A. (1993). *Cadre de référence d'une démarche multicritère de gestion intégrée des ressources en milieu forestier* [in French]. Sous-comité socio-économique de la gestion intégrée des ressources.
- Maystre, L.-Y., Pictet, J., & Simos, J. (1994). *Méthodes multicritères ÉLECTRE* [in French]. Presses polytechniques et universitaires romandes
- Ortolano, L., & Shepherd, A. (1995). Environmental impact assessment: Challenges and opportunities. *Impact Assessment*, 13(1), 3–30.
- Robertson, S. A., Blackwell, B. D., & McFarlane, J. A. (2017). The viability of remote mining communities: Insights from community perceptions and employment impact assessments. *Impact Assessment and Project Appraisal*, 35(4), 310–324. <https://www.tandfonline.com/doi/full/10.1080/1461551720171354640>
- Status of Women Canada. (2019). *Government of Canada's approach: Gender-based analysis plus*. <https://cfc-swc.gc.ca/gba-ac/s/approach-approche-en.html>
- Sustainable Industrial Areas. (n.d.). *Disaster risk management: Awareness and Preparedness for Emergencies at Local Level (APELL)*. <https://www.sia-toolbox.net/solution/disaster-risk-management-awareness-and-preparedness-emergencies-local-level-apell>.
- YSI Environmental. (2015). *Using real-time telemetry for ecological monitoring of coastal wetlands* (Application Note A578). <https://www.ysi.com/File%20Library/Documents/Application%20Notes/A578-Using-Real-time-Telemetry-for-Ecological-Monitoring-of-Coastal-Wetlands.pdf>

## 4.0 GENDER AND IMPACT ASSESSMENT

- Clow, B., Stienstra, D., Baikie, G., Stinson, J., & Manning, S. (2016). *Gender-based analysis meets environmental assessment: Aligning policy mechanisms to address the resource development in Canada's North*. Canadian Research Institute for the Advancement of Women. <http://fnn.criaw-icref.ca/images/userfiles/files/GBAMeetsEnviroAssessPP.pdf>
- Hill, C., Madden, C., & Collins, N. (2017). *A guide to gender impact assessment for the extractive industries*. Australian Aid, Oxfam Australia. [https://www.oxfam.org.au/wp-content/uploads/2017/04/2017-PA-001-Gender-impact-assessments-in-mining-report\\_FA\\_WEB.pdf](https://www.oxfam.org.au/wp-content/uploads/2017/04/2017-PA-001-Gender-impact-assessments-in-mining-report_FA_WEB.pdf)
- Manning, S., Nash, P., Stienstra, D., & Stinson, J. (2018). *Strengthening impact assessment for Indigenous women*. Canadian Research Institute for the Advancement of Women. <http://fnn.criaw-icref.ca/images/userfiles/files/Strengthening%20impact%20assessments%20for%20Indigenous%20women.pdf>
- Prospectors and Developers Association of Canada. (2019). *Gender diversity and inclusion: A guide for explorers*. <https://www.pdac.ca/priorities/responsible-exploration/gender/gender-diversity-and-inclusion-guidance-document>
- Rio Tinto. (2009). *Why gender matters: A resource guide for integrating gender considerations into Communities work at Rio Tinto*. <https://www.extractiveshub.org/servefile/getFile/id/1182>

## 5.0 HEALTH IMPACT ASSESSMENT

Asian Development Bank (ADB). (2018). *Health impact assessment: A good practice sourcebook*. <https://www.adb.org/documents/health-impact-assessment-sourcebook>

Byambaa, T., Wagler, M., & Janes, C. R. (2014). Bringing health impact assessment to the Mongolian resource sector: A story of successful diffusion. *Impact Assessment and Project Appraisal*, 32(3), 241–245. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.913347>

International Council on Mining & Metals. (2010). *Good practice guidance on health impact assessment*. <https://www.icmm.com/en-gb/publications/health-and-safety/good-practice-guidance-on-health-impact-assessment>

International Finance Corporation (IFC). (2009). *Introduction to health impact assessment*. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_handbook\\_healthimpactassessment\\_wci\\_1319578475704](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_healthimpactassessment_wci_1319578475704)

IPIECA & International Association of Oil and Gas Producers. (2016). *Health impact assessment: A guide for the oil and gas industry*. <http://www.ipieca.org/resources/good-practice/health-impact-assessment-a-guide-for-the-oil-and-gas-industry/>

Quigley, R., den Broeder, L., Furu, P., Bond, A., Cave, B., & Bos, R. (2006). *Health impact assessment: International best practice principles* (Special Publication Series No. 5). International Association for Impact Assessment. [https://www.iaia.org/uploads/pdf/SP5\\_3.pdf](https://www.iaia.org/uploads/pdf/SP5_3.pdf)

## 6.0 HUMAN RIGHTS IMPACT ASSESSMENT (HRIA)

Danish Institute for Human Rights. (2016). *Human rights impact assessment guidance and toolbox: Road testing version*. <https://www.humanrights.dk/business/tools/human-rights-impact-assessment-guidance-and-toolbox>

Kemp, D., & Vanclay, F. (2013). Human rights and impact assessment [Guest editorial]. *Impact Assessment and Project Appraisal*, 31(2) 85–167. <https://www.tandfonline.com/toc/tiap20/31/2?nav=tocList>

Volume 31, issue 2 (2013) of *Impact Assessment and Project Appraisal* is entirely dedicated to articles related to HRIA, and includes the following papers:

- Kemp, D. & Vanclay, F., Human rights and impact assessment: Clarifying the connections in practice.
- Graetz, G. & Franks, D. M., Incorporating human rights into the corporate domain: Due diligence, impact assessment and integrated risk management.
- Harrison, J., Establishing a meaningful human rights due diligence process for corporations: Learning from experience of human rights impact assessment.
- Watson, G., Tamir, I., & Kemp, B., Human rights impact assessment in practice: Oxfam's application of a community-based approach.
- Boele, R. & Crispin, C., What direction for human rights impact assessments?
- Thorben Sauer, A. & Podhora, A., Sexual orientation and gender identity in human rights impact assessment.
- Hanna, P. & Vanclay, F., Human rights, Indigenous peoples and the concept of Free, Prior and Informed Consent.

- Collins, N. & Woodley, A., Social water assessment protocol: A step towards connecting mining, water and human rights.

Goldcorp & On Common Ground. (2010). *Human rights assessment of Goldcorp's Marlin Mine*. <https://www.business-humanrights.org/en/human-rights-assessment-of-goldcorps-marlin-mine-in-guatemala-0%20?>

International Council on Mining & Metals. (2009). *Human rights in the mining & metals industry: Overview, management approach and issues*. <https://www.icmm.com/website/publications/pdfs/social-and-economic-development/8331.pdf>

International Council on Mining & Metals. (2009). *Human rights in the mining & metals industry: Handling and resolving local level concerns and grievances*. <https://www.icmm.com/website/publications/pdfs/social-and-economic-development/691.pdf>

Rio Tinto. (2013). *Why human rights matter: A resource guide for integrating human rights into Communities and Social Performance work at Rio Tinto*. <https://mc-56397411-4872-452d-b48e-428890-cdn-endpoint.azureedge.net/-/media/Content/Documents/Sustainability/Corporate-policies/RT-Why-human-rights-matter-EN.pdf?rev=e5aa94269d4c43269b16c1313d9eee69>

United Nations. (2011). *Guiding principles on business and human rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*. [https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr\\_en.pdf](https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf)

## 7.0 INDIGENOUS PEOPLE AND IMPACT ASSESSMENT

Food and Agriculture Organization of the United Nations. (2016). *Free Prior and Informed Consent: An Indigenous Peoples' right and a good practice for local communities. Manual for project practitioners*. <http://www.fao.org/3/a-i6190e.pdf>

Gwich'in Council International. (2018). *Impact assessment in the Arctic: Emerging practices of Indigenous-led review*. [https://gwichincouncil.com/sites/default/files/Firelight%20Gwich%27in%20Indigenous%20led%20review\\_FINAL\\_web\\_0.pdf](https://gwichincouncil.com/sites/default/files/Firelight%20Gwich%27in%20Indigenous%20led%20review_FINAL_web_0.pdf)

Hanna, P & Vanclay, F. (2013). Human rights, Indigenous peoples and the concept of Free, Prior and Informed Consent. *Impact Assessment and Project Appraisal*, 31(2), 146–157. <https://www.tandfonline.com/doi/full/10.1080/14615517.2013.780373>

International Council on Mining & Metals. (2010). *Indigenous peoples and mining good practice guide*. <https://www.icmm.com/en-gb/publications/mining-and-communities/indigenous-peoples-and-mining-good-practice-guide>

## 8.0 LEGAL FRAMEWORKS

Cameron, P. D., & Stanley, M. C. (2017). *Oil, gas, and mining: A sourcebook for understanding the extractive industries*. World Bank. doi:10.1596/978-0-8213-9658-2. Licence: Creative Commons Attribution CC BY 3.0 IGO.

European Commission. (2017). *Environmental Impact Assessment of Projects, Guidance on Screening* (Directive 2011/92/EU as amended by 2014/52/EU). European Union.

Global Legal Group. (2019). *International comparative legal guides*. Mining law 2020 (7th ed.) [https://www.lawsonlundell.com/media/news/596\\_Canada%20Chapter%20The%20International%20Comparative%20Legal%20Guide%20to%20Mining%20Law%202020.pdf](https://www.lawsonlundell.com/media/news/596_Canada%20Chapter%20The%20International%20Comparative%20Legal%20Guide%20to%20Mining%20Law%202020.pdf)

Prieur, M. (2018). *Les indicateurs juridiques: Outils d'évaluation de l'effectivité du droit de l'environnement* [in French]. Institut de la Francophonie pour le Développement Durable. [https://www.ifdd.francophonie.org/media/docs/publications/733\\_indicateur-juridique\\_web.pdf](https://www.ifdd.francophonie.org/media/docs/publications/733_indicateur-juridique_web.pdf)

## 9.0 MINE CLOSURE

Gorey, P., McHenry, M., Morrison-Saunders, A., Mtegha, H., & Doepel, D. (2016). Critical elements in implementing fundamental change in public environmental policy: Western Australia's mine closure and rehabilitation securities reform. *Australasian Journal of Environmental Management*, 23(4), 370–381. <https://www.tandfonline.com/doi/full/10.1080/14486563.2016.1179227>

International Council on Mining and Metals. (2019). *Integrated mine closure: Good practice guide* (2nd ed.). [https://www.icmm.com/website/publications/pdfs/closure/190107\\_good\\_practice\\_guide\\_web.pdf](https://www.icmm.com/website/publications/pdfs/closure/190107_good_practice_guide_web.pdf)

Morrison-Saunders, A., McHenry, M. P., Rita Sequeira, A., Gorey, P., Mtegha H., & Doepel, D. (2016). Integrating mine closure planning with environmental impact assessment: Challenges and opportunities drawn from African and Australian practice. *Impact Assessment and Project Appraisal*, 34(2), 117–128. <https://www.tandfonline.com/doi/full/10.1080/14615517.2016.1176407>

Nakazwe, M. (2017). Life beyond the glitz and glamour of mining: Strengthening the mine closure regime in Zambia. *Journal of Energy & Natural Resources Law*, 35(3), 325–348. <https://www.tandfonline.com/doi/full/10.1080/02646811.2017.1323520?scroll=top&needAccess=true>

Sales Rosa, J.C., Sánchez, L. E., & Morrison-Saunders, A. (2018). Getting to 'agreed' post-mining land use – An ecosystem services approach. *Impact Assessment and Project Appraisal*, 36(3), 220–229. <https://www.tandfonline.com/doi/full/10.1080/14615517.2018.1445175>

Sánchez, L. E., Silva-Sánchez, S. S., & Neri, A. C. (2014). *Guide for mine closure planning*. IBRAM <http://www.ibram.org.br/sites/1300/1382/00004552.pdf>

Srikanth, R. & Kristle Nathan, H.S. (2017). Towards sustainable development: Planning surface coal mine closures in India. *Contemporary Social Science: Journal of the Academy of Social Sciences*, 13(1), 30–43. <https://www.tandfonline.com/doi/full/10.1080/21582041.2017.1394484>

## 10.0 RESETTLEMENT AND LIVELIHOOD RESTORATION

Adam, A. B., Owen, J. R., & Kemp, D. (2015). Households, livelihoods and mining-induced displacement and resettlement. *The Extractive Industries and Society*, 2(3), 581–589. <https://doi.org/10.1016/j.exis.2015.05.002>

IFC Environment and Social Development Department. (2002). *Handbook for preparing a resettlement action plan*. International Finance Corporation. [https://www.ifc.org/wps/wcm/connect/ee19f150-f505-41db-891f-6ef5557195b6/ResettlementHandbook.PDF?MOD=AJPERES&CACHEID=ROOT\\_WORKSPACE-ee19f150-f505-41db-891f-6ef5557195b6-jkDOCR](https://www.ifc.org/wps/wcm/connect/ee19f150-f505-41db-891f-6ef5557195b6/ResettlementHandbook.PDF?MOD=AJPERES&CACHEID=ROOT_WORKSPACE-ee19f150-f505-41db-891f-6ef5557195b6-jkDOCR)

International Association for Impact Assessment. (2017). *IAIA Special Symposium: Resettlement and livelihoods*. <https://www.iaia.org/uploads/pdf/ResettlementManilaCompendium.pdf>

- Kemp, D., Owen, J. R., & Collins, N. (2017). Global perspectives on the state of resettlement practice in mining. *Impact Assessment and Project Appraisal*, 35(1), 22–33. <https://www.tandfonline.com/doi/full/10.1080/14615517.2016.1271544>
- Owen, J. R., Kemp, D. (2015). Mining-induced displacement and resettlement: A critical appraisal. *Journal of Cleaner Production*, 87, 478–488. <https://doi.org/10.1016/j.jclepro.2014.09.087>
- Rowan, M. (2017). Aligning resettlement planning and livelihood restoration with social impact assessment: A practitioner perspective. *Impact Assessment and Project Appraisal*, 35(1), 81–93. <https://www.tandfonline.com/doi/full/10.1080/14615517.2016.1271541>
- Smyth, E., Steyn, M., Esteves, A. M., Franks, D. M. & Vaz. K. (2015). Five ‘big’ issues for land access, resettlement and livelihood restoration practice: Findings of an international symposium. *Impact Assessment and Project Appraisal*, 33(3), 220–225. <https://www.tandfonline.com/doi/full/10.1080/14615517.2015.1037665>
- University of Queensland, Centre for Social Responsibility in Mining. (n.d.). *Mining Resettlement: A Research Initiative for Mining and Resettlement and Livelihoods*. <http://www.miningresettlement.org>
- Vanclay, F. (2017). Project-induced displacement and resettlement: From impoverishment risks to an opportunity for development? *Impact Assessment and Project Appraisal*, 35(1), 3–21. <https://www.tandfonline.com/doi/full/10.1080/14615517.2017.1278671>

## 11.0 SOCIAL IMPACT ASSESSMENT (SIA)

- Bice, S. (2014). Bridging corporate social responsibility and social impact assessment. *Impact Assessment and Project Appraisal*, 33(2), 160–166. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.983710>
- Compliance Advisor Ombudsman. (2016). *Grievance mechanism toolkit: A practical guide for implementing grievance mechanisms in different sectors*. <https://www.cao-grm.org/>
- Esteves, A. M., Franks, D., & Vanclay, F. (2012). Social impact assessment: The state of the art. *Impact Assessment and Project Appraisal*, 30(1), 34–42. <https://www.tandfonline.com/doi/full/10.1080/14615517.2012.660356>
- Esteves, A. M. & Barclay, M. (2011). Enhancing the benefits of local content: Integrating social and economic impact assessment into procurement strategies. *Impact Assessment and Project Appraisal*, 29(3), 205–215. <https://www.tandfonline.com/doi/abs/10.3152/146155111X12959673796128>
- Franks, D., Fidler, C., Brereton, D., Vanclay, F., & Clark, P. (2009). *Leading practice strategies for addressing the social impacts of resource developments*. Centre for Social Responsibility in Mining. [http://www.socialimpactassessment.com/documents/Franks\\_etal\\_LeadingPracticeSocialImpacts\\_20091.pdf](http://www.socialimpactassessment.com/documents/Franks_etal_LeadingPracticeSocialImpacts_20091.pdf)
- International Association for Impact Assessment (IAIA). (2015). *Social impact assessment: Guidance for assessing and managing the social impacts of projects*. [https://www.iaia.org/uploads/pdf/SIA\\_Guidance\\_Document\\_IAIA.pdf](https://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf)
- International Finance Corporation & On Common Ground. (2010). *International lessons of experience and best practice in participatory monitoring in extractive industry projects: Guidance note on designing participatory monitoring programs*. <https://www.commddev.org/wp-content/uploads/2015/05/Guidance-Note-on-Participatory-Monitoring-and-Extractive-Industries.pdf>

- International Finance Corporation & World Bank Group. (2009). *Projects and people. A handbook for addressing project-induced in-migration*. <https://commdev.org/pdf/publications/In-Migration-Handbook.pdf>
- IPIECA. (2015). *Community grievance mechanisms in the oil and gas industry: A manual for implementing operational-level grievance mechanisms and designing corporate frameworks*. <http://www.ipieca.org/resources/good-practice/community-grievance-mechanisms-in-the-oil-and-gas-industry/>
- Mancini, L. & Sala, S. (2018). Social impact assessment in the mining sector: Review and comparison of indicator frameworks. *Resources Policy*, 57, 98 –111. <https://doi.org/10.1016/j.resourpol.2018.02.002>
- New South Wales Department of Planning and Environment. (2017). *Social impact assessment guideline: For State significant mining, petroleum production and extractive industry development*. [https://www.planning.nsw.gov.au/~/\\_media/Files/DPE/Guidelines/social-impact-assessment-guideline-2017-09.ashx](https://www.planning.nsw.gov.au/~/_media/Files/DPE/Guidelines/social-impact-assessment-guideline-2017-09.ashx)
- Parsons, R., Everingham, J., & Kemp, D. (2019). Developing social impact assessment guidelines in a pre-existing policy context. *Impact Assessment and Project Appraisal*, 37, 114–123. <https://www.tandfonline.com/doi/full/10.1080/14615517.2018.1485612>
- Sincovich, A., Gregory, T., Wilson, A. & Brinkman, S. (2018). The social impacts of mining on local communities in Australia. *Rural Society*, 27(1), 18–34. <https://www.tandfonline.com/doi/full/10.1080/10371656.2018.1443725?src=recsys>
- Smyth, E. & Vanclay, F. (2017). The social framework for projects: A conceptual but practical model to assist in assessing, planning and managing the social impacts of projects. *Impact Assessment and Project Appraisal*, 35, 65–80. <https://www.tandfonline.com/doi/full/10.1080/14615517.2016.1271539>
- Vanclay, F., Esteves, A., Aucamp, I., & Franks, D. (2015). *Social impact assessment: Guidance for assessing and managing the social impacts of projects*. International Association for Impact Assessment. [https://www.iaia.org/uploads/pdf/SIA\\_Guidance\\_Document\\_IAIA.pdf](https://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf)

## 12.0 SOCIAL LICENCE TO OPERATE (SLO)

- Browne, A.L., Stehlik, D., & Buckley, A. (2011). Social licences to operate: For better not for worse; for richer not for poorer? The impacts of unplanned mining closure for “fence line” residential communities. *International Journal of Justice and Sustainability*, 16(7), 707–725. <https://www.tandfonline.com/doi/full/10.1080/13549839.2011.592183>
- Brueckner, M., Durey, A., Pforr, C., & Mayes, R. (2014). The civic virtue of developmentalism: On the mining industry’s political licence to develop Western Australia. *Impact Assessment and Project Appraisal*, 32(4), 315–326. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.929784>
- Dare, M. L., Schirmer, J., & Vanclay, F. (2014). Community engagement and social licence to operate. *Impact Assessment and Project Appraisal*, 32(3), 188–197. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.927108>
- Demajorovic, J., Campos Lopes, J., & Frezzatti Santiago, A. L. (2019). The Samarco dam disaster: A grave challenge to social licence to operate discourse. *Resources Policy*, 61, 273–282. <https://www.sciencedirect.com/science/article/abs/pii/S0301420718302629>

- Harvey, B. & Bice, S. (2014). Social impact assessment, social development programmes and social licence to operate: Tensions and contradictions in intent and practice in the extractive sector. *Impact Assessment and Project Appraisal*, 32(4), 327–335. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.950123>
- Martinez, C. & Franks, D. M. (2014). Does mining company-sponsored community development influence social licence to operate? Evidence from private and state-owned companies in Chile. *Impact Assessment and Project Appraisal*, 32(4), 294–303. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.929783>
- Ruckstuhl, K., Thompson-Fawcett, M., & Rae, H. (2014). Māori and mining: Indigenous perspectives on reconceptualising and contextualising the social licence to operate. *Impact Assessment and Project Appraisal*, 32(4), 304–314. <https://www.tandfonline.com/doi/full/10.1080/14615517.2014.929782>
- Sícoli Póslleman, C. & Sallan, J. M. (2019). Social licence to operate in the mining industry: The case of Peru. *Impact Assessment and Project Appraisal*, 37(6), 480–490. <https://www.tandfonline.com/doi/full/10.1080/14615517.2019.1585142?scroll=top&needAccess=true>

## 13.0 OTHER USEFUL RESOURCES

- Bice, S. (2016). *Responsible mining: Key principles for industry integrity*. Routledge.
- Franks, D. (2016). *Mountain movers: Mining, sustainability, and the agents of change*. Routledge.
- International Council of Mining and Minerals. (2015). *Demonstrating value: A guide to responsible sourcing*. <https://www.icmm.com/website/publications/pdfs/responsible-sourcing/demonstrating-value>

## 14.0 WEBSITES

There are many websites available related to mining, ESIA, and related topics. Below is a list of a few of the key associations' websites, along with a research institute in Australia that is renowned for its work on socially responsible mining.

- International Association for Impact Assessment (IAIA): [www.iaia.org](http://www.iaia.org)
- International Association for Public Participation (IAP2): <http://www.iap2.org>
- International Council on Mining and Metals (ICMM): [www.icmm.com](http://www.icmm.com)
- Mining Association of Canada (MAC): [www.mining.ca](http://www.mining.ca)
- Netherland Commission for Environmental Assessment: [www.eia.nl/en](http://www.eia.nl/en)
- Prospectors and Developers Association of Canada (PDAC): [www.pdac.ca](http://www.pdac.ca)



**IGF**

INTERGOVERNMENTAL FORUM  
on Mining, Minerals, Metals and  
Sustainable Development