UN environment programme

Sustainability Reporting in the Mining Sector

Current Status and Future Trends

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List of Acronyms

Acronym	Meaning
3TG	tin, tantalum, tungsten and gold
ASI	Aluminium Stewardship Initiative
ASM	Artisanal and Small-scale Mining
ASX	Australian Stock Exchange
BC	Bettercoal
BMV	Bolsa Mexicana de Valores (Mexican Stock Exchange)
BR	Business Responsibility
CSC	Cornerstone Standards Council
CSR	Corporate Social Responsibility
DRC	Democratic Republic of Congo
EESG	Economic, Environmental, Social and Governance
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EPF	Environmental Protection Fund
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
ESTMA	Extractive Sector Transparency Measures Act
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FM	ARM Fairmined
FS	Fair Stone
FT	Fairtrade Gold and Silver
GDP	Gross Domestic Product
GHG	greenhouse gases
GoF47	Group of Friends of Paragraph 47
GRI	Global Reporting Initiative
ICMM	International Council on Mining and Metals
IFC	International Finance Corporation
IGF	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
IIRC	International Integrated Reporting Council
IISD	International Institute for Sustainable Development
IRMA	Initiative for Responsible Mining Assurance
JSE	Johannesburg Stock Exchange
KPI	Key Performance Indicator
LPRM	Local Procurement Reporting Mechanism
LSM	large-scale mining
MAC	Mining Association of Canada

Acronym	Meaning
MNEs	Multinational Enterprises
MPF	Mining Policy Framework
NSC	Natural Stone Council
ODC	Open Data Charter
OECD	Organisation for Economic Co-operation and Development
OGD	Open Government Data
PRI	Principles for Responsible Investment
RBC	Responsible Business Conduct
RGMPs	Responsible Gold Mining Principles
RJC	Responsible Jewellery Council
RMF	Responsible Mining Foundation
RMI	Responsible Mining Index
SASB	Sustainability Accounting Standards Board
SBGA	Swiss Better Gold Association
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SEBI	Securities and Exchange Board of India
SEC	Securities and Exchange Commission
SME	Small and Medium-sized Enterprise
SOE	State-Owned Enterprise
TCFD	Task-Force on Climate-related Financial Disclosures
TFT	The Forest Trust
TSF	Tailing Storage Facilities
TSM	Towards Sustainable Mining
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
VSI	Voluntary Sustainability Initiative
WGC	World Gold Council
XF	Xertifix

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Key Messages

- The management of environmental and social aspects, and sustainability reporting of mining companies is currently not meeting the expectations of interested stakeholders, notably communities affected by mining operations and investors.
- In general, governments have not specifically targeted sustainability reporting of mining sector but the sector often falls under wider policies, including regulations that address sustainability reporting of large or publicly listed companies. Governments that have taken concrete steps to address the sustainability and associated reporting of the sector include South Africa and Canada.
- Governments have an important role to play in enhancing the sustainability reporting of mining companies operating in their jurisdictions, such as through policies or guidance on what environmental and social aspects are most important in the local and national context and support the attainment of the Sustainable Development Goals (SDGs).
- The COVID-19 pandemic is disproportionally affecting vulnerable communities, including around mining operations and disrupting supply chains. Mining companies can support the economies of affected communities such as through local procurement (supports SDG 8), which can also be beneficial in a situation such as COVID-19 that puts limits on the effectiveness of international supply chains.
- Mining companies and governments can consider modern technologies available for real time monitoring of social and environmental impact of mining operations. This can help in transferring information from mining companies to the government, such as for SDG reporting, but also to other stakeholders such as local communities. Open Data Principles are an emerging tool for governments to adopt for enhancing and streamlining the sharing of information.
- There is increased focus on the environmental and social impacts of the wider mineral supply chain, including the operations of trading companies. Several Voluntary Sustainability Initiatives (VSIs) have been formed to enhance the sustainability and transparency of the different actors of the mineral supply chain. Governments can consider using VSIs when designing relevant policies in this area.
- Sustainability reporting of mining companies needs to further integrate the SDGs. Governments have an important role to play to provide mining companies with the relevant information and data relating to national SDG priorities and actions plans, to inform and focus the mining companies' sustainability reporting.
- Governments can play a role in enhancing the link between Environmental (and social) Impact Assessment (EIAs) and the information reported in sustainability reporting of mining companies.
- When evaluating the feasibility of mining projects, governments should consider, in an integrated way, the economic, environmental and social impacts of mining projects. At present, economic factors are often considered separately and final decisions fail to adequately weigh in environmental and social aspects of a proposed mine.

Executive Summary

Metals and minerals are at the core of human and economic development. Their use is expected to increase substantially in the coming decades in light of a growing world population. Metals and minerals are also essential for the clean energy transition to meet the urgent climate change challenge, such as for the production of batteries for cars, solar panels and wind turbines. While the operations of the large-scale mining sector are essential to maintain and increase economic development around the world the sector also faces serious challenges related to its significant environmental and social impact. Environmental and social impacts of the sector include greenhouse gas emissions, toxic waste that can negatively impact soil and water quality, unsafe working conditions and negative impacts on vulnerable groups such as women and indigenous people. The vulnerability of marginal groups, such as women working in artisanal and small-scale mining have been further exacerbated with the COVID-19 pandemic.

Frequent accidents of the sector have increased the pressure on large mining groups to improve the management and transparency of their environmental and social impacts. A recent example is the tragic collapse of the Brumadinho tailings dam in Brazil in January 2019, which led to 270 deaths and devastating environmental damage. New mining projects, notably in resource-rich developing countries, are often met with opposition by NGOs and local communities who fear the projects will not provide the economic benefits to outweigh the associated risks to the health and wellbeing of the affected communities and the environment. This prevailing negative reception by NGOs and local communities lends credence to expressed fears and discontent owing to the material circumstances of communities where mining extraction takes place, since there is often no inclusive and participatory mining development, resulting in the erosion of mutual trust and livelihoods of affected communities.

Sustainability reporting is an important tool to transfer information on environmental, social, economic, as well as governance, and performance measures from mining companies to their stakeholders. In addition to supporting the implementation of a company's sustainability strategy, sustainability reporting can enable stakeholders of companies to monitor performance over time and identify where key risks and opportunities for improvements lie. Large mining groups report on their sustainability performance for various reasons, including to meet the requirements of national and EU regulations, respond to investor pressure, fulfil requirements of stock exchanges, and to maintain and strengthen their reputation and social license to operate. The current state of reporting of the mining sector has however been largely inadequate to meet the various stakeholders' information needs. An important challenge in achieving a higher level of environmental and social performance of the mining sector, is the lack of a global common vision for the sector in terms of what constitutes sustainable operations for mining, including Key Performance Indicators at the mine-site level. A clearer framework for the sustainability of the sector could help in further standardizing and improving sustainability reporting of mining companies, and could inform relevant government policies on reporting and related initiatives.

Although governments have been key drivers of corporate sustainability reporting through policies, CSR action plans and collaborative initiatives with businesses, they have generally not targeted their policies and initiatives specifically at the mining companies operating in their jurisdictions. South Africa and Canada are examples of an exception to this trend, as they have been proactive in specifically targeting the mining sector through various policy instruments and initiatives, which consider the particular context of the sector in their countries. As outlined through the country examples in this report, there are many ways of designing policies and initiatives to enhance the transparency of the mining sector but it is clear that further efforts at the government level are needed. It is essential that governments consider their larger agendas for sustainable development, and the particular challenges faced by the mining companies in their countries when defining the way forward to enhance the sector's sustainability and transparency. Government engagement with mining companies and other relevant stakeholders is also an important element for success.

One common issue with the sustainability reporting of the large mining groups, is that they generally focus their reporting at the corporate level (as required by the most commonly used reporting framework of the sector, the GRI Standards) and do not disclose more granular information at the level of the mines that they operate. In an effort to address this challenge, the focus on sustainability performance and reporting at the mine-site level is being encouraged and supported by several national and international initiatives, including the Responsible Mining Foundation, the Mining Association of Canada's Towards Sustainable Mining program, the International Council for Mining and Metals and the Initiative for Responsible Mining Assurance. These initiatives, and others, also place an increasing focus on the third-party verification (assurance) of the sustainability performance disclosure published by mining companies, as assurance is imperative to enhance the credibility of the disclosed information vis a vis their stakeholders.

An increasing focus on the sustainability performance of mining companies at the mine-site level is also being driven by demands from production companies that seek to ensure that the material they use is responsibly sourced. This increasing interest in sustainability issues by (mainly large) production companies has been triggered by the growing sustainability awareness of consumers who want to limit the environmental and social impacts of the products they buy and use. This is generally referred to as 'responsible mineral sourcing'. Various Voluntary Sustainability Initiatives (VSIs) have been established in recent years to help increase the understanding and visibility of the sustainability impacts throughout the complex mineral supply chain. These initiatives are requiring enhanced information sharing of the different actors of the supply chain, including mining companies at which level the sustainability risks are most elevated. Other key parts of the supply chain, where enhanced transparency is needed, include smelters and refiners as well as traders of minerals and metals. Governments have an important role to play in enhancing the sustainability and transparency in the mineral supply chain, for example through requirements for increased transparency in the area of trading of minerals and metals. Governments can also engage with VSIs operating in their jurisdictions to advance solutions to mutual challenges, such as through collaborative initiatives and reference to VSIs in policies.

The Sustainable Development Goals (SDGs) adopted by the world's governments in 2015 provide a unique opportunity and context for collaboration between governments and the mining sector to establish what environmental and social challenges are most essential for the companies to focus on in their sustainability strategies, management and reporting. The activity of mining relates to all of the 17 SDGs to different extents. Examples of particularly relevant SDGs include SDG 8 on decent work and economic growth and SDG 12 on responsible consumption and production. Although reporting on the SDGs is in the hands of governments, businesses such as mining companies have a key role to play in enhancing their sustainability performance to minimize their negative impacts and maximizing their contribution to achieving the SDGs.

In addition, governments have an opportunity to make better use of Environmental Impact Assessments (EIAs) to inform what areas should be of key focus in the reporting of mining companies at the level of the mine-site. The Extractive Industries Transparency Initiative (EITI), works with governments around the world to enhance the transparency of the extractives sector, including mining companies. The EITI reporting by governments, which is required by the EITI Standard, is primarily focused on the transparency of payments from extractive (such as mining) companies to the government but has increasingly started to include information related to environmental issues. This interesting development may bring future opportunities for enhanced transparency and collaboration between governments and mining companies that may help enhance the link between EIAs and sustainability reporting at the mine-site level.

One of the challenges facing large mining groups is identifying how to effectively communicate their performance to different stakeholders, across several countries. For it to be of use to stakeholders such as host-communities, NGOs and investors, the reporting needs to move from the global corporate level to a more granular, mine-site level. Companies need to adapt their communication to their many stakeholder groups and pay particular attention to the needs of host-communities. Sudden and unpredictable events such as the COVID-19 pandemic further enhance the need for targeted and frequent communication, including between a mining company and its suppliers and customers. Modern technology now allows for real time monitoring of environmental and social indicators, which could be an option for some mining

companies. Through this technology community members could for example monitor the level of water and air quality at the mine-site and the information could also be used to fulfill eventual government reporting requirements in areas such as greenhouse gas emissions or waste management.

Another interesting area that is receiving attention from mining companies and governments alike is local procurement. Pursuing local procurement can bring about economic benefits for host-communities, through supporting local businesses which also creates jobs. Having a strong local supplier base may also help in facing situations where disruptions in international supply chains occur for example in the event of a pandemic such as COVID-19. The initiative Mining Shared Value has issued a specific reporting guidance for local procurement of mining companies, the *Mining Local Procurement Reporting Mechanism* (LPRM). The LPRM outlines the key disclosures that mining companies should include in their reporting on local procurement and it is also meant as a tool for governments and other stakeholders for which the enhancement of local procurement is important.

This report provides a comprehensive overview of the status of sustainability reporting in the large-scale mining sector with a specific focus on how governments can further support the efforts of the sector in advancing their sustainability practices and reporting. The report includes a number of examples of government initiatives, both in countries of the Group of Friends of Paragraph 47 as well as other countries where the mining industry is well established. The report offers recommendations to governments on how to further support the sustainability performance of the mining companies operating in their jurisdictions and more particularly how to support their sustainability reporting efforts. Other recommendations are also addressed to mining companies and other stakeholders.

Foreword - UNEP

At the time of writing, the effects of the COVID-19 pandemic are still unfolding and the economic, social and environmental impacts are yet to be fully realized. Although the years to come will bring challenges and difficulties, notably for vulnerable communities, there will also be new opportunities for governments to "build back better" and strengthen the protection of the health of their citizens and the environment. While addressing the immediate challenges of COVID-19 governments must also continue their urgent efforts to address climate change and, more broadly, their work to meet the Sustainable Development Goals (SDGs) by 2030.

Further to being at the center of human and economic development, minerals and metals are key components of clean energy technologies. The importance of the mining sector to the energy transition and the need for advancing the sector's environmental responsibility and transparency is highlighted in the resolution on Mineral Resource Governance adopted at the 4th session of the UN Environment Assembly (UNEA-4). In this context, UNEP has an important role to play in supporting member states in advancing the sustainability of the mining sector and its contribution to meeting the SDGs.

The mining sector and the mineral supply chain have been severely impacted by the COVID-19 pandemic. The current crisis could however act as an unprecedented opportunity to achieve the objective of turning the mining sector into an economically, socially and environmentally sustainable sector; and of transforming it into an engine for sustainable development. Including the mining sector in the government recovery or "build back better" plans will be fundamental to frame its pathway to advancing the global sustainability agenda. In recovering from the shock of the crisis, mining companies may need to rethink their supply chains, strengthen their involvement with local economies and enhance their resilience to meet future challenges in the areas of health and safety and environmental management. Such actions could also help make the sector more attractive to the investment and finance communities given the growing importance of sustainable investments and financing globally.

Sustainability reporting is an important tool for gradually improving the management of the sustainability impacts of mining companies and their transparency vis-a-vis stakeholders. When effectively applied the process of reporting allows for greater visibility of key sustainability impacts and insight into a company's performance against set targets. However, sustainability reporting of globally operating mining companies is generally not meeting the expectations of their stakeholders. Amongst shortcomings of their reporting is the lack of details on the sustainability impacts of mining projects on local communities and the absence of contextual information, such as how the reported data links to national sustainability priorities and plans for the SDGs.

Governments are well positioned to provide such context and can assist mining companies in identifying where risks and opportunities lie in terms of national sustainability, including SDG, priorities. In addition, opportunities for enhancing the monitoring and reporting of sustainability performance of the sector lie in areas such as adopting new technologies for real-time monitoring of environmental and social impacts. A collaborative effort between mining companies, governments and communities will be an important success factor in adapting to current and emerging needs for enhanced sustainability, accountability and transparency in the post-COVID-19 era.

This publication is developed by UNEP, through its Extractives Hub, with the support of the Group of Friends of Paragraph 47, a consortium of governments promoting effective corporate sustainability reporting. The publication provides recommendations and inspiring examples to support and guide governments in enhancing sustainability reporting of mining companies. In particular, the publication supports governments in their efforts concerning SDG 12 on Responsible Consumption and Production and the implementation and follow up of the UNEA-4 resolution on Mineral Resource Governance.

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Director Economy Division
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Foreword - Group of Friends of Paragraph 47 (GoF47)

On behalf of the GoF47 allow me to use this opportunity to extend our sincere condolences to those who have lost loved ones due to the pandemic and to express solidarity with countries who are fighting COVID-19.

What is now termed the "Great Reset" for humanity, challenges us to rethink how we make decisions and how to develop and apply technology in new and meaningful ways for the benefit of all. This new way of working should be guided by insight and designed to encourage resilience, workplace innovation and inclusiveness, while ensuring environmental sustainability.

This pandemic comes at a critical moment in the *Decade of Action and Delivery* to implement the Sustainable Development Goals. COVID-19 provides us with the chance to move towards the world that the SDGs aim to create, putting the world on a healthier trajectory, one that is driven by new forms of productivity, greener and more sustainable consumption and production patterns, more resilient supply chains, more flexible working arrangements with less environmental impacts. Success depends on global collaboration between governments, business, civil society and all citizens.

The member governments of GoF47 share the common vision that corporate transparency and accountability are key elements of a well-functioning market economy. Furthermore, sustainability reporting is a key way to assume corporate responsibility and to demonstrate a company's long-term economic value.

The mining sector plays an important part in combating climate change, as far greater amounts of metals will be required for scaling up renewable energy technologies and infrastructure. Although mining is an economic driver in many countries, and modern society is highly dependent upon mined materials, the socio-economic benefits are not always fully derived. Mining companies, communities and governments need to work together to recognize the impact of sustainable mining practices can have on the environment and livelihoods. This publication *Sustainability Reporting in the Mining Sector – Current Status and Future Trends*, is hence opportune and very relevant.

As we seek a world free from the devastations of the global pandemic, we must commit to recover better by using this opportunity to build a more inclusive, sustainable and resilient world for future generations. The GoF47 strongly believes that sustainability reporting allows for this vision by creating value for all.

The recommendations of this report for policy makers, mining companies, regulators and stakeholders, speak to the holistic approach in assessing sustainability in the mining sector. This publication offers a unique perspective into the sector, showcasing innovative approaches and benchmarking initiatives with specific country examples, while noting the associated challenges and trends of sustainability reporting within the sector.

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Introduction

Group of Friends of Paragraph 47

The Group of Friends of Paragraph 47 (GoF47) is a government-led initiative that was formed by Brazil, Denmark, France and South Africa in 2012 during the United Nations Conference on Sustainable Development (Rio +20) following the acknowledgement of the importance of corporate sustainability reporting in Paragraph 47 of the Conference outcome document 'The Future We Want'. Other countries have joined the initiative in recent years, including Argentina, Chile, Colombia, Norway and Switzerland. The group shares experiences and methods to promote sustainability reporting. UNEP supports the GoF47 in a Secretariat capacity.

The goals of the GoF47 are the following:

- To promote the exchange of experience on sustainability reporting policies and initiatives with a view to enhancing their effectiveness, leading to more widespread and higher quality sustainability reporting.
- To increase the number of governments with policies or initiatives that promote corporate sustainability reporting.
- To maintain and promote discussions on sustainability reporting in relevant international fora.
- To engage with strategic stakeholders, recognizing that the promotion of sustainability reporting is a multi-stakeholder effort. [1]

Box 1: Related reports by UNEP and GoF47:

- Sustainability Reporting in the Financial Sector: A Governmental Approach (2017) [2]
- Evaluating National Policies on Sustainability Reporting (2015) [3]

About this Report

This report is a joint initiative of the Group of Friends of Paragraph 47 and UNEP.

Scope and context

The report looks into the context and state of sustainability reporting of the mining and metals sector. More specifically, the report focuses on the different measures taken by governments to promote enhanced sustainability reporting practices of the sector. Specific emphasis has been put on providing an overview of policies in the area of sustainability reporting in the countries of the GoF47, that have significant mining and metals operations. In the selection of other country examples an effort was made to balance geographical representation, to the extent possible.

Primary attention is given to material and policies that concern industrial-scale mining and metals activities. The report also looks into sustainability reporting in the context of responsible sourcing in the larger mineral supply chain and discusses the importance of due diligence of actors in the supply chain, such as traders, smelters and refiners, for transparency on the origins of minerals and metals. The report only marginally discusses artisanal and small-scale mining in the context of the responsible sourcing of minerals and metals.

The findings and recommendations of this report feed into the follow-up to resolutions approved by member states at the fourth session of the United Nations Environment Assembly (UNEA-4), which took place in March 2019. In particular, the report contributes to the UNEA-4 resolution 19 on "Mineral Resource Governance". While acknowledging the severity of the environmental impacts of the mining and metals sector the resolution also highlights the sector's importance for sustainable development. As part of the resolution, UNEP is asked to "collect information on sustainable practices, identify knowledge gaps and options for implementation strategies, and undertake an overview of existing assessments of different governance initiatives and approaches relating to sustainable management of metal and mineral resources, and report thereon to the United Nations Environment Assembly at its fifth session." [4]

The report also supports the 2030 Agenda for Sustainable Development more generally by discussing corporate sustainability reporting as a tool to gain oversight of progress on the UN Sustainable Development Goals (SDGs). Businesses has a key role to play in achieving the goals by 2030 but the reporting on the progress towards achieving the goals is in the hands of governments. The report puts a focus on how mining and metals companies have started reporting on the SDGs and how this reporting could be further strengthened and supported by governments to enhance progress on the goals at the national level, and particularly SDG 12 on responsible consumption and production and the associated target 12.6 on "encouraging companies, especially large and transnational companies, to adopt sustainable and to integrate sustainability information into their reporting cycle." [5]

Throughout the report, focus is placed on the subject of sustainability reporting but it is emphasized that the ultimate goal of the reporting should be gradual improvements of environmental, social and governance performance. Sustainability reporting can be an effective tool for communicating companies' performance in these areas to stakeholders.

It is noted that this report has benefited from valuable contributions of the organizations listed in the acknowledgement section. The coverage of their respective standards, guidance and initiatives may therefore be more prominent than of others that may nevertheless be of similar relevance for advancing sustainability and transparency of the mining sector.

Target audience

The target audience of the report is primarily government authorities that are responsible for regulating the mining and metals companies operating in their countries. The report may also be of interest to public institutions that wish to support and encourage the sustainability reporting efforts of the mining and metals sector as well as representatives of Civil Society Organizations, businesses and related stakeholders.

Note on terminology

The report uses the terms 'mining' or 'mining and metals' interchangeably and applies those terms to companies in the large-scale mining sector, as well as to the sector as a whole. Primary focus is put on companies that are involved in the upstream activities of exploration and mining.

The term 'mineral supply (value) chain' is used for the process of bringing raw minerals to the consumer market involving multiple actors. The process generally includes the extraction, transport, handling, trading, processing, smelting, refining, manufacturing and sale of end product. [6]

The terms 'corporate sustainability reporting' and 'sustainability reporting' are used as a reference to non-financial reporting, or Corporate Social Responsibility (CSR) reporting of companies, that covers economic, environmental and social, including human rights, issues. The term ESG (Environmental, Social and Governance) reporting is also used, notably when discussing sustainability reporting that targets investors. It is important to note that sustainability reporting can take the form of an independent sustainability report but can also be embedded in an annual or integrated report, or presented through other corporate communication means, such as corporate websites.

Overview of structure and content

The first chapter of the report starts with a brief overview of the mining and metals sector and outlines the key environmental and social challenges the sector is facing, while demand for minerals and metals continues to grow. The contribution of the mining sector to advancing sustainable development is then explored, notably via its contribution to the global renewable energy transition. The chapter then moves to the area of sustainability reporting and reporting trends in the mining as well as exploring the key drivers of reporting, core challenges and the important role of third-party verification (assurance) in advancing reporting quality.

The second chapter places a specific focus on the area of sustainability reporting in the mineral supply chain, in the context of responsible mineral sourcing. The chapter has two core parts, the first part looks into reporting in the (upstream) supply chain of mining companies, i.e. sustainable procurement. The second and more extensive part of the chapter looks into sustainability initiatives and reporting in the wider mineral supply chain. Specific attention is given to the OECD Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict-Affected and High-Risk Areas and its inclusion in US and EU regulations. The chapter then provides a brief introduction to the role of Voluntary Sustainability Initiatives (VSIs) in advancing responsible mineral sourcing. The chapter finally briefly explores the importance of increased transparency of trading companies to allow for a clearer visibility of sustainability throughout the mineral supply chain.

The third chapter specifically looks into the role of governments in enhancing sustainability and transparency of the mining sector. The chapter provides an overview of the role of Environmental Impact Assessments in the approval process for mining projects as well as the importance of the UN Sustainable Development Goals in enhancing corporate reporting on the environmental and social impacts of mining operations. The chapter then moves to discuss the enhanced role of the Extractive Industries Transparency Initiative (EITI) in advancing transparency on the environmental impact of the mining sector. This final section of the chapter is a contribution by the EITI.

Chapter four of the report is dedicated to the role of VSIs in enhancing sustainability reporting of the mining sector. This chapter is a contribution from the International Institute for Sustainable Development (IISD). The chapter explores the sustainability reporting aspect of VSIs and the interaction between VSIs and government policies in the mining sector. The chapter outlines how governments can use VSIs to enhance transparency of the mining companies operating in their countries.

Chapter five and six are focused on examples of government initiatives to enhance reporting of mining companies, both from countries of the Group of Friends of Paragraph 47 (Chapter 5) as well as others (Chapter 6).

Chapter seven is dedicated to the interaction between government strategy and national mining industry associations in Canada and Finland with a focus on the role of the Mining Association of Canada's Towards Sustainable Mining program in advancing sustainability and reporting of the mining sector. The Mining Association of Canada and the Finnish Network for Sustainable Mining contributed their respective sections of this chapter.

Finally, chapter eight and nine include conclusions of the report as well as recommendations, notably for governments that wish to advance the sustainability reporting of mining companies operating in their countries through policies or other initiatives or partnerships, but also for mining companies and other stakeholder groups.

Amongst the questions this report aims to address are the following:

- What has been the role of governments in advancing sustainability reporting in the mining sector?
- Which are the key challenges to enhancing the quality of sustainability reporting of mining companies and how can these challenges be addressed by governments?
- How have VSIs guided the reporting of mining companies and how have they been used as tools by governments to promote more effective sustainability reporting?

- How are the UN Sustainable Development Goals influencing sustainability reporting of the mining sector and how can the goals be used by governments to guide the sustainability reporting strategies of mining companies?

Why Focus on the Mining Sector?

Growing demand for minerals and metals

As the world population and the associated economic activities continue to grow, so does the demand for extracted materials. From 1970 to 2017, the annual global extraction of materials tripled [7] and the global use of materials is expected to more than double from 79 Gt in 2011 to 167 Gt in 2060. [8] Minerals that are non-metallic, such as construction material, e.g. sand and gravel, represent more than half of the total use of materials by weight and their use is expected to grow rapidly in the coming years (from 35 Gt in 2011 to 82 Gt in 2060). [8]

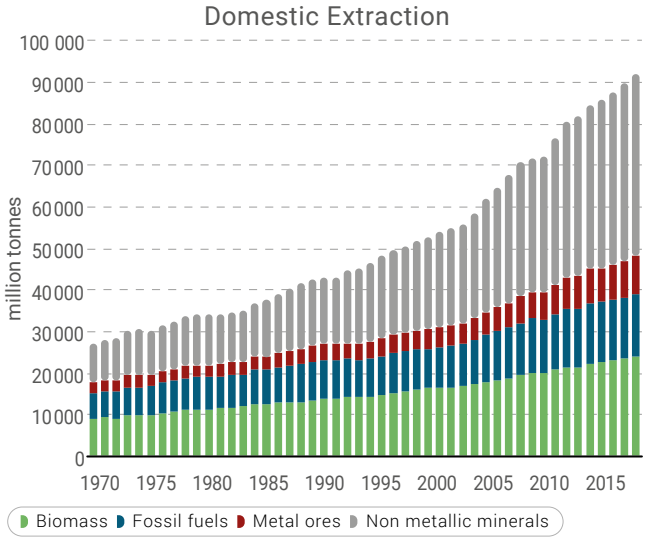

Figure 1: Global Material Extraction 1970-2017 [7]

The switch to a low carbon economy as agreed by UN member states in the 2015 Paris Climate Agreement will require extensive amounts of metals for enabling renewable energy technologies. Most notably, metals will be needed for electric storage batteries (e.g. for electric cars) which require aluminum, cobalt, iron, lead, lithium, manganese and nickel but also for other relevant technologies, including those used for the production of wind turbines and solar panels. [9] Far greater amounts of metals are needed for clean energy production than the traditional energy production from fossil fuels. Although the COVID-19 pandemic is slowing down the growth in production of renewable energy infrastructure in the short-term, growth in the renewables sector is expected to rebound in 2021. [10]

The unfolding 4th industrial revolution, which is likely to be advanced with the COVID-19 crisis (e.g. the increasing uptake of technology for virtual meetings and other tools used to facilitate remote work), will further intensify the demand for metals for automation of processes, including for robots and datacenters.

Environmental and social impacts of mining

When considering the different environmental and social impacts and challenges associated with mining activities it is important to note that these impacts differ between large-scale mining (LSM), which is the key focus of this report, and artisanal and small-scale mining (ASM). ASM, which is generally labor intensive and poorly mechanized, is recognized as an important source of revenue for 40 million people across 80 countries. [11] It is estimated that ASM accounts for 15-20% of global non-fuel mineral production. [11]

Although generally small in scale, the environmental and social challenges associated with ASM are often greater than in LSM due to the lack of management processes for environmental and social issues and

the fact that ASM is rarely integrated into laws and regulations. [12] The COVID-19 pandemic is having a disproportionate impact on ASM miners and their communities that are even more vulnerable post-pandemic than they were prior to the crisis due to factors such as low commodity prices, risks of contracting the virus and government restrictions which combined are putting their livelihoods and wellbeing at risk. [13]

The activity of mining of minerals and metals can have a positive impact on the host countries such as in the form of royalties and taxes paid to governments, direct and indirect employment for the population and opportunities for local suppliers. In fact, the most important factor in benefit distribution for communities and governments is the procurement by mines, notably in developing countries. [14]

However, mining and mineral extraction frequently comes at a high environmental and social cost. Environmental impacts often associated with the mining process include water and soil contamination, soil erosion, loss of biodiversity and adverse impacts of climate change due to greenhouse gas (GHG) emissions. The process of mining also includes large amount of waste materials or 'tailings' that can cause severe environmental damage if not handled appropriately by mining companies.

The issue of safely storing tailings is comprehensively covered in the UNEP/GRID-Arendal report of 2017 *Mine Tailing Storage: Safety is no Accident.* The report highlights that tailings dam accidents in the past could have be avoided with better safety management practices and notes that the challenge of safely storing mine waste is growing in complexity and scale. The volume of tailings is increasing with lower ore grades and more variable and intense weather events expected with climate change can further increase risks of dam failure. [15]

Many of the untapped minerals and metal resources are located in developing countries. A number of these countries suffer from unstable political systems, governance issues including corruption, widespread poverty as well as weak legal frameworks for environmental and human rights issues, which are often ineffectively applied. Rather than providing economic and development benefits, abundance of minerals in developing countries can be associated with authoritarianism and poverty. This paradox is often referred to as "the resource curse". [16] The local communities living in the vicinity of large-scale mines do not always reap benefits from the mining operations but rather the companies operating the mines and their shareholders. Other potential negative social impacts include violence, escalation of gender inequalities and child labour (child labour is of a particular concern in ASM).

Although important progress in improving the safety of mine workers has been made, the level of injuries and fatalities in the mining sector still remains high. In addition, many injuries and deaths associated with mining remain undisclosed due to different reporting regulations in mining countries and varying corporate reporting practices. [17] A recent example of the dangerous nature of the mining sector is the Brumadinho tailings dam collapse in Brazil in January 2019, which resulted in the death of 270 people and led to severe environmental damage. [18]

The mining sector and sustainable development

The mining and metals sector is particularly interesting in the context of sustainable development. As outlined earlier in this chapter, the sector plays an important part in combating climate change as essential materials for technical solutions, such as batteries in electric cars and the material of solar panels (which include rare earth metals), depend on the extraction of minerals. However, mining operations also often have a negative impact on the environment and host-communities. In Latin America, for example, frequent community oppositions to new mining projects are causing unrest and conflicts and pose a key challenge for global mining groups operating in the region. [19]

It is relevant to look briefly into the formalization of the sustainable development concept in the context of the mining sector at the turn of the millennium. From the mid-1990s to early 2000s the mining and metals sector was facing enormous pressure to improve its environmental and social performance and defend its "social license to operate", which is in essence the level of acceptance or approval by local communities and stakeholders of companies, and their operations. [20] The gains of mining were often not reaching

local communities in part due to corruption and poor governance of the mining sector at the time. There were also wide concerns about alleged human rights abuses associated with mining projects. To respond to these concerns and to defend their social license to operate, nine mining companies formed the Global Mining Initiative, which "sought internal reform, a review of the various association they belonged to and a rigorous study of the societal issues their industry had to face". [21] Following extensive research[1] and dialogue, involving the International Institute for Environment and Development and the World Business Council for Sustainable Development, the International Council for Mining and Metals (ICMM) was formed in 2001. [21] [22]

Among the core objectives of the ICMM at the outset, as outlined in the ICMM Toronto Declaration [23], was enhancing the mining sector's contribution to social and economic development, putting emphasis on respecting communities and human rights, as well as accepting the environmental stewardship responsibilities for their mines. The declaration highlights that accountability, transparency and credible reporting are essential elements in enhancing the sector's contribution to sustainable development. The establishment of the ICMM was an important milestone for integrating and formalizing sustainable development factors into the operations of large mining and metals groups, including enhancing the transparency of their environmental and social impact through sustainability reporting. However, as outlined in this report, the level of transparency of mining companies on their sustainability performance, as well as the actual performance in managing their environmental and social impact, has been insufficient to the meet stakeholder expectations.

The various stakeholder groups of mining companies have therefore continued to push for improvements in the sustainability performance of the mining sector. Over the last two decades, several sustainability initiatives including reporting frameworks have been established, some of which including specific guidance for sustainability reporting of mining companies (see Chapter 1). A number of voluntary sustainability initiatives (VSIs) have also been founded, targeting different parts or the whole of the mineral supply chain, notably in response to civil society and community pressure as well as a growing customer demand for responsibly produced products (see chapters 2 and 4).

The growing role of governments in enhancing sustainable development of the mining sector

The SDGs adopted by governments in 2015 provide an opportunity for the mining sector to advance its efforts of contributing to sustainable development and limiting the negative impact on communities and the environment. The SDGs bring various possibilities for collaboration, both within the business sector as well as between stakeholder groups, such as businesses and governments. The SDGs in the context of mining, and the benefits of a collaborative effort between governments and businesses for achieving the goals, is discussed further in Chapter 3.

As noted above, a large part of the efforts towards enhancing the sustainability of the mining sector has been initiated voluntarily by mining companies themselves. However, as further outlined in this report, the most important push for improvements of the environmental and social performance of the mining sector has come from governments, including through international and national sustainability reporting regulations which apply to the sector. The report *Beyond Voluntarism* [24] highlights the growing tendency of governments being more assertive in their relations with companies in the mining and oil and gas sectors. While the report focuses mainly on the role of governments in social investments in these sectors, it points out that this has been a wider trend in other areas within corporate social responsibility and sustainability. Reasons for this increased assertiveness of governments include general pressure to respond to rising societal expectations and reduced community support for mining and oil and gas projects in recent years. [24]

To meet the urgent global challenges facing the world today, further exacerbated by the COVID-19 pandemic, governments have a key role to play to guide and direct the mining companies operating in their countries towards more sustainable practices that will contribute to attaining the SDGs by 2030.

1 Notably through the Mining, Minerals and Sustainable Development (MMSD) project.


Easy Pie Charts
2016
2017
2018
0
100
300
500
1000

shutterstock/CrizzyStudio

SUSTAINABILITY REPORTING – FOCUS ON THE MINING SECTOR

This chapter provides an overview of sustainability reporting in the mining sector. To provide for a more global context, the first section of the chapter looks more broadly into the field of corporate sustainability reporting and introduces some of its current challenges. Further attention is then given to sustainability reporting of the mining sector, including reporting trends and context, the key reported issues, as well as the most relevant drivers for reporting of the mining sector and key reporting frameworks and standards that are used by the sector. A specific focus is then placed on the various challenges associated with obtaining meaningful sustainability disclosures from mining companies and the importance of third-party verification of sustainability reporting of the sector.

General State of Sustainability Reporting

Around 93% of the world's 250 largest companies (by revenue), and 75% of the world's largest 100 companies across 49 countries, disclose information on their environmental and social performance, with a majority of reporting companies referring to the reporting framework of the Global Reporting Initiative (GRI). [25] However, the quality of these reporting efforts vary widely between companies, as does the value of those efforts to company stakeholders.

The Alliance for Corporate Transparency issued a report in February 2020 on the analysis of sustainability reporting of 1,000 European companies in the context of the 2014 EU Directive on non-financial disclosure. The report concluded that "while there is a minority of companies providing comprehensive and reliable sustainability-related information, at large quality and comparability of companies' sustainability reporting is not sufficient to understand their impacts, risks, or even their plans." [26] Investors are increasingly demanding sustainability information to inform their investment decisions [27], however, according to the 2018 *Responsible Investing Survey* investors feel that both the quantity and the quality of sustainability reporting is unsatisfactory. [28]

Sustainability reporting of small and medium sized enterprises (SMEs) is much less common than in larger companies in part due to the fact that SMEs are generally not targeted by reporting regulations or by investor or shareholders' requirements. SMEs also often lack the resources for the work needed to gather data and other tasks associated with sustainability reporting. The practice of sustainability reporting of SMEs is however expected to grow in coming years, notably in response to growing stakeholder demand. For example, as larger companies extend their sustainability disclosures to include the impact of their supply chains, (including the responsible sourcing of minerals) the pressure for SME reporting grows, as many companies in global supply chains are SMEs. Increased transparency of SMEs can also create new opportunities in the growing market for responsible products or public procurement. [29] These opportunities are relevant in business to business (B2B) relationships, business to consumer relationship (B2C) and business to government (B2G) relationships.

One of the challenges for effective corporate sustainability reporting are the numerous and diverse reporting frameworks, standards and initiatives that have emerged in recent years. [30] Reporting frameworks target different audiences and have varied approaches to key reporting principles, notably relating to the materiality principle. [31] For example, organizations such as GRI, the Sustainability Accounting Standards Board (SASB) and the International Integrated Reporting Council (IIRC) have different guidance and approaches to how to define what issues are material and to be included in the reporting. This stems partially from the fact that the reporting frameworks are designed for different stakeholders, for example SASB and IIRC are primarily designed for the information needs of investors while GRI is intended for sustainability reporting for all stakeholders of companies. Indeed, the varying needs of the different stakeholders makes it complex for companies to target their reporting and communication of their sustainability performance.

There have also been concerns about the reported information being presented without the necessary context that would allow for a meaningful conclusion on the company's actual negative or positive impacts and contribution to sustainable development. [32] This demand has grown following the adoption of the SDGs by governments and stakeholder pressure, notably from investors, for more detailed information on

how companies are addressing global challenges such as climate change and gender equality. Companies are in turn increasingly integrating the SDGs into their reporting, although currently selectively and with little consistency. [33] The challenges of sustainability reporting, with a focus on reporting of the mining sector, are further discussed later in this chapter.

Sustainability Reporting in the Mining Sector

Overview of reporting trends and context

Sustainability reporting rates for the extractive sectors are elevated compared with other sectors, in response to their large environmental and social footprint. This is in particular the case for large companies in the oil and gas and mining and metals sectors. As stated in KPMG's 2017 survey on corporate responsibility reporting around 80% of the world's largest companies in the extractive sectors publish information on their sustainability performance. [25] However, consistent with the pattern in other sectors, the quality of sustainability reporting in the mining sector is commonly considered inadequate and not up to stakeholder expectations. [34]

In recent years, there has been increasing emphasis on openness, transparency, accountability and reporting of the mining sector, supported by numerous international initiatives such as the EITI and GRI. However, more emphasis has generally been put on financial transparency and accountability and less on the disclosure of environmental and social and governance performance. [35] In some cases in collaboration with the EITI, a number of governments have taken concrete steps to enhance the governance and financial transparency of the mining sector. The pressure for enhanced ESG disclosures by mining companies has, however, been rapidly growing, notably by investor-led initiatives, stock exchanges and independent organizations such as the Responsible Mining Foundation. Pressure from manufactures, NGOs and consumers has also led to the establishment of various VSIs that promote responsible mineral sourcing, including increased transparency on the environmental and social impacts of mining.

Although most of the large international mining groups are now reporting on their environmental and social performance, in line with established sustainability reporting frameworks, the overall quality of their reporting remains poor as outlined in the Responsible Mining Index of 2020. [34] An important factor to consider in this respect is that reporting frameworks generally do not set specific performance targets but rather depict what environmental and social topics should be addressed and reported on. What is lacking is a focus on improving performance on the sustainability related areas of key interest to the communities affected by mining and other key stakeholder groups.

Sustainability reporting of mining companies also generally lacks information on the positive externalities the company delivers at the local mine-site level, such as for supporting local economic development through sourcing, which supports local businesses and leads to job creation. [36] This information is of key interest to local communities affected by mining operations as well as the local government. The growing trend of mining companies integrating the SDGs in their reporting, and underlying sustainability strategies, might help in achieving a greater balance of reporting of positive and negative impacts that meet the different stakeholder information needs and more generally help in assessing the mining sector's contribution to sustainable development. A precondition to the effective integration of the SDGs to a mining company's strategy and reporting is, however, to first undertake a comprehensive sustainability assessment of the mining operations to understand the key positive and negative impacts to the mining operations in the national and local community context.

Stakeholders increasingly require information on the environmental and social impacts of mining at the mine-site level, and presented in a local context. There is limited value derived from reporting that sums up results from numerous and geographically dispersed projects of large mining and metals groups, especially as impacts may vary greatly depending on the location. For example, a key impact of the mining sector is water

consumption but the severity of the impact on water supply will depend on the context of water availability, i.e. whether the mining operation takes place in an area experiencing water stress or has abundant water supply. Organizations such as the Responsible Mining Foundation and industry initiatives, such as the Canadian Towards Sustainable Mining program and the newly updated principles of the International Council for Mining and Metals, are helping in addressing these concerns and promoting sustainability reporting at the mine-site level as well as third-party verification to help enhance the credibility of the reported information.

Governments are well positioned to provide the appropriate guidance to mining companies on where reporting should be focused to reflect the specific sustainability context, challenges and opportunities related to mining and mineral development as well as eventual national plans to address the SDGs. For example, governments can guide mining companies on what sustainability issues are of most importance in the national context as well as in the context of a particular commodity. Although there are many common sustainability challenges to mining operations of the different minerals and metals, the priorities and the appropriate performance indicators differ as well as the guidance offered by VSIs. Special attention is given to the interaction of governments and VSIs in Chapter 4.

Frequently reported environmental and social issues

When looking at key sustainability reporting frameworks and initiatives for the mining sector, there is some consensus on the core environmental and social areas and topics that mining companies should generally report on. However, the proposed indicators and reporting guidance vary between initiatives and depend in part on the intended target audiences. For example, SASB's Metals and Mining Sustainability Accounting Standard is first and foremost intended for reporting for investors and therefore focuses on areas that are considered to have a financial impact on a company's operations whereas GRI aims to provide information for all key stakeholder groups of companies.

It is important to note that the mining process for the different kinds of minerals and metals will involve specific environmental and social considerations. For example, gold extraction is often associated with toxic mercury emissions that can be harmful to human health. Table 1 gives an overview of some of the environmental and social issues that are often included in sustainability reporting of large-scale mining companies.

Environmental Impact	Examples of Indicators
Impact on biodiversity	- Number/percentage of sites with biodiversity management plans Description of significant impacts on biodiversity - Amount of land disturbed or rehabilitated - Information on the use of biodiversity offsets
GHG Emissions and Energy use	- Amount of CO2e GHG emissions and mitigation measures - Energy consumption and reductions
Water Management	- Amount of water withdrawal by source - Water sources significantly affected by withdrawal of water
Waste and hazardous materials (tailings) management	- Total weight of waste and disposal method - Total number and type of significant spills - Processes in place to manage risks associated with waste rock, tailings, sludges and other residues - Amount of release of heavy metals/toxins into the local environment
Social Impact	**Examples of Indicators**
Health and Safety	- Number of accidents/deaths - Information on training on health and safety management
Security / Human Rights and Rights of Indigenous Peoples	- Number/percentage of reserves in or near areas of conflict - Number/percentage of reserves in or near indigenous lands and engagement processes in place - Processes in place to prevent child or forced labor
Impact on local communities and local community engagement	- Number of operating sites where resettlement took place, number of households resettled in each site and information on how their livelihoods were affected in the process - Number/percentage of operations with local community engagement (including minority groups such as women), and/ or environmental/social impact assessments - Number/percentage of operations with significant negative impacts on local communities - Proportion of spending on local suppliers

Table 1: Examples of environmental and social impacts reported by mining companies[2]

2 The table is indicative and is based on indicators of the mining reporting frameworks of SASB (Industry Standard for Metals and Mining), the TSM program, the GRI Standards and Sector Supplements for Mining and Metals, available on https://www.globalreporting.org/Documents/ResourceArchives/GRI-G4-Mining-and-Metals-Sector-Disclosures.pdf as well as the most commonly reported GRI disclosures by mining companies as outlined in the GRI publication Defining What Matters (2016) available on: https://www.globalreporting.org/resourcelibrary/GRI-DefiningMateriality2016.pdf

An example of an issue that seems to be receiving insufficient attention in the sustainability focus and reporting of large-scale mining companies (and in reporting frameworks), is gender equality. It is estimated that only around 10% of the workforce in the, traditionally male oriented, large-scale mining sector is female. [37] Improving gender equality, for the benefit of national economies and local communities, is an area where national governments can play a strong role. An example of government effort in this area is Chile's 2012 national standard on "Gender equality and reconciliation of professional, family and personal life."[3] The national mining company of Chile, CODELCO, is one of the top performers in promoting gender diversity in the RMI Index 2020. [38] In line with the government's requirements, the company adopted a Gender Diversity Strategy in 2015 associated with specific gender-related KPIs.

Key Drivers, Frameworks and Standards for Sustainability Reporting

The mining sector has a large impact on several areas linked to sustainability, which has created pressure for increased disclosures on the sector's environmental and social impacts. This demand has intensified following severe mining accidents in the past years. Drivers for sustainability reporting of the sector are various and their relevance depends in part on national context. Reporting drivers may be combined in different ways within countries and they are often interlinked. According to findings of the RMI Index of 2020: "Stronger-performing and more transparent companies tend to be subject to specific requirements set by investors or producing country or home country governments." [34] National regulations and investor demands are among the key drivers for sustainability reporting, discussed in this chapter.

It is noted that the reporting regulations discussed below are not only relevant for the mining sector but apply to broader categories of companies such as large, public, or state-owned companies. Mining companies generally fall under these categories and are therefore affected by the regulations.

International and national regulation

EU Directive on non-financial disclosure

The European Union (EU) Directive from 2014 on non-financial disclosure of companies with more than 500 employees applies to around 6000 companies across the EU. The directive mandates reporting on sustainability related areas including environmental protection, respect for human rights and anti-corruption. [39] In 2017 the European Commission published a non-binding guidance document to assist companies in applying the EU Directive. [40]

In 2019 the EU added specific guidance on the disclosure of climate-risk as a supplement to the non-financial disclosure directive. The supplement provides guidance for companies on how to report climate-related information, including negative impacts of company actives on the climate, negative impacts on the company due to climate change and climate related opportunities such as new products and services that can contribute to climate change mitigation or adaptation. The EU recommends that companies use existing reporting standards in the interest of comparability and cites relevant standards, including the standards of SASB, CDP[4], the GRI as well as the recommended disclosures of the Task-Force on Climate-related Financial Disclosures (TCFD). [41]

In line with the goals of the European Green Deal announced by the European Commission at the end of 2019[5] a review of the EU directive on non-financial disclosure of 2014 is planned in 2020 with the aim of improving non-financial disclosures as a foundation for sustainable investments. As part of the review, stakeholder consultation is taking place in the first half 2020, specifically targeting investors and NGOs who are key users of sustainability disclosures.

3 NCh3262 (2012). For more information (in Spanish) see https://minmujeryeg.gob.cl/?page_id=37311
4 Formerly the Carbon Disclosure Project
5 The European Green Deal, available on https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en is a roadmap for making the EU's economy sustainable.

National regulation and state-ownership of mining companies

The main driver for corporate sustainability reporting is government regulation, followed by provisions set by financial market regulators. [42] There has been an impressive growth in provisions that concern sustainability reporting in the last years as demonstrated in Table 2, taken from the 2020 Carrots and Sticks report on sustainability reporting policy. In terms of organizations covered by the reporting provisions, the most common are provisions that cover all companies, large or publicly listed companies. [42] There is a growing trend towards sector specific reporting provisions and heavy industry (which includes mining companies) is the sector that includes the most reporting provisions with focus on the sector grown substantively in the last years. [42]

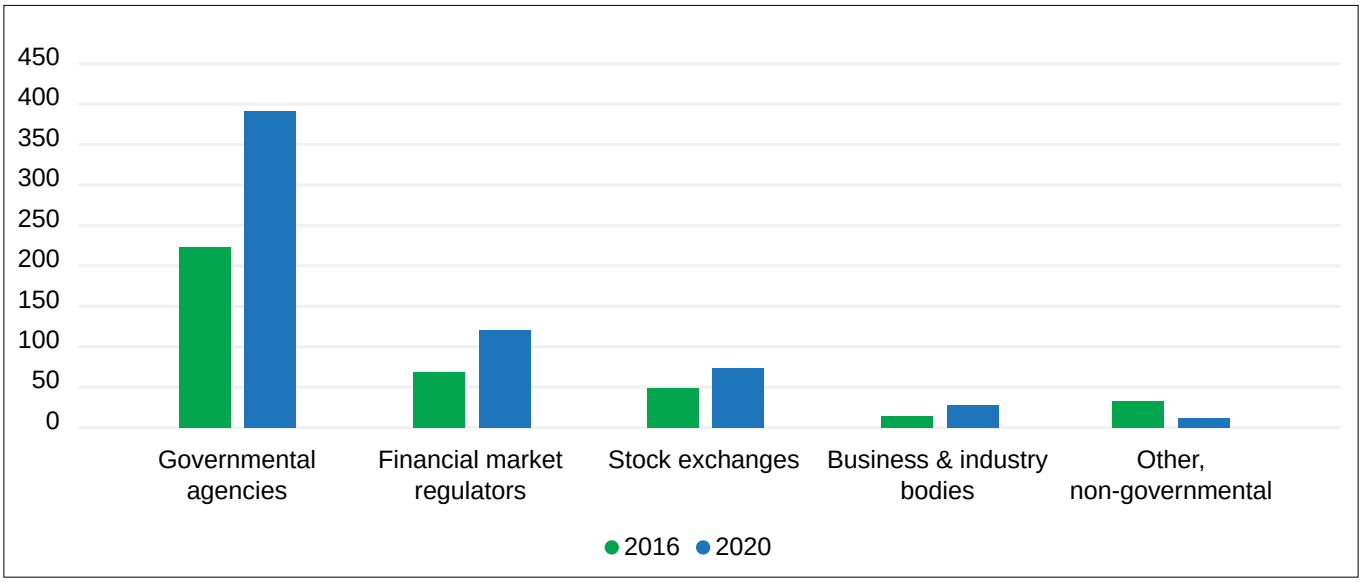

Figure 2: Number of sustainability reporting provisions issued by different issuer types [42]

The GRI Standards are the reporting framework that is most often referenced by policy makers. As total of 168 policies in 67 countries specifically reference or require use of the GRI Standards. [43] Chapters 5 and 6 provide examples of regulatory initiatives relating to sustainability reporting in countries where the mining sector is well established.

In general, however, as concluded in a 2019 report from the Natural Resource Governance Institute, when it comes to extractive industries such as mining and metals companies: "Governments have not generally harnessed or coordinated the efforts of companies to promote more consistent measurement and reporting of environmental and social impacts of extraction." [44]

In some resource-rich countries governments manage its natural resources, including minerals and metals, through State Owned Enterprises (SOEs). State ownership is particularly prevalent in the oil and gas sector but SOEs are also frequently found in the metals and mining sector. For example, Chile's state owned CODELCO is the largest producer of copper in the world and Morocco's state owned OCP group is a world leader in the production of phosphates. [45] Many SOEs have made significant progress in sustainability reporting. In some countries there are SOE guidelines or requirements for sustainability disclosure. Examples of these countries include India, South Africa and Chile. Many large SOEs also disclose sustainability information at their own initiative. [46]

NGO and community pressure driving increased transparency of mining companies

Sustainability reporting of the mining sector has largely been initiated from the mining companies themselves, in part as a management tool for reputation risk and eventually also to pre-empt stricter government regulation. [47] According to a recent EY survey of the top 10 business risks and opportunities for the industry in 2020, "license to operate" is the key industry risk for the second year in a row, as stakeholder demands for increased social and environmental responsibility of the sector intensify. [48]

Local communities are often negatively affected by mining operations (e.g. they may be relocated, lose their source of income and suffer degradation of water, soil or air quality). The law and governance of mining is complex and the affected local communities are often not informed of their rights and the applicable laws and do not know who to turn to for assistance and information. [49] Local and international NGOs have in recent years fought to increase the level of mining companies' adherence to environmental legislation, rule of law, humans rights and other legislative, regulatory and governance prescripts which should enable the mining sector to operate in an open, transparent and accountable manner, taking into account the interests and needs of local communities.

As discussed in the introduction of this report, large international mining groups came together in 2001 through the ICMM and its principles with the aim of regaining their social license to operate by enhancing their environmental and social performance and increase their transparency towards their stakeholders, including local communities.

Stock exchanges requiring ESG information

Stock exchanges have played an important role in driving sustainability reporting of the mining and metals sector, both through mandatory regulation as well as voluntary guidance. For example, the latest version of the Corporate Governance Principles and Recommendations of the Australian Stock Exchange (ASX), issued in February 2019, references the importance of companies disclosing environmental and social risks. [50] The update follows a growing investor demand for ESG information. Other stock exchanges requiring ESG disclosures of listed companies include India, Brazil and South Africa.

Growing investor demand for sustainability information

Environmental, social and governance aspects are increasingly important factors in the decision-making process of investors around the world, notably large institutional investors, as non-financial factors are increasingly impacting the value of companies. [51] This development is related to the increased emphasis on sustainability factors among many stock exchanges, as outlined above. An important tool that investors use to push for enhances ESG performance of their investments is through proxy voting on ESG-related shareholder resolutions, which may be associated with direct investor engagement with company management on the issue of concern. This has been particularly common in the US where the support for ESG-related resolutions has been growing steadily. According to research by Morningstar 29% of investor shares voted favorably on ESG-related resolutions in 2019, compared to around 11% in 2004. [52]

Box 2: Key reporting frameworks that target reporting on ESG for investors

Sustainability Accounting Standards Board (SASB)'s sector reporting standards (2018) [53]

The Reporting framework of the International Integrated Reporting Council (IIRC) (2013) [54]

Although investors generally look at ESG data at the corporate level the risks of mining companies will often lie at the mine-site level. [55] Therefore, as the uptake of ESG investments likely continues to grow, it can be expected that more emphasis will be put on the availability of ESG disclosures disaggregated at the mine-site level in the future.

In October 2018 a number of large investors,[6] representing more than 5 trillion USD in assets under management, signed a petition pushing the US Securities and Exchange Commission (SEC) to design a framework for companies to disclose more specific and higher quality ESG information than currently required under SEC regulations. [56]

Investors are also using their own leverage to push for enhanced sustainability reporting of companies. For example, in January 2020 the world's largest asset management firm, BlackRock[7] , asked all the companies it invests in on behalf of their clients to disclose industry specific sustainability information in line with the SASB standards as well as climate-related risks in line with the recommendations of the TCFD. [57]

Another recent example of investor pressure occurred in the aftermath of the devastating tailings dam failure at the Brumadinho dam in Brazil on 25 January 2019, which led to 270 deaths. [18] Through the Investor Mining and Tailings Safety Initiative, governed by the Church of England, investors representing more than $13 trillion demanded 726[8] extractive companies to enhance the disclosures on their management of tailings storage facilities (TSF). The demand led to the collaboration of the ICMM, UNEP and the Principles for Responsible Investment (PRI) to co-convene the Global Tailing Review, a process to define an industry standard aimed at raising the bar in the management of TSFs. [58] The result of this process is the *Global Industry Standard on Tailings Management*, published in August 2020. [59] The Standard includes six broad topics, one of which is *Public Disclosure and Access to Information*.[9]

Interestingly, according to a recent research by McKinsey, the majority of investors (82%) are supportive of legal mandates requiring companies to issue sustainability reports, [60] which implies the value and materiality of sustainability information for informing investment decisions.

Key sustainability reporting frameworks and standards used by mining companies

In demonstrating their sustainability performance mining companies often use voluntary sustainability reporting frameworks. The key frameworks, guidelines and standards of core relevance to sustainability reporting, and related due diligence processes, of mining companies are listed in Table 2.

6 Including the California Public Employees' Retirement System (CalPERS), the UN Principles for Responsible Investment and top state financial authorities from New York, Illinois, Connecticut and Oregon.
7 See overview of top-10 largest asset management companies on: https://www.valuewalk.com/2019/07/top-10-largest-asset-management-companies/
8 This was the first round of letter, others were added later, so the final number is higher.
9 The associated principle for this topic is "Principle 15: Publicly disclose and provide access to information about the tailings facility to support public accountability."

International Council on Mining & Metals (ICMM)
ICMM is an international organization of 27 mining and metals companies and 38 regional and commodities associations. Amongst the aims of the ICMM is to strengthen the environmental and social performance of the mining and metals industry and enhance mining's contribution to society. [61] ICMM Principle 10.3 requires ICMM members to "Report annually on economic, social and environmental performance at the corporate level using the GRI Sustainability Reporting Standards." [62]

Global Reporting Initiative (GRI)
The GRI Standards is the leading framework for corporate sustainability reporting of large companies. In addition to the GRI Standards there is a special guidance document for companies involved in the mining and metals sector, 'GRI's Mining and Metals Sector Disclosures' document. [63] The performance indicators in the Mining and Metals Sector Disclosures were mandatory in the previous GRI G4 Reporting Guidelines but are not required under the GRI Standards. Their use is however still encouraged by GRI. New sector standards for high impact sectors are currently in development, starting with oil, gas and coal and agriculture and fishing sectors. [64] Mining has been identified as a priority 1 Sector for the GRI Sector Program and development of a Standard is expected to commence in the near-term.[10]

Sustainability Accounting Standards Board (SASB) Metals and Mining Sustainability Accounting Standard
The Sustainability Accounting Standards Board (SASB) has developed 77 industry specific sustainability reporting standards, published in 2018. [65] One of SASB's standard is the Metals and Mining Sustainability Accounting Standard, [66] which is undergoing a review in 2020 to ensure it fully captures the risks associated with company management of tailings storage facilities. [67]

The Mining Association of Canada's Towards Sustainable Mining Program
The Towards Sustainable Mining (TSM) program was founded by the Mining Association of Canada (MAC) in 2004 to encourage sustainable mining practices of Canadian mining companies. MAC members commit to a set of guiding principles and are required to report on their performance annually through 30 environmental and social performance indicators. [68]

International Finance Corporation's (IFC's) Performance Standards on Social & Environmental Sustainability
The eight IFC's Performance standards (PS) concern environmental and social risk management of projects, notably large (including mining) projects. PS 1 outlines the importance of integrated environmental and social impact assessments, stakeholder engagement and management of environmental and social performance throughout the life of the project. It also covers reporting obligations at project level and encourages sustainability reporting of the company. PS 2-8 cover specific environmental and social impact areas. The IFC Performance standards can be used by any company and their use is a precondition for IFC financing. [69]

The Responsible Mining Index Framework of the Responsible Mining Foundation (RMF)
The Responsible Mining Index Framework of RMF sets out the core content of the Responsible Mining Index (RMI). The framework provides a comprehensive reference of the major aspects of responsible mining which is based on society expectations of large-scale mining companies. The framework includes information on 43 topics and provides indicators and metrics that are used in the RMI assessment to measure mining company policies and practices on these topics. [70]

The Reporting Framework of the International Integrated Reporting Council (IIRC)
The IIRC Reporting Framework assists organizations in reporting on their financial, as well as non-financial performance, with an emphasis on how the organization creates value over time. The Framework puts emphasis on value creation for all organization's stakeholders, including employees, customers, suppliers, local communities and policy-makers. [54] The IIRC Reporting Framework is relevant for all business sectors, including the mining sector.

10 Information obtained from the GRI

The OECD Guidelines for Multinational Enterprises
The OECD Guidelines for Multinational Enterprises (MNEs), last revised in 2011 [71], and associated Due Diligence Guidance for Responsible Business Conduct (RBC) of 2018 [72] set out principles of environmental and social due diligence and reporting. They are highly relevant to the mining sector due to the sector's dominance by MNEs. The OECD Guidelines for MNEs are backed by OECD governments and outline government expectations to businesses on how to operate responsibly. [71] The OECD Guidelines for MNEs are referenced in various other guidelines and reporting frameworks such as the GRI Standards.

Table 2: Key reporting frameworks, standards and initiatives relevant to sustainability reporting of the mining sector

The reporting frameworks and other sustainability initiatives included in Table 2 cover a broad range of sustainability/ESG issues. There are other topic-specific standards and guidance that are relevant to sustainability reporting and related due diligence processes of mining companies, such as the *Guiding Principles on Business and Human Rights* [73], the manual *Free Prior and Informed Consent: An indigenous peoples' right and a good practice for local communities* [74] and the *Mining Local Procurement Reporting Mechanism*. The broader sustainability reporting frameworks and standards will generally include various references to topic-specific standards but mining companies may also opt to use topic-specific standards directly in their sustainability reporting and related due diligence processes.

In addition to sustainability reporting frameworks and standards, a number of voluntary sustainability initiatives (VSIs) focusing on increased transparency in the mineral supply chain have been initiated in recent years. These VSIs have largely been established as a response to continued civil society criticism, growing investor demands for non-financial (ESG) information, and to meet downstream consumers' requirements for sustainably sourced minerals for their own products (these include companies such as Samsung and Microsoft). [75] Further information on the responsible sourcing of minerals and supply chain reporting, including key VSIs, can be found in Chapter 2.

Challenges Associated with Sustainability Reporting of Mining Companies

Global versus aggregated reporting

Policies for the management of environmental and social issues associated with mining operations are generally established at the headquarter or parent company level of large mining groups. These policies are, however, often not translated to local level operations. According to a 2017 study by the United Nations Conference on Trade and Development (UNCTAD) on MNEs in ASEAN[11] countries "less than 24% of all MNEs were comprehensively translating sustainability policies and reporting practices from parent-company operations into systematic practices at the affiliate level within ASEAN. This was particularly the case when looking at the practices of identifying pertinent and locally relevant sustainability issues" [76] The study suggests that the review of progress on the SDGs at the national and regional levels can assist in providing clarity to MNEs on the most critical local sustainability issues and how they might address them.[12]

Focusing reporting on environmental and social issues at the local level is essential for portraying the real positive and negative impacts of mining companies and the companies' contribution to sustainable development. Combining performance indicators from disperse geographical areas, on the other hand, may result in inaccurate or irrelevant evaluation of sustainability performance [77] and hide risks that may be associated with mining assets. Companies may opt for reporting both at the local and global levels in order to meet the information demands of their different stakeholders, but the availability of sustainability reporting at mine-site level should at least be available for the affected communities and other stakeholders of the county such as the government and investors.

11 Association of South-East Asian Nations
12 The 2030 Agenda for Sustainable Development encourages member states to conduct regular reviews on SDG progress, for further information see https://sustainabledevelopment.un.org/vnrs/

Lack of focus on context and impact in reporting

There is a growing demand on companies to move beyond reporting statistics to providing comprehensive information on the (positive and negative) effects and impacts that each company is having on the environment and society. For example, a mining company should include information on the availability of (and other demand for) water alongside performance indicators on its water consumption or the current level of air quality around a mine site. The SDGs have been a factor in increasing the demand for context of sustainability reporting of companies as their stakeholders want to understand the companies' contribution to sustainable development and the achievement of the SDGs. [25]

The importance of placing sustainability disclosures in a larger environmental and social (as well as economic) context is highlighted in key reporting frameworks such as the frameworks of the GRI and the IIRC, however they do not include guidance on how companies can do so. The reasons for which mining companies do not place their reporting in sustainability context likely include the lack of clarity on how to integrate the context but also eventually the lack of available information from national and local governments. To address the gap in guidance on integrating context in reporting, the Center for Sustainable Organizations has developed tools in recent years to help companies apply context to their reporting, in areas such as water and waste management and GHG emissions. [78]

Another relevant initiative that can provide national context for sustainability reporting of mining companies is the Hotspot Analysis Tool for Sustainable Consumption and Production (SCP-HAT). The SCP-HAT initiative was initiated in 2018 by the Life Cycle Initiative (hosted by UNEP) together with the One Planet Network and the International Resource Panel. SCP-HAT combines national environmental and social data with trade information to estimate environmental pressure and impact indicators (footprints).[13] The approach used for estimating the footprint indicators builds on Life Cycle Impact Assessment and environmentally extended multi-regional input-output analysis. Environmental performance data is gathered at country as well as sector levels, in the context of the most relevant policy questions and is intended for policy makers but also other stakeholders such as NGO and the general public. [79] The data generated by the SCP-HAT tool supports government work on SDG 12 on Sustainable Consumption and Production and can facilitate collaboration between companies and governments and provide national context for sustainability reporting of mining companies.

In terms of accessibility of sustainability related data at the government level there has been an increasing trend of governments embracing Open Data (see section below) to make environmental, social and economic data available to its citizens. Although currently not focused on providing context for corporate sustainability reporting, this may be an interesting area for improving the connection between national context sustainability data and the information disclosed through corporate sustainability reporting.

Mining companies can also be inspired by and explore usage of open data and modern technology that allows for real-time monitoring and publishing of environmental and health and safety data such as on pollution levels and water quality. This kind of Open Data can serve to fulfil regulatory requirements, help manage internal risks, as well as to provide information to concerned local communities.

Governments and Open Data

In an effort to increase transparency and accountability towards its citizens, governments around the world have started applying Open Governmental Data (OGD), which is defined by the OECD as "a culture of governance based on innovative and sustainable public policies and practices inspired by the principles of transparency, accountability and participation that fosters democracy and inclusive growth." [80] A key initiative for the OGD movement is the Open Data Charter (ODC) which is a collaboration, initiated in 2015, and involving over 100 governments and organizations working towards opening up data using a shared set of principles.[14] The ODC is referenced by other key organizations that are active in promoting OGD such as the OECD, which adopted the

13 For further information see http://scp-hat.lifecycleinitiative.org/

14 The ODC Principles are: 1. Open By Default, 2. Timely and Comprehensive, 3. Accessible and Usable, 4. Comparable and Interoperable, 5. For Improved Governanc and Citizen Engagement, and 6. For Inclusive Development and Innovation. See further information on: https://opendatacharter.net/

Recommendation on Open Government in 2017 [81] and the EITI, which has an open data policy since 2019 and encourages EITI countries to endorse the ODC. [82]

Lack of a holistic approach for assessing the sustainability of the mining sector

Another systematic challenge is, that a holistic approach to assess the sustainability of the mining sector is missing. The significance of sustainability reporting increases if comparable measures and evaluation systems are used. For example, for the Food & Agriculture sector, the UN Food and Agriculture Organization (FAO) has published the "SAFA Guidelines" (*Sustainability Assessment of Food and Agriculture Systems*) [83] which allows a holistic assessment of the sustainability performances of companies and farms of the sector. SAFA is explicitly designed to assess and compare the sustainability performances of companies. In contrast to single issue assessments, the SAFA Guidelines allow for the consideration of conflicting objectives (trade-offs) and synergies in the assessment of sustainability performance and the selection and development of appropriate improvement actions.

The SDGs in contrast, are a sustainability framework designed for the county level, not for assessing the sustainability performance of companies. Companies that want to report their commitment to the SDGs should therefore always carry out sustainability assessments first and build on the comparable and measurable data obtained.

One advantage of introducing a systematic and comparable sustainability assessment approach for the mining sector would be that sustainable mines that perform well in the assessment could also be more interesting for the launch of sustainability funds based on this system.

Proliferation of standards and initiatives and lack of interoperability

The number of sustainability reporting frameworks, standards and initiatives (schemes) that apply to the mining sector, as well as the number of VSIs for responsible sourcing, has grown substantially in recent years. This development poses a challenge for sustainability reporting of mining companies as it may not be clear which standards, initiatives or guidance to select and where several of those are applied there may be some level of duplication which can amongst other lead to inconsistency, loss of credibility and create confusion for the stakeholders that use the reported information. [84]

The topic of interoperability of sustainability schemes is specifically examined in the report *Designing Sustainability Certification for Impact*. [84] The report found that: "While many schemes cross-reference other standards, there are few that cross-recognise the certificates, claims or labels issued by other schemes." [84] Efforts are being made to address the challenge of interoperability including a collaborative workplan of SASB and GRI announced in July 2020, to show how the two standards can be used together. [85]

Corporate reporting versus site-specific reporting

When considering the environmental and social impacts of mining companies, the impact associated with the mining operations at the local level is of key concern, notably to the affected communities, workers and governments. However, companies generally do not publicly disclose comprehensive site-specific information on their environmental and social performance. [34]

The most widely used sustainability reporting framework in the mining sector is the reporting framework of GRI, the GRI Standards. [77] This is in part due to the fact that the ICMM Mining Principles (Principle 10) requires ICMM members to use the GRI Standards as a framework for their sustainability reporting. [86] The GRI Standards focus on reporting at the corporate level and not on specific projects such as mining facilities. According to GRI's materiality principle companies should report on the topics on which they have the most impact as well as the

topics that are most important for stakeholder decisions about the companies. [87] The final decision on what and how to report is in the hands of the reporting company.

Mining companies may choose to outline key environmental and social impacts of their operations on a project or site-level basis or provide different levels of information to different stakeholders (e.g. provide site-specific information to the affected communities and host government). At present, however, sustainability disclosure at site-level is generally lacking among the leading mining companies. [34]

The ICMM Mining Principles were updated in February 2020 and now include a requirement for asset (project) level reporting of ESG performance. The update followed the "increasing scrutiny of industry" and in order to "... supply the increasing demand for metals and minerals, while giving confidence to customers and other stakeholders that they have been produced responsibly." [88]

The Mining Association of Canada (MAC)'s Towards Sustainable Mining Program (TSM) requires MAC members to report annually on each of their mining facilities (assets/projects) against 30 environmental and social performance indicators, which are embedded in eight performance protocols that focus on the following core areas: Communities and People, Environmental Stewardship and Energy Efficiency. [89] The TSM program builds on the Canadian regulatory environment for mining companies, i.e. it does not cover issues that are already addressed in Canadian regulation. [90] Chapter 7 includes a more detailed overview of the TSM program.

The Initiative for Responsible Mining Assurance (IRMA) provides a voluntary system offering independent third-party assessment of environmental and social performance at the mine site. In order for a mine to receive a score by IRMA, the mining company must undergo an independent audit against all relevant requirements in IRMA's Standard for Responsible Mining [91], which is divided into twenty-six chapters focused on: Business Integrity, Planning for Positive Legacies, Social Responsibility and Environmental Responsibility. Assessment of a mine against the IRMA Standard includes interviews with residents of communities near the mine, mine workers and relevant NGOs. The report from the mine audit process is public for review by all stakeholders.

Assurance of Sustainability Reporting

General status of sustainability reporting assurance

There has been growing emphasis on the need for enhancing the quality of sustainability reporting. Although it has not been formally evidenced that an assurance process increases the quality of sustainability reporting, it has been shown to help reduce errors and enhance the credibility of the reported information vis a vis company stakeholders. [92]

The definitions of 'assurance' of sustainability information differs slightly between the different organizations. In its guidance document on "The external assurance of sustainability reporting" the GRI provides the following definition for 'assurance': "the outcome of an independent verification process, the term is often used interchangeably with the term verification. It is increasingly used to describe the evaluation and assessment services provided by independent accounting and other firms, usually based on specific assurance standards or frameworks." [93]

The practice of assuring information in sustainability, or Corporate Social Responsibility (CSR), reports, has been growing steadily among large companies. According to KPMG's Survey of CSR Reporting 2017 a total of 67% of the largest 250 companies seek assurance of the information reported in their sustainability reports. According to the survey, the rate of assurance increases as the practice of sustainability reporting matures within countries. [25]

Although the uptake of assurance of sustainability reporting has been growing it is still a voluntary initiative without an agreed global standard. The KPMG Survey of CSR Reporting of 2013 specifically looked into the level of assurance of sustainability reporting. The findings included that a majority (72%) of companies opted for a 'limited' rather than a 'reasonable' level of assurance and around half the companies chose to verify their whole report while the other half limited the assurance to selected indictors or chapters of their report. [94] According to

another study conducted in 2019, about two thirds (63%) of the companies that engage in an assurance process do so by engaging an accounting firm to provide the assurance. [92]

Reporting framework organizations that promote sustainability or integrated reporting (such as GRI, SASB and IIRC) generally advise assurance to enhance the quality of sustainability reporting but do not mandate it as part of their reporting requirements. [95] The two key international standards used for the assurance of sustainability reporting are the International Standard on Assurance Engagements (ISAE) 3000 and the AA1000 Assurance Standard (AA1000AS). [93]

There are also different requirements for assurance in different countries. For example, in the EU directive on non-financial reporting, assurance is optional, but countries may decide to make assurance mandatory. [39]

Assurance of sustainability reporting in the mining sector

In parallel to the growing emphasis of responsible mineral sourcing, there has been increasing pressure on mining companies to provide reliable and high-quality information on their environmental and social performance. Large manufacturers, such as Apple and Microsoft, have started to demand assurances that the minerals used in their products are mined in a responsible way.

In response to this growing demand some of the VSIs relevant to the mining sector have strengthened their emphasis on third-party verification and assurance. This chapter discusses the key developments and initiatives related to this topic.

Assurance in the GRI, ICMM and TSM standards

The sustainability reporting framework that is most widely referenced by large mining companies, the GRI Standards, advise external assurance of the reported information but it does not require it. [96]

As discussed earlier in this report, the ICMM requires its members to report in accordance with the GRI Standards at the corporate level. Following an update of the ICMM Mining Principles in February 2019, the requirement for assurance of ICMM member reporting were enhanced. The update was prompted by a growing investor demand for enhanced ESG disclosures from mining companies. [97] The updated principles are accompanied by a new "Assurance and Validation Procedure", [98] which requires some level of assurance at the mine-site level, as well as the corporate level. Earlier ICMM assurance requirements only applied to the corporate level. These new requirements will concern around 650 assets in over 50 countries, owned by 27 companies. [99] In its Assurance and Validation Procedure, the ICMM notes the following explanation of the new requirement:

> ***"There is an expectation that some assurance procedures take place at asset level as well as at the corporate level. This is required in order to review source data and to understand the flow of data from the source through to the corporate level for consolidation in the sustainability report." [98]***

The ICMM does not, however, prescribe a required level of assurance (reasonable or limited) nor does it require the use of a specific assurance standard. These decisions are left to the discretion of ICMM member companies following consideration of management needs and stakeholder interests. [98]

The Mining Association of Canada's Towards Sustainable Mining program includes a mandatory assurance at the mine-site level, which has been an important factor in the program's success. [100] The program includes a yearly self-assessment and an assurance engagement by an independent verification service provider every three years. This process is further described in Chapter 7.

The Initiative for Responsible Mining Assurance

The Initiative for Responsible Mining Assurance (IRMA) is a not-for-profit, internationally focused multi-stakeholder initiative founded in 2006 to meet the global demand for more socially and environmentally responsible mining. [101] The IRMA governance is shared by civil society, communities and organized labor alongside the private sector. IRMA decision-making process strives for consensus, and where it cannot be achieved a voting process takes place. However, no topic can be passed if one of the stakeholder groups is fundamentally opposed. [103]

IRMA offers an independent third-party verification and certification against its Standard for Responsible Mining for industrial-scale mines. [91] IRMA covers all mined materials (except for energy fuels), and is operational in all parts of the world, for all sizes of mines that are industrial (mechanized). [102] The Standard provides a set of objectives and performance requirements for environmentally and socially responsible practice of the mining sector. It serves as a basis for IRMA's independent third-party assessment and certification, which became available at the end of 2019.

The standard has 26 chapters covering the full range of environmental and social issues related to the impacts of industrial-scale mines. It supports and integrates relevant OECD guidelines such as the OECD Due Diligence Guidance for Responsible Supply Chain and the OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector. Reviews take place at the mine-site, and the standard describes 'best practice' for mines globally and also encourages mines at any level to engage and be recognized for continuously improving.

IRMA Assurance – Third party certification

IRMA is the only mine-site focused multi-stakeholder standard for industrial-scale mining that offers independent third-party verification and certification, that requires corrective actions and continuous improvement.[15] IRMA is also the only mine-site standard that requires community engagement in all steps of the process. The IRMA Standard has the most robust criteria related to fair labor and terms of work, occupational health and safety, and community health and safety.[16]

IRMA and government engagement

IRMA's Standard for Responsible Mining is intended to complement, not replace, strong laws and regulations. The first chapter in IRMA focuses on legal compliance as a basic starting point for market recognition and IRMA seeks to be a collaborative partner of governments. IRMA is engaging with governments to use IRMA certification as a resource to develop legislation, to frame public procurement policies and to provide proof of compliance with laws. For example, in 2019 IRMA met with Andean country governments in Chile at the invitation of Economic Commission for Latin America and the Caribbean. The meeting focused on how standards such as IRMA can be used as a proxy for national mining indicators (via compliance/certification), and how IRMA provides a way to enhance dialogue with industry and mining stakeholders on key sustainability issues. Governments can play a role in incentivizing mines to use IRMA as a way to meet the expectations of communities and civil society and also enhance the positioning of their jurisdiction to global purchasers.[17]

15 Other standards require only reporting and benchmarking, but not change where there is a gap (information obtained from IRMA)
16 Information obtained from IRMA
17 Information obtained from IRMA

shutterstock/Phawat

MINERAL SUPPLY CHAIN REPORTING / RESPONSIBLE MINERAL SOURCING

The large international mining and metals groups[18] have diverse operations across several countries. These groups interact with the environment and society in complex ways. The energy and material used in the mining operations are often sourced from different regions creating a complex supply chain of several companies. The end product of the mining process is frequently sent to consumers living on the other side of the globe, following refining and manufacturing in yet other places. In this global context, mining companies normally apply both voluntary sustainability reporting frameworks and comply with the applicable national regulatory requirements for sustainability reporting.

It is beyond the scope of this report to dive deeply into the reporting aspects of the supply chains of mining companies, or the reporting of end user production companies. It is, however, appropriate to discuss some specific elements of the mineral supply chain which link to sustainability reporting of mining companies to provide a further context of the increasing demand on transparency of mining companies but also to provide an insight into the complexities involved in the wider mineral supply chains.

This chapter has two key focuses. On the one hand, the chapter looks at the reporting of mining companies of their own supply chain (sustainable procurement) with a specific focus on the increasingly important topic of local procurement in mining and the associated reporting practices. On the other hand, the chapter explores the wider mineral supply chain, focusing on initiatives for responsible mineral sourcing and their contribution to pressure on mining companies to disclose their sustainability impacts at the mine-site level. The chapter concludes with a specific look at traders in the mineral and metals sector, and the current lack of transparency of their operations. While discussing the topic of the mineral supply chain this chapter also provides examples of how the different sustainability initiatives that concern responsible mineral sourcing connect to the SDGs, in particular SDG 8, 12 and 16.

Mining Companies' Supply Chain (Sustainable Procurement) Reporting

Before turning to the reporting aspects of the wider mineral supply chain and Responsible Sourcing Programs, it is relevant to first consider some core elements of a mining company's own procurement of materials and services, as demonstrated on the left part of Figure 3, by the ICMM.

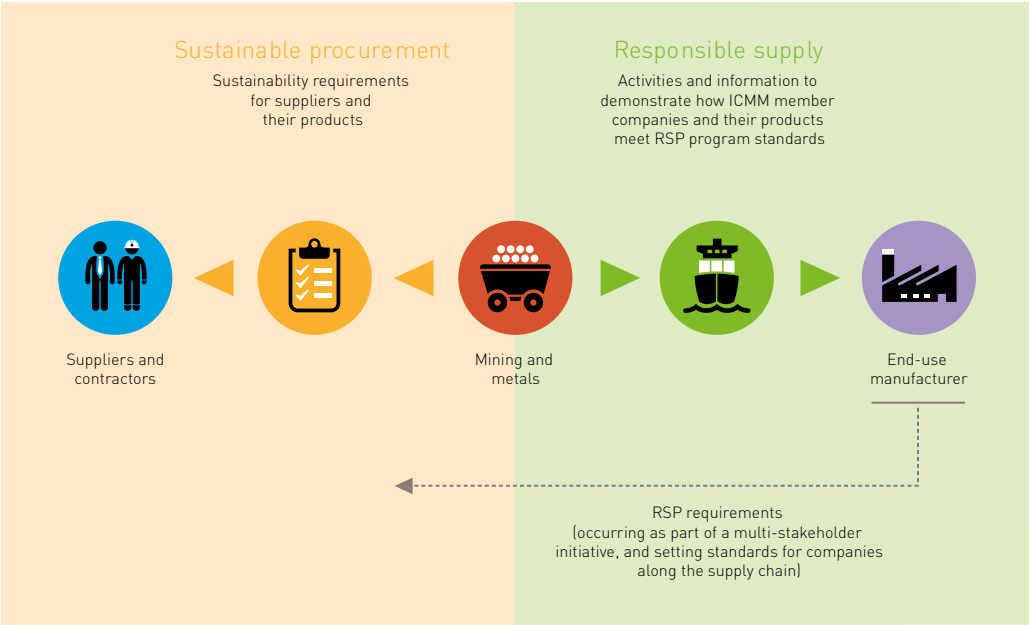

Figure 3: The scope of responsible sourcing [104]

18 Including BHP, Rio Tinto, Vale, Glencore and Anglo American. See list under https://www.consultancy.org/news/145/the-40-largest-mining-companies-in-the-world

Recent years have seen a growing emphasis on the transparency of the sustainability impact of the supply chains of mining companies as part of the overall, positive and negative impact, of mining companies in the context of sustainable development. Reporting on supply chain management is included in key sustainability reporting frameworks and industry initiatives used by the mining industry such as the frameworks of GRI, SASB, the ICMM Principles and the Responsible Gold Mining Principles of the World Gold Council.

To take an example, the Responsible Gold Mining Principles (RGMPs) of the World Gold Council (WGC) require WGC member companies to adopt and publish a Supply Chain Policy. WGC members are required to support their contractors and suppliers to apply sustainability standards that are comparable with their own standards, such as in areas concerning ethics, health and safety, human rights and the environment.[19] Public reporting on the mining company's sustainability performance, as well as of its supply chain, are part of the requirements of the RGMPs.[20]

Social and economic benefits of transparent local procurement in mining

When looking at the economic benefits derived from a mining project to the local community, local procurement, such as payments to local suppliers of goods and services usually represents more than half of all in-country payments associated with a mining project over the life cycle of the project. [105] Local procurement is also an important tool to generate indirect jobs in the supply chain of a mining project.

The growing interest in local sourcing of goods and services is likely to be further strengthened by the effects of the COVID-19 pandemic which has upended global supply chains and forced mining companies to rethink how they organize their supply chains. Although local procurement may be associated with higher upfront costs (such as for training of local workers) it may be economically beneficial in the long run and help secure business continuity in case of a health crisis. The COVID-19 crisis is pushing mining companies to re-calculate the optimal balance of local versus global sourcing, considering their supply chain's vulnerability to health crises. [106]

Policies for local procurement

Local procurement policies can be an effective tool for governments to ensure that the country and host communities benefit from mining projects. Such policies can also limit the dependency on royalty and tax payments. Focusing on local procurement is also in line with SDG 8, which includes inclusive economic growth, full employment and decent work for all.[21] The potential contribution of the mining sector to SDG 8 is demonstrated in Figure 4, which is obtained from the publication *Mapping Mining to the Sustainable Development Goal: An Atlas* (this publication is discussed further in Chapter 3).

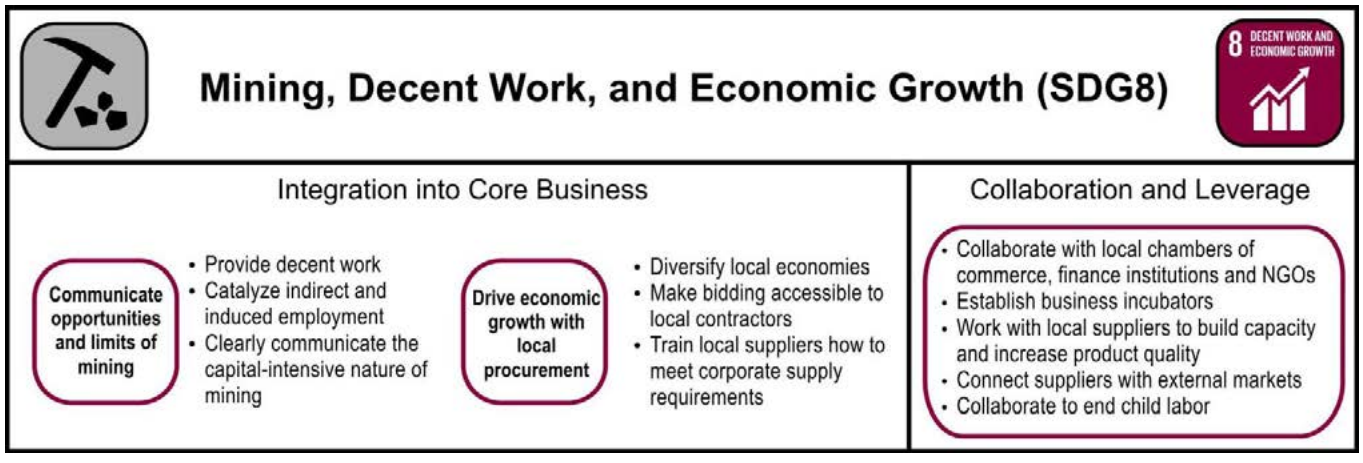

Figure 4: Examples of how mining can contribute to SDG 8 [107]

19 See Principle 3.1 of the RGMPs, available on: https://www.gold.org/about-gold/gold-supply/responsible-gold/responsible-gold-mining-principles
20 See Principle 1.7 of the RGMPs (Accountabilities and reporting)
21 For more information on SDG 8 see https://sustainabledevelopment.un.org/sdg8

Promoting local procurement can also help governments and mining companies gain and maintain host community acceptance for mining projects and can help mining companies keep their social license to operate. [108]

Although increasing in popularity and relevance, local procurement practices are not without risks. For example, local procurement in the mining sector can be associated with corruption, if proper processes and reporting are not in place. In an effort to help governments address this risk the EITI has promoted increased transparency on payments for local goods and services to combat the corruption risk that is often associated with procurement policies. At least 24 EITI countries were reporting on their local procurement in 2018. [109] The EITI has also started to more proactively encourage reporting on the procurement practices of extractive industry companies. At the EITI's October 2019 Board Meeting in Addis Ababa, the board agreed to start sharing disclosure practices on supply and service contracting. [110]

According to the EITI it is estimated that 90% of resource-rich countries have adopted a form of local content policy. [109] South Africa and Ghana are examples of countries where local procurement in the mining sector has been formalized in mining regulations. [108] Definitions of local content, and the ways to integrate the topic in covered in policies, regulations, and individual contracts, vary between countries but typically the goal of the policies and provisions include increasing local employment and economic development, facilitating technology transfer and increasing training for local staff. [108] There are many pre-conditions that are needed for policies on local content in mining to be successful, as outlined by in the 2019 IISD/IGF publication *Local Content Policies in the Mining Sector.* [108] These include areas such as regulatory enforcement, monitoring and evaluation, establishing partnerships with mining companies and local communities and sophisticated reporting and data collection systems on local procurement. [108] The topic of reporting and data collection is further discussed below.

Reporting and data collection systems on local procurement for mining companies

Government reporting on local procurement relies on mining companies publicly disclosing the relevant information but so far mining companies have not been sufficiently transparent on the subject. According to the Responsible Mining Index 2020, which evaluated 38 mining companies, about half the companies publicly disclosed some information on their national and international procurement practices but with very limited information disclosed. [111] Sustainability reporting frameworks such as the GRI Standards include guidance on key performance indicators to include on local procurement. However, mining companies rarely include this information at the mine-site level [109], where it is most relevant to communities and governments, and there is a lack of standardization of how mining companies report on their local procurement practices.

The Mining Local Procurement Reporting Mechanism

Created in 2017 by the Mining Shared Value initiative of Engineers Without Borders Canada, *The Mining Local Procurement Reporting Mechanism* (LPRM) [112] provides a set of disclosures in an effort standardize how mining companies and host countries measure and discuss local procurement, with a focus on reporting at the mine-site level. More specifically, the LPRM helps mine sites report on local procurement to:

- "Improve internal management in mining companies to create more benefits for host countries and to strengthen their social license to operate.
- Empower suppliers, host governments, and other stakeholders with practical information that helps them to collaborate with mine sites.
- Increase transparency in the procurement process to deter problematic practices such as corruption." [112]

The LPRM provides disclosures for mining companies for local procurement in the following areas: Context for disclosures on local procurement (LPRM 100), procurement systems (LPRM 200), local procurement spending (LPRM 300), local procurement due diligence (LPRM 400), methods to incentivize local procurement (LPRM 500) and external commitments and obligations (LPRM 600). [112] In line with the increasing focus of gender equality in the mining sector, the LPRM places specific focus on encouraging procurement from under-represented groups, such as women, through disclosure 507.

Mindful of the "reporting burden" felt by certain mining companies and mine sites the LPRM emphasizes integration with existing reporting frameworks and standards such as GRI and IFC as well as in initiatives by mining industry associations such as the ICMM and the Mining Association of Canada's TSM Program. Governments are also encouraged to refer to the LPRM in their relevant regulatory frameworks. [112]

Responsible Mineral Sourcing – Implications for Transparency in Mining

There has been growing pressure for responsible sourcing of minerals for products such as jewelry, computers and mobile phones. The pressure has emerged both from increased media focus on human rights and environmental concerns associated with mining, increasing legislative pressure and more awareness among consumers. Companies involved in the mineral supply chain, have started to respond to these concerns by informing their stakeholders of their efforts in ensuring responsible sourcing of minerals and metals used in their products and through participation in certification and assurance programs. [113] These developments have contributed to the pressure on mining companies to effectively disclose their environmental and social impacts, as well as the impacts of their own supply chain, as discussed above.

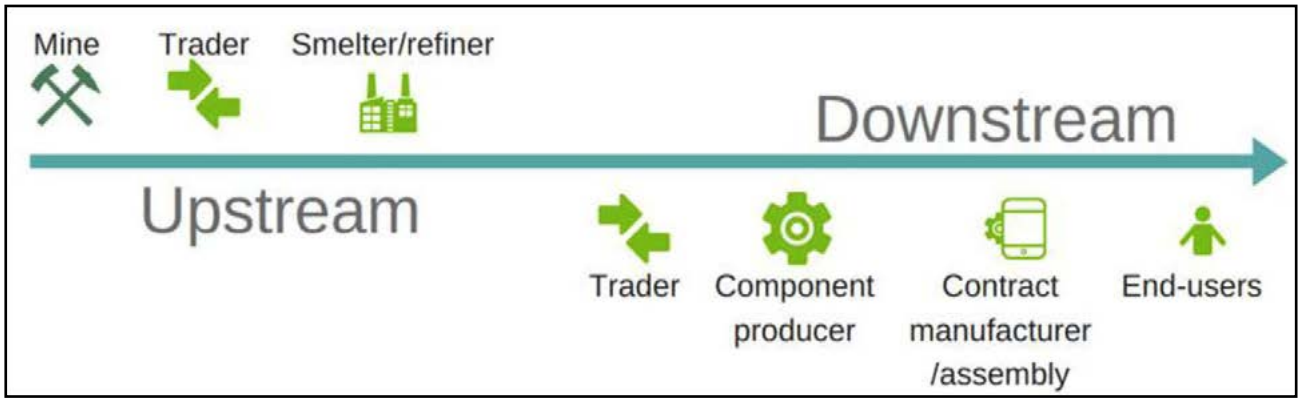

Figure 5: Key parts of the mineral supply chain [114]

Figure 5 shows the key parts of the upstream and downstream mineral supply chain from mining operations to end-user companies. The reality is of course a much more complicated and international mix of actors, including intermediaries, agents and transporters. A key point of the mineral supply chain is found at the smelter or refiner (SOR) level. SORs are relatively few in number compared to upstream suppliers and downstream users and they are in a position to know the origin of minerals before they are processed and distributed to a large number of downstream users. [115] The Responsible Minerals Initiative specifically focuses on enhancing transparency of the minerals supply chain at the SOR level. In addition to SORs, transparency at the trading level is also important for visibility on the origin of minerals, the lack of transparency at the trading level is discussed later in this chapter.

Responsible mineral sourcing is an important part of SDG 12 on responsible consumption and production. As reflected in the report *Mapping Mining to the Sustainable Development Goals: An Atlas* "companies can collaborate with governments and across the supply chain to support a circular economy to minimize inputs to waste from the mining process and to increase the reuse, recycling and repurposing of raw materials and products to improve sustainable consumption." [107]

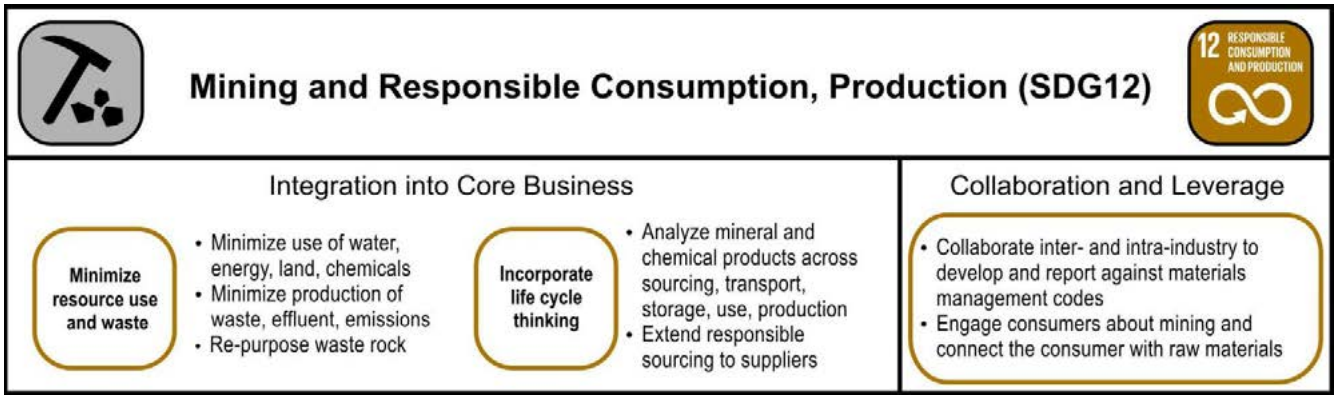

Figure 6: Mining and Responsible Consumption and Production (SDG 12) [107]

The following sections look further into key initiatives, guidance and regulations for responsible mineral supply chains and their connections (and lack thereof) with the reporting of mining companies.

OECD Due Diligence Guidance for responsible mineral supply chains

The OECD Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict-Affected and High-Risk Areas (the "OECD Minerals Guidance") [116] provides detailed guidance to help companies respect human rights and avoid contributing to conflict through their mineral purchasing decisions and practices. The Minerals Guidance is particularly relevant for those companies that are potentially sourcing minerals or metals from areas affected by conflicts or risks linked to political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure or widespread violence. The Guidance recognizes the important role extractive industries can play in economic development, supporting livelihoods, and generating tax revenue in such areas. It therefore recommends identifying and mitigating risks related to human rights, corruption and business integrity rather than avoiding high-risk areas altogether. The OECD Guidance has been referenced in a number of international declarations, regulations and initiatives, including the relevant US and EU regulations (discussed in this chapter) and Chinese Supply Chain Guidelines that are discussed in Chapter 6 (section on China). [117] The OECD Guidance comprises 5 steps that are outlined in Figure 7.

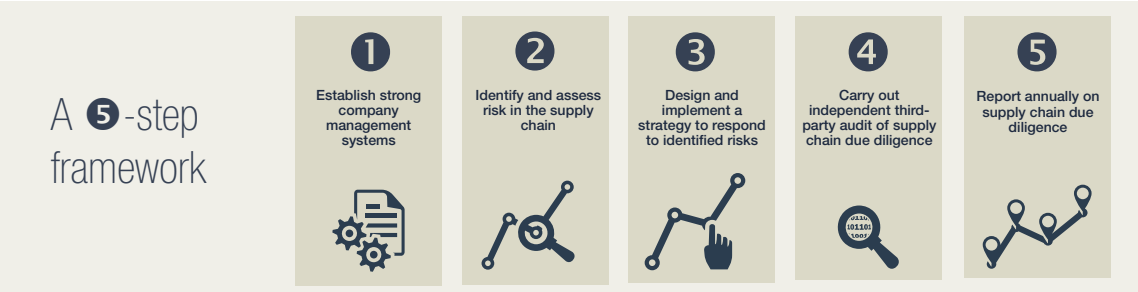

Figure 7: The 5 Steps of the OECD Guidance [118]

The OECD Minerals Guidance does not explicitly reference environmental risks. However, it is part of a group of OECD instruments for responsible business conduct, including the MNE Guidelines and the Due Diligence Guidance for Responsible Business Conduct (the "General Guidance"), which do include environmental risks, encourage sustainability reporting, and are applicable to all sectors and industries (with a focus on companies' operations as well as their supply chains). Within this normative framework, the Minerals Guidance functions as a tool for prioritization for supply chains that originate in or transit conflict-affected and high-risk areas.

The Minerals Guidance can also be a point of entry for greater consideration of environmental risks in producing regions through a supply chain due diligence approach. This may be particularly relevant to

mineral production and trading models that have been subject to less environmental scrutiny in the past but have recently become more prominent due to human rights concerns. Since Amnesty International and Afrewatch's 2016 publication of *This is What We Die For* focusing on child labour risks in cobalt production in the Democratic Republic of the Congo [119], several studies have examined the environmental and health dimensions of cobalt production, particularly in the artisanal and small-scale mining (ASM) sector. [120] [121] [122]

The OECD Minerals Guidance's appendix *Suggested measures to create economic and development opportunities for artisanal and small-scale miners* provides recommendations to companies for responsibly engaging with this sector. In particular, the process of formalizing ASM entails significant opportunities for building environmental controls into mining operations. Indeed, several ASM sites in the DRC's Copperbelt region have started to formalize to varying degrees, variously instituting measures related to personal protective equipment, dust control, water use, waste management and radiation. [123] Cobalt is a critical material for many rechargeable battery configurations and, by extension, the transition to more sustainable mobility. While still early in the development of formal and responsible cobalt ASM supply chains, the integration of both human rights and environmental measures as part of pilot formalization processes may comprise an important part of a just transition that transcends the full length of the supply chain. Responsible engagement and formalization of ASM also provide opportunities for reducing the use of mercury in artisanal and small-scale gold mining.

Conflict minerals in US and EU regulations and the SDGs

Regulations on responsible minerals have emerged in recent years, including in the US and the EU, which refer to the OECD Minerals Guidance. The introduction of these regulations is part of the increasing pressure on mining companies to ensure environmentally and socially responsible operations and effectively communicate their performance to their stakeholders, including the relevant companies in their downstream supply chain.

US Dodd-Frank Act

The US Dodd-Frank Act of 2010 entered into force in 2014. Section 1502 of the Act requires US publicly listed companies to check their supply chains for tin, tungsten, tantalum and gold, if they might originate in the Democratic Republic of Congo or an adjoining country. The US Securities and Exchange Commission (SEC) adopted a final rule for section 1502 of the Dodd Frank Act in 2012. [124] According to the rule, companies are required to address identified risks of potential funding of conflict or human rights abuse and publicly report on their efforts annually to the SEC. It is recommended that companies employ due diligence systems aligned with recognized international or national frameworks, such as the OECD Minerals Guidance to understand whether there are conflict minerals present within their supply chains, and if so they should take corrective actions and report on the results. [125] However, enforcement of the Act has been limited due the SEC's decision not to enforce the law, which followed a threat of US President Trump in 2017 [126] to suspend Section 1502 of the Act on the claim that it violated the US Constitution.

In terms of the US Dodd-Frank Act´s direct impact on the sustainability reporting of mining companies, it is important to note that the Act does not oblige listed companies to identify the mine or location of origin [115] and therefore there are limits to the Act's direct impacts on the reporting of mining companies.

According to the Responsible Sourcing Network's 2019 Mining the Disclosures Report US companies are generally not reporting according to the intent of the legislation and the quality of disclosure has declined following the SEC's decision not to enforce the Act. [127]

EU Mineral Supply Due Diligence Regulation

The EU Mineral Supply Due Diligence Regulation [128] was passed in 2017 and will be enforced in 2021. The Regulation will require that EU importers of tin, tantalum, tungsten and gold (3TG) to ensure they import these minerals and metals from responsible and conflict-free sources only. The Regulation will apply to up

to 1,000 EU importers and will indirectly affect about 500 smelters and refiners of 3TG regardless of whether they are located in the EU or not. The affected companies will need to identify, manage and report on the risks (potential and actual) linked to conflict-affected and high-risk areas identified in their supply chains (including human rights risks such as child labour, sexual violence and disappearance of people). The EU Regulation refers to the OECD Minerals Guidance discussed above. [129]

The requirements of the EU Regulation differ depending on where companies are located in the mineral supply chain. To provide an example of requirements, importers of minerals and metals should list the minerals they import and provide the names and addresses of their suppliers. [129] When minerals originate from conflict-affected and high-risk areas, importers must provide additional information, including on the mine of origin. [129] The Regulation therefore directly impacts mining companies operating in conflict-affected and high-risk areas and can be expected put pressure of increased human rights disclosures at the mine-site level. The EU Regulation is therefore stricter in its requirements than the US Dodd-Frank Act.

Conflict minerals and SDG 16

The issue of conflict minerals specifically connects to SDG 16 on Peace, Justice and Strong Institutions as demonstrated in the publication *Mapping Mining to the Sustainable Development Goals: An Atlas*, see Figure 8 below on SDG 16, which puts a focus on the prevention and preemption of conflict in mining operation and the mineral supply chain.

Figure 8: Mining and Peace, Justice and Strong Institutions (SDG 16) [107]

Within SDG 16, target 16.4 is particularly important for the issue of conflict minerals. Target 16.4 calls to "significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets, and combat all forms of organized crime" by 2030. [130] Enhancement of transparency in the mineral supply chain and due diligence are an important contribution to Goal 16. As stated in *Mapping Mining to the Sustainable Development Goals: An Atlas*:

> *"By actively combating mining-related illicit financial flows through disclosure and reporting, mining companies can encourage transparency and avoid undermining the integrity of public institutions. Mining companies can also ensure they do not endanger peaceful societies by preventing company-community conflict, providing access to information, human rights, supporting representative decision-making and carefully managing their security approaches to ensure they decrease rather than increase the likelihood of violence or conflict." [107]*

VSIs for Responsible Mineral Sourcing (Responsible Sourcing Programs)

In addition to national and sub-national regulations and guidance, the increasing focus on transparency of the supply chain of the mining sector has been accompanied by various VSIs, which cover a specific or several commodities. The initiatives commonly include a process for assurance of responsible mineral sourcing, and in some cases also a certification process. The VSIs target different parts of the mineral value chain, some are directly aimed at the mining activities of companies while others also cover the stages of refining, trading and use of the minerals by manufacturing companies.

Although VSIs are voluntary in nature, government regulation is a major driver of the uptake of mining VSIs. In some cases, the use of VSIs are mandated through government legislation and in others they may be used to show corporate efforts to enhance sustainable development. [90] The interaction between government regulation and VSIs is discussed in Chapter 4.

Examples of VSIs that focus on responsible mineral sourcing, also referred to as 'Responsible Sourcing Programs', are listed in Table 3. The initiatives all include a reporting element in their standards or guidance material. The selection of VSIs in Table 3 is largely aligned with the VSIs in large-scale mining discussed in the context of government policies and sustainability reporting in Chapter 4.

Organization	Key material	Key focus
Initiative for Responsible Mining Assurance	Standard for Responsible Mining and Certification (as of 2019) Focus on mine-site level (the Standard covers all types of commodities). [91]	Mine-site
World Gold Council	Responsible Gold Mining Principles and Assurance [131] and Conflict-free Gold Standard [132]	Mine-site and corporate level
Responsible Minerals Initiative	Due Diligence Guidance for Minerals (3TG and others) [133] and Assurance Process [134]	Smelters and refiners
Aluminium Stewardship Initiative	Performance Standard [135] and Assurance Manual [136]	Full supply chain
Responsible Jewellery Council	Code of Practices [137]	Full supply chain
Bettercoal	Bettercoal code [138] and Assurance System [139]	Full supply chain
Fair Stone	Fair Stone Standard [140]	Full supply chain
International Cyanide Management Institute	International Cyanide Management Code for the Manufacture, Transport, and Use of Cyanide in the Production of Gold (Cyanide Code) [141]	Mining companies (mine-site operations and transportation)

Table 3: Examples of VSIs for Responsible Mineral Sourcing

Some of the examples of VSIs in Table 3 target the companies in the wider supply chains of minerals sourcing, while organizations such as the Initiative for Responsible Mining Assurance, the World Gold Council and the International Cyanide Management Institute, have provided standards and processes that specifically target mining companies and their operations. It can be expected that the initiatives that focus specifically on the mining operations will help in enhancing the level of sustainability reporting quality of mining companies and guide the focus of their reporting efforts to meet these standards.

Lack of transparency of commodity traders in the mineral value chain

Commodity traders are critical actors in the commodity value chains as their role is to move commodities from suppliers to customers. Despite the importance of commodity trading, there is limited transparency of commodity trading activities, such as on payments that traders make to governments in exchange for, oil, gas and minerals. [142] In light of recurrent cases of corruption associated with commodity trading [143] there are growing demands for enhanced transparency on trading activities from stakeholders of traders, such as shareholders, lenders, civil society and journalists. [142] The EITI has been active in addressing this issue in the last years in collaboration with global traders (including Glencore, Trafigura and Gunvor), mining companies and civil society. [144]

Most of the commodity trading and marketing companies in the minerals and metals sector are privately held and therefore not obliged to disclose their economic results, or environmental and social impacts. There are a few exceptions such as Glencore and Noble Group which are public companies and therefore publish their financial results as well as information on their sustainability performance. [143] Typically a sustainability focus of a trading company would be on responsible sourcing, i.e. managing environmental and social impact in its supply chain. This is, for example, the case for Noble Group which identifies the supply chain as its most material topic in its sustainability report. [145] Glencore on the other hand is active throughout the mineral supply chain and operates its own mines as well as supplying minerals and metals to end customers (from its own mines as well as third-parties). [146] Glencore's sustainability focus is therefore both on the environmental and social impacts of its mining operations as well as on responsible sourcing. [147]

Although traders are generally operating with limited transparency on financial and non-financial aspects, they are increasingly subject to enquiries from financial institutions on their transactions as well as their general corporate profile and policies. These enquiries are part of the regulatory compliance due diligence of banks (such as for anti- money laundering and counter-terrorism financing) but also to fulfil internal policies of the banks, sometimes concerning environmental and social topics to respect the bank's own sustainability commitments. Banks may refuse financing in case of insufficient or unsatisfactory information. [148] Although trading companies are increasingly supplying sustainability related information, this information is rarely made public and therefore not valuable for the wider transparency of the mineral value chain.

Another important recent development in enhanced transparency of trading in the mineral value chain, is the introduction of the London Metal Exchange (LME) of responsible sourcing requirements, for all its listed brands, in October 2019. [149]

As a means to raise awareness and build capacity on responsible extractives value chains, the Responsible Mining Foundation is conducting a Responsible Extractives Trading (RET) study. [150] The study assesses, based on publicly available information, a geographically dispersed set of companies trading in minerals, metals, oil and gas in relation to their policies and practices on human rights due diligence, business integrity, financial integrity, and environmental due diligence. The RET study, to be published in 2021, will support implementation of the international guidance on responsible supply chains mentioned above and the Swiss government's guidance for the commodity trading sector on implementation of the UN Guiding Principles on Business and Human Rights (see Chapter 5). The Responsible Mining Foundation, a Swiss-based independent research organisation, encourages continuous improvement in responsible extractive value chains by developing tools and frameworks, sharing public-interest research results and data, and enabling informed and constructive engagement between companies and other stakeholders.

GOVERNMENTS AND SUSTAINABILITY IN THE MINING SECTOR

In order to advance the sustainability performance and transparency of the mining sector, and to help provide the broader context for national sustainable development priority and challenges, governments have an important role to play. There are several ways in which governments can be more proactive in terms of directing or guiding mining companies towards enhanced sustainability. Tools that governments can use in this effort include the Sustainable Development Goals and making better use of results of Environmental Impact Assessments to inform mining companies' efforts towards improving their management of environmental and social issues as well as their reporting. This chapter looks more closely into these areas and introduces how the EITI has moved to include environmental issues in its work with governments and extractive (including mining) companies.

The Sustainable Development Goals (SDGs)

The UN 2030 Agenda for Sustainable Development and the associated Sustainable Development Goals (SDGs) is a plan of action for people, planet and prosperity. [151] The SDGs, which national governments committed to attain by 2030, provide an ambitious set of targets for improving global environmental sustainability, economic development, social cohesion and human development. The COVID-19 pandemic, which is fundamentally affecting the world's economies and societies, is expected to increase poverty and inequalities at a global scale, is further increasing the urgency of achieving the SDGs. [152]

Although governments formally committed to attaining the SDGs, it is clear that success can only be achieved through a global partnership of governments, the private sector, civil society organizations and other stakeholders. While businesses did not formally commit to the SDGs, their views were considered, notably through industry associations, in the multi-stakeholder consultation process leading up to the formalization of the goals. [153] The lines between the roles and responsibilities of the public and private sectors in SDG related areas, such as health, human rights, infrastructure and water and food sustainability, have become increasingly blurred providing new opportunities for public-private partnerships for advancing the SDGs. [154]

It is, however, important to highlight that the reporting of progress towards the SDGs is officially done by governments as the SDGs are designed for the country level and not for assessing the sustainability performance of companies. It is up to each government to determine how the input from other national actors, such as businesses, is gathered and whether that input is formalized through action plans, mandated through regulation, or encouraged. Innovative approaches, such as using open data principles for sharing information between governments and companies should be considered for advancing meaningful reporting on the SDGs. Governments can help companies by identifying and providing the data for determining a baseline for corporate sustainability reporting, such as data relating to air quality, water availability, labour statistics and information on local suppliers. And companies, in turn, can supply governments with the relevant data for reporting on the SDGs.

Although the SDGs only came into effect in 2016, a PwC study from 2018 found that 72% of mining and metals companies already mention the SDGs in their sustainability reporting and 54% of the companies mention the goals in their business strategies. [155] When considering disclosure of meaningful Key Performance Indicators (KPIs), across all sectors, only 23% of the surveyed companies linked their targets to the SDGs. [155] While the increasing reporting of companies against the SDGs is a generally positive trend, there is a risk of 'SDG-washing' as companies determine the focus of SDG reporting, including which goals to focus on, and may omit mentioning negative impacts that could hamper the achievement of the goals. [34] Governments can play an important role in guiding or directing mining companies on which goals and related issues are of most relevance to local priorities and context.

The SDGs are relevant to the mining sector in a number of ways, as shown through the examples of SDG 8, 12 and 16 in the previous chapter. In the previously quoted publication *Mapping Mining to the Sustainable Development Goal: An Atlas* [107] the linkages between mining and the SDGs are explored as well as the broader role of mining and the private sector in sustainable development. The publication is divided into

chapters on each of the SDGs with a discussion on the contributions the mining sector can make to achieving the SDGs, the opportunities and challenges as well as relevant case studies from mining companies.

Figure 9 provides an overview of the key overlap between mining and the SDGs.

Figure 9: Major Issue Areas for Mining and the SDGs [107]

As outlined in the Atlas, mining companies can use the SDGs to validate their current efforts towards sustainable development and stimulate innovation. The document also emphasizes that successful incorporation of the SDG will be facilitated with partnership between businesses, governments, communities and civil society. [107]

Building on the Atlas, a subsequent publication, Mining and the SDGs: a 2020 status update[22], provides an up-to-date report on how mining companies are currently: (1) developing opportunities to contribute to the SDGs; (2) avoiding and mitigating their risks of impeding achievement of the SDGs; (3) integrating and prioritising the SDGs within their corporate strategies; and (4) reporting on their positive contributions to, and negative impacts on, the SDGs. The report presents recommendations for mining companies on practical steps they can take to improve their contributions to the SDGs and their impact reporting.

An innovative project was initiated by the government of Colombia in 2018 where the private sector's, including mining companies', contribution to the SDG was analyzed. The results were reported as part of the 2018 National Voluntary Review of the SDGs. Further information can be found in Chapter 5.

22 Available in September 2020 on www.responsibleminingfoundation.org/mining-and-the-sdgs

Corporate Sustainability Reporting in the SDGs

SDG 12 on responsible consumption and production is of particular relevance to the private sector. Target 12.6 requires UN Member States to "encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle." [156]

One of the indicators associated with target 12.6, indicator 12.6.1, states that governments should report on the "Number of companies publishing sustainability reports." As of September 2019, there is a methodology available to assist governments in reporting on the indicator, [157] including guidance on what minimum information should be included in a report to be counted towards the indicator as well as a proposed partially automated government reporting process involving a global reporting platform. Awareness raising and testing of the methodology will take place in the course of 2020.

With the aim of providing governments with relevant information on assessing the private sector contribution to the SDG implementation, and assist in reporting on SDG 12.6.1, UNCTAD published the *Guidance on core indicators for entity reporting on contribution towards implementation of the Sustainable Development Goals* in 2019. [158]

An important effort has also been made by key sustainability reporting frameworks to map how their different disclosures and indicators relate to the SDG, and thereby help reporting companies focus their sustainability efforts and reporting towards attaining the SDGs. Examples of relevant publications include the SASB *Industry Guide to the Sustainable Development Goals* (2020) [159]and the *SDG Compass of GRI*, the UN Global Compact and the World Business Council for Sustainable Development (2015). [160]

EIAs as Part of the Government Approval Process for Mining Projects

As discussed earlier in this report, when considering the environmental and social impact of the mining process the mine-site (project), and its surroundings is of key concern. Most countries require an environmental impact assessment (EIA) in the government permit process for mining projects. EIAs are a point of entry for governments to determine whether a mining project should be allowed or not.

EIAs are in some cases integrated with social impact assessments and are then often called environmental and social impact assessments (ESIAs) and in some cases social considerations are considered within EIAs. [161] EIAs originate from the 1970s and are primarily focused on identifying future environmental, and generally also social, consequences of a current or proposed action, such as a project. An important part of the EIA process is public consultation. An EIA in the mining sector is usually conducted by the mining companies that plan to establish a mining project which is subject to government approval, including an environmental permit. National regulations for EIAs vary widely between countries which leads to a lack of comparability between projects.

A related and more recent type of EIAs is a Strategic Environmental Assessment (SEA) which focuses on a higher-level adoption of a plan, project or policy by the government. [161] As opposed to EIAs, which are conducted by private entities, such as companies, SEAs are conducted by governments and generally require a high degree of government ownership in the proposed plan or project. At least 40 countries have a formal SEA process in place, including all EU member states. [161] The use of the terms EIA, ESIA and SEA differ between countries depending on definitions in national regulations. Here the focus is on EIAs that are prepared by companies for government approval, and include both environmental and social impacts.

EIAs are generally not intended to assess compliance with a specific environmental, or social, standards but rather to ensure that all critical information on the future impact on the environment as well as the affected communities, is made available and considered in the decision-making process and public consultations. Government processes around EIAs take account of the national context, e.g. in Mexico a public information meeting must be held in case such a meeting is requested by anyone impacted by a mining project.[23]

23 Information obtained from the Mexican Ministry for the Environment and Natural Resources

Despite the tendency of national regulation to provide for EIAs in the government approval process for mining projects, the choice of methods and tools to quantify the impacts of the project is generally left in the hands of mining companies. This leads to varying standards for measurement and limits comparability of environmental and social impact management between projects. [162] Another important factor to consider is that governments most often assess financial revenues and the environmental and social impacts of mining projects through separate processes. This forces them to weigh economic benefits against their environmental and social impacts in their decision-making process instead of having a complete overview of the existing tradeoffs and thus being able to make more informed decisions. [162] In light of urgent global challenges such as climate change and water scarcity, it is becoming ever more pertinent that governments evaluate new mining projects more broadly in the context of sustainable development. It is therefore essential that economic as well as social and environmental factors are considered in an integrated way, right at the outset of a project and through its lifetime as well as post-closure. A more integrated assessment can help policymakers and the various stakeholders of mining projects make more informed decisions on whether a mining project should take place and if so under what conditions. [162]

In line with the general lack of environmental and social reporting at the level of mining projects there is currently little relationship between the content of EIAs and the disclosed environmental and social indicators in corporate sustainability reports. This is an area where public policy could play a larger role, such as in enhancing the link between the outcomes of EIAs and broader environmental, social and economic goals and initiatives relating to sustainability at the national level. [163] A more systematic approach to sustainability assessments, including guidance, at the international level could also help in providing a global benchmark for sustainability of the mining sector. This could assist in harmonizing national EIA legislation as well as help mining companies provide the most relevant data in their sustainability reporting.

Sustainability Initiatives Collaborating with Governments – Examples of IGF and GRI

There are various forums that governments can use to exchange and explore ideas to further sustainable development and the environmental and social responsibility of the mining sector. Box 3 and 4 provide overviews of two of these forums, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) and GRI's Governmental Advisory Group. Although the latter is not mining sector specific, it primarily addresses the topic of sustainability reporting and may therefore be of interest to governments that look to enhance the sustainability reporting of mining companies operating in their countries.

Box 3: The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF)[24]

The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) supports more than 75 nations committed to leveraging mining for sustainable development to ensure negative impacts are limited and financial benefits are shared. [164] A voluntary initiative, the IGF was established following the 2002 World Summit on Sustainable Development in Johannesburg in South Africa. The IGF creates an opportunity for national governments with interest in mining to collaborate to advance the priorities identified in the Johannesburg Plan of Implementation (which includes promoting transparency and accountability for sustainable mining and minerals development [165]), and, more recently, the UN Sustainable Development Goals and Agenda 2030. [166]

IGF member efforts are framed in the IGF Mining Policy Framework (MPF) [167] which sets out objectives and processes for good governance. The MPF is a non-binding policy guidance tool that lays out international best practice in six key pillars[25] of mining law and policy. [167]

The MPF offers a platform for developing national policies that promote consistency and transparency across national jurisdictions. A comparative analysis of the SDGs against the MPF will be used as a basis for a proposal to update the MPF. [167]

The International Institute for Sustainable Development (IISD) has served as secretariat for the IGF since October 2015. The IGF secretariat includes experts in economics, law, policy, geology, and environmental management. [168] The secretariat conducts assessments on member practices against the MPF, at the request from IGF members. The first assessments were carried out in 2014 in the Dominican Republic, Madagascar and Uganda. Based on the success of these evaluations, assessments are conducted every year in response to member requests. The results of the assessments are published on the IGF website to help governments focus their effort in implementing the MPF, to inform capacity building and monitor progress. [169]

Box 4: GRI's Governmental Advisory Group[26]

GRI recognizes the essential role of policy makers in achieving transparency and sustainable development. Both governments and GRI have a shared interest in ensuring that GRI's activities help support government-agreed goals and are optimally supported and utilized by public agencies.

For this reason, in 2007, GRI developed the so-called Amsterdam Declaration where it was announced that the organization would engage with governments in their role as policy makers, funders, stewards of the public good, owners of state-owned companies, investors, and procurers. As more than 100 government officials joined the 2008 GRI Conference, the idea of the GRI Government Advisory Group was first formed.

The Group serves a high-level function to advise and provide feedback to GRI's Board and Executive Management, as well as a direct source for strategic governmental relationship building. It allows members to stay up to date on the latest developments around sustainability reporting, to provide insights to the development of GRI's activities and Standards, and to engage with other policy makers to further drive their agenda on responsible business conduct in a collaborative manner.

For more than 10 years, this group has championed the role of governments in advancing transparency. It is instrumental to GRI's leadership and strategic direction on policy and regulation on sustainability reporting, the development of the GRI Standards, and thematic work such as the SDGs.

24 The information in Box 3 was contributed by the IISD
25 Legal and Policy Environment, Financial Benefit Optimization, Socioeconomic Benefit Optimization, Environmental Management, Post Mining Transition and Artisanal and Small-Scale Mining
26 The information in Box 4 was contributed by GRI

The EITI's Growing Role in Enhancing Transparency of the Environmental Impact of the Extractive Industries

Chapter by the Extractive Industries Transparency Initiative (EITI)

Based on the principle that a country's natural resources belong to its citizens, the EITI promotes the open and accountable management of oil, gas and mineral resources. The EITI Standard implemented by 53 countries requires government disclosure of information along the extractive industry value chain, from licensing to extraction. Disclosure requirements include how extractives operations are being managed, how revenue makes its way through to government, and how it contributes to the economy and wider society. The Standard is implemented at the national level, where multi-stakeholder groups oversee implementation and ensure it is aligned with national priorities. Although national governments are responsible for reporting to the EITI extractive companies, including mining companies, are at the core of the EITI process as they provide data for government reporting.

Update of the EITI Standard to reflect environmental aspects

In 2019, the EITI Standard was revised to reflect emerging practices in implementing countries. The standard already included requirements related to reporting on significant environmental taxes, fees or other payments related to environmental impact. A total of 37 out of the 53 implementing countries have already reported collecting environment taxes, fees or similar payments from companies. Where such payments are significant and levied by project, the EITI requires these to be disclosed by project by the end of 2020. This will provide local stakeholders with better opportunities to track payments that relate to specific projects affecting their communities.

The EITI Standard now also encourages implementing countries to disclose information on the management and monitoring of environmental impacts of extraction. The new provision covers disclosure of relevant legal provisions and administrative rules as well as actual practice related to environmental management and monitoring of extractive investments in the country. Depending on demands in each country, this can entail reporting on EIAs, certification schemes, special licenses, environmental liabilities and rehabilitation and remediation programmes. Such disclosures allow local stakeholders to improve how environmental, social and economic risks in the extractives sector are managed, enhancing the sector's potential to contribute to sustainable development.

The update of the EITI standard was a result of demand from implementing countries and proactive campaigning of global and local civil society for better information on environmental impact and risks. [170] In February 2019, more than 100 civil society organisations signed a letter to the EITI Board asking its members to support new requirements on transparency in environmental information provided by governments. [171] Industry has been increasingly supportive as the demand for ESG reporting for the extractive sector has increased drastically in the last years. To support countries and stakeholders in implementing the new provisions of the standard, guidance on environmental reporting will be developed and issued in 2020, building on existing reporting frameworks such as GRI. The EITI will also highlight and disseminate innovative environmental reporting practices in implementing countries.

Increasing emphasis on environmental disclosures in EITI countries

Implementing countries are increasingly using the EITI as a platform to monitor environmental impacts. This includes assessing whether environmental permits are issued as part of the licensing process,

whether environmental impact assessments are conducted in accordance with environmental regulations, whether companies are making environmental payments in accordance with their legal and contractual obligations. Country monitoring also concerns checks on whether agencies responsible for collecting environmental payments are efficiently performing their obligations and the adequacy of the management of environmental rehabilitation funds.

At present, information disclosed through the EITI process is not connected or linked to information included in corporate sustainability reports. The government level and corporate level reporting could, however, further connect in coming years, notably in the context of the implementation of the SDGs. Some examples of governments that, through the EITI process, have worked with industry and civil society to enhance transparency on environmental and social aspects in the mining sector include the governments of the Democratic Republic of Congo, the Philippines, Zambia and Mongolia.

The Democratic Republic of Congo (DRC)

In the DRC, concerns around the environmental impact of large mining and oil and gas projects have been repeatedly raised by civil society actors, highlighting repercussions on public health and potential risks of displacement for affected communities. The 2018 Mining Code introduced innovations around companies' environmental obligations, the implementation of which represents a priority for EITI stakeholders, as stated in the DRC EITI 2020 work plan. For the first time, the 2017 EITI Report published in December 2019 included information on coordination between government services on environmental monitoring per the legislation, as well as a description of the assessment of EIAs for the obtention of "environmental certificates", as part of the process for license awards. The report also included partial disclosures of three revenue streams, including contributions to the rehabilitation fund and fees paid to the Mining Cadastre CAMI and the Congolese Environment Agency (ACE).

Two months after the publication of the EITI Report, local NGO Oil and Mines Governance Center (OMGC) published a critical analysis of the above information. While commending disclosures around companies' contributions to the rehabilitation fund, the analysis provided concrete recommendations to encourage project-level disclosures, expand coverage of reporting to a dozen environmental payments, disclose relevant documents such as EIAs, and the audit of the revenues allocated to the rehabilitation fund.

The Philippines

In the Philippines, companies are required to undertake environment protection and enhancement activities in all stages of a mine's lifecycle - from mine exploration to mine rehabilitation. In its latest EITI Report, the country provided information about company commitments in their respective Annual Environmental Protection and Enhancement Programs (AEPEPs) and actual expenditures for these commitments. AEPEP shall approximate a minimum of 3-5% of the company's direct mining and milling costs. Additionally, other environmental expenditures, such as mine waste and tailing fees, are disclosed and reconciled. These disclosures allow stakeholders including civil society to compare whether company commitments related to environmental protection are met.

Zambia

In Zambia, concerns have been raised by stakeholders about mining company payments related to rehabilitation and the management of the Environmental Protection Fund (EPF). The fund 'lodges' contributions as deposits to be spent by the government in case of need for rehabilitation of mining areas where the mining license holder fails to do so. Companies are required under the EITI to report their payments to the EPF.

Audits conducted on the EPF by the government found that the fund was not working effectively. The audits undertaken to ascertain the extent of the environmental liability caused by each individual mining firm found that mining companies were not complying with the EPF's regulations and the majority were not paying the stipulated contributions. Zambia EITI Reports have also highlighted challenges in the oversight of the fund, and the latest 2017 report recommends improving the implementation of the EPF by setting up

a clear investment policy, appointing a fund manager and ensuring that all mining companies comply with the EPF requirements. These recommendations are being followed up by the Ministry of Mines and Mineral Development.

Mongolia

In Mongolia, mining companies are required to deposit 50% of their annual budget for execution of environmental protection work to the environmental protection account of the relevant region. This amount is refunded to the companies upon completion of their obligations in EIAs. According to the 2018 EITI Report, no refund was made in 2018. Moreover, the report provides information on the share of production areas that have been rehabilitated in 2018 as well as an overview of water and waste fees paid by reporting companies in 2018. Additionally, the report notes budgeted and actual air pollution expenses related to the coal industry, allowing stakeholders to understand whether the expenses due have been paid.

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SUSTAINABILITY REPORTING THROUGH VOLUNTARY SUSTAINABILITY INITIATIVES (VSIs) IN THE MINING SECTOR

Chapter by the International Institute for Sustainable Development (IISD)

The role of VSIs in promoting transparency through information-sharing and reporting in the mining sector

Information-sharing in the mining sector is becoming ever more important. In order to meet the diverse needs of stakeholders and regulatory authorities, mining companies must be transparent about the impacts of their activities – both at the level of the mine site, and along their often-complex supply chains. Reporting, and more generally the public disclosure of sustainability performance in mining activities, including environmental, social and governance (ESG) data, can take many different forms. It can be done by the mining companies themselves or through other platforms. As mentioned in previous chapters, in addition to public policies and laws that may require mandatory corporate reporting on sustainability issues and the financial institutions that increasingly require ESG reporting as a form of due diligence (i.e. responsible investment), there are also numerous voluntary sustainability initiatives (VSIs) that have emerged that also have an information-sharing or reporting element.

VSIs are supply chain initiatives led by industry associations, NGOs, and other multi-stakeholder organizations that aim to promote sustainable sourcing, production and consumption practices, often at the global level. Their *voluntary nature* sets them apart from other public and private efforts. They have the distinct advantage of responding to a demand in the market for such schemes, and as such the level of uptake by companies across different commodities can be quite good. [90] Mining companies may join a VSI for a variety of reasons. The upstream drivers (at the level of mines, mining companies, or national mining associations) are generally associated with business risk and reputation management, and maintaining the so-called 'social license to operate.' Downstream drivers (from retailers or industry associations) often come from societal concerns about conflict funding, emissions management, and fair labour, and compliance with related legislation, which in turn builds interest in sourcing from VSI-certified supply chains. However, a major challenge, depending on the design of the VSI, can be having the enforcement and assurance systems in place to ensure that companies are complying with the criteria outlined in the scheme. VSIs operating in the mining sector define their own enforcement and assurance systems ranging from self-reporting to third party certification.

As previously outlined in this report, the Sustainable Development Goals (SDGs), provide an important operating context for companies, public authorities and civil society involved with mining and extractives activity today. The achievement of the SDGs will require combined efforts of public, private sectors as well as civil society. In theory, VSIs can support public and private sectors in working towards the SDGs by building transparency through reporting and information-sharing along the supply chain, by building awareness of sustainability issues, promoting a culture of inclusion, by collecting, aggregating and disclosing data on sustainability-related indicators, and by identifying gaps and development priorities in specific geographic regions – among other ways. In practice, this will require continued and deeper collaboration across actors and organizations to make sure that there is comparability or complementarity in data sources, indicators and assessment methods so that rates of progress in the mining sector towards achieving SDGs can be measured and reported meaningfully.

Findings from the report *Standards and the Extractive Economy*

This section draws from the relevant findings of a 2018 report, *Standards and the Extractive Economy*, co-developed by the International Institute for Sustainable Development (IISD) and the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). [90] Findings from two different parts of the report are presented below: firstly on the interplay between VSIs and government activity on sustainable mining, and secondly on the results of a systematic comparison of 15 VSIs operating in the mining sector, as it relates to sustainability reporting and information-sharing more generally.

VSIs and public sector regulation

Government regulation is one of the major drivers for the uptake of VSIs; as such, it is important for policy-makers to think about the interplay between regulation and these voluntary schemes. Both the expansion and contraction of regulation can lead to the emergence of VSIs in the mining sector. The development of new environmental codes and laws, for instance, can create a market for VSIs in order for companies to demonstrate compliance with the new norms. On the other hand, the roll-back of environmental protection legislation, or the lack of government capacity in a certain domain, can spur the creation or uptake of a VSI in order to fill the gaps in regulation or enforcement. VSIs can also complement regulation by focusing on areas that are difficult or too technical to regulate effectively (e.g. what to include in an effective tailings management plan). The *Standards and the Extractive Economy* report highlighted some specific ways that governments can leverage the growing presence of VSIs. The different measures that governments can take towards this end are outlined in the following sections.

Identifying targets

Governments face the difficult task of balancing trade-offs in decisions about development; a large mining project that may offer employment and export revenues, for instance, may also threaten social cohesion and natural resource stocks and quality. It is challenging for governments to implement sustainable development, and in spite of good intentions through declarations, policies and laws, it is still a slow and complex process. VSIs can help draw attention to key issues, and identify areas that require more monitoring or improved practices. They can also provide benchmarks for tracking or demonstrating progress towards local, national and regional goals. One example shared by an official from Sierra Leone was that the active presence of the Diamond Development Initiative in their country helped them to identify artisanal and small-scale mines as a priority, specifically the need to integrate them into the formal economy and build compliance with legal frameworks.

Incorporating VSIs into policy or law

Some VSIs may prove to be so comprehensive, fit-for-purpose or robust that they eventually get incorporated into soft or hard law. One example is the reference to several VSIs as potential due diligence mechanism in the OECD Minerals Guidance (the OECD 5-step Due Diligence Framework, discussed in Chapter 2), which is a soft-law that will transition to hard law through the European Union's 2021 Conflict Mineral Regulation. This law will mandate importers to use the framework, and thus, they might leverage VSIs as mechanism of compliance. The specific criteria embedded in VSI standards can also become technical specifications in public procurement tenders, driving markets for more sustainably sourced raw materials.

Broadening support and evidence for progressive policy intervention

There can be broader positive spill-over effects from the activities of VSIs in local economies and beyond. They can create a culture of accountability, inclusion and participation in the supply chains they work in. This might, in turn, lead to normative change in the jurisdictions where they are active (promoting gender equality and women empowerment, public participation, safer practices etc.) in a way that might

complement government efforts, or encourage further regulatory support. Also, concretely, VSIs can create a real demand for monitoring and verification professionals, offices, technologies, and institutions in the regions where their company members are active, which are needed to carry out auditing or third-party verification activities. They may also provide training and capacity-building opportunities (one example is ASI's learning program and online platform 'educationAI'). Finally, VSIs can generate data on company activities at the site level and/or at the company levels, through internal controls, research, surveys, and reporting, which may be particularly valuable in places where data collection is sparse, or too complicated and expensive to collect. However, understanding the nuance of the different types of data that comes from VSIs is an important issue, and is addressed in the following section.

Results from a comparison of select VSIs in the mining sector

Box 5 presents the 15 different VSIs that were included for analysis in the study, categorizing them by the type of mining activity they apply to. These initiatives were systematically assessed based on the 'CARE' criteria: what is the Coverage of issues in the scheme (in terms of their content, and required level of obligation); what Assurance systems are in place to assess if companies are applying these criteria in the field, what is the Responsiveness of the scheme to changing local and global conditions over time; and finally, what is the level of Engagement of the company with stakeholders and communities?

Box 5: Initiatives included in the 2018 IISD-IGF report *Standards and the Extractive Economy*

Large-scale industrial

- Aluminium Stewardship Initiative (ASI)
- Bettercoal (BC)
- International Council on Mining and Metals (ICMM)
- International Finance Corporation (IFC)
- Initiative for Responsible Mining Assurance (IRMA)
- Responsible Jewellery Council (RJC)
- Responsible Mining Index (RMI)
- Mining Association of Canada: Towards Sustainable Mining (TSM)

Stone and Aggregates

- Cornerstone Standards Council (CSC)
- Fairstone (FS)
- Natural Stone Council (NSC)
- The Forest Trust (TFT)
- Xertifix (XF)

Artisanal and Small-Scale

- ARM Fairmined (FM)
- Fairtrade Gold and Silver (FT)

'Access to Information' was one dimension analysed under the *Engagement* part of the CARE assessment, which comprised a set of indicators including whether or not companies' annual sustainability reports, financial statements, board membership, company membership and a host of other items were made available to the public. One general observation that can be made is that there was variation across the 15 VSIs in their scores on 'Access to information' – though generally the VSIs in artisanal and small-scale mining (FM and FT) scored the highest in this category. VSIs do not always have a reporting requirement – in the sense of requiring companies to publish general, corporate, annual reports on environmental and

social impacts. More fundamental to the VSI model, is that the scheme itself sets out specific criteria by which to assess company's activities – based on the priorities of its stakeholders. This criteria might be very narrow in its issue area of interest (for example, related exclusively to greenhouse gas emissions or to human rights protection), or in its commodity scope (for example, specific to the mercury pollution associated with gold production in particular). On the other hand the VSI might strive to cover all types of large-scale mining activity, and all of its associated social, environmental and economic impacts. These differences were captured in the *Coverage* part of the CARE analysis. Therefore, it is important to note that VSIs can lead companies to report sustainability information in at least these two different ways: against the VSI's own criteria and priorities, and/or by encouraging companies to do general, annual (or otherwise) sustainability impact reports. While the former is an integral part of the design of most VSIs, the latter is secondary but can provide potentially helpful information to the public.

Secondly, the *level of obligation* (under *Coverage*) part of the CARE assessment revealed differences in the institutional designs of VSIs that have implications for information-sharing. Some VSIs have an 'obligatory' approach and require full compliance with all of their respective criteria in order for a company to participate in the scheme or to become certified (ASI, IFC, RJC, CSC, FS, FM and FT are examples).[27] Others have a more flexible approach, letting companies reach full compliance over time, or by offering different levels of achievement in working towards full compliance (IRMA, ICMM, XF, and NSC are examples). Finally, some VSIs have an optional approach, in which compliance is either required at only a very basic level, or the VSI is used primarily as a reporting tool only (BC and TFT are examples). There is nothing inherently problematic with any of these approaches – and all of these models can generate useful data. Understanding these differences, however, for researchers, policy makers, and in processes of data aggregation is essential.

Finally, under the *Assurance* part of the CARE analysis, an important distinction is made between self-reporting and third-party verified reporting. The findings show a trend towards third-party assurance systems, with all of the VSIs in the study engaging third parties in some capacity. In most cases, the VSI requires the member company to commission their own third-party assessments and make it available to the VSI to review. In other cases, a third-party audit is undertaken, but the VSI governance body comes to its own conclusions based on the results. Whether or not this is reflective of trends across all mining VSIs cannot be confirmed, but it is a positive sign in terms of working towards transparency and robustness in sustainability reporting to VSIs from companies.

27 Data used in the report came from research undertaken in 2017-2018, and the placement of the VSIs in these categories may have changed since. At the time of writing, TSM fell between the flexible and optional approaches. At the time of writing IRMA was in the obligatory approach category but has since introduced levels, therefore it was placed it in the flexible approach category here.

Box 6: Traceability Systems in Mining VSIs

1. What is traceability?

Traceability is the ability to access any or all information about a product throughout its life-cycle by using a system of recorded identifications. Traceability also relates to the ability to track and trace along the supply chain. While tracking allows the supply chain stakeholders to follow the downstream path of a product, tracing enables identification of the origins and characteristics of the product when following an upstream path in the supply chain. [172]

2. What role do traceability systems play in information-sharing and reporting across the value chain?

Traceability systems determine to a large extent the level of information that is shared and disclosed along the value chain. They allow to illustrate the chain of custody, which is the sequence of stages and custodians the product is transferred to through the supply chain. Traceability systems are considered an aspect of many VSI's assurance systems – i.e. one of the ways that VSIs ensure companies are doing what they say they will do.

3. What different type of traceability systems are there in the mining sector?

Not all traceability systems provide assurance of the physical traceability of material from a mine through to an end product; this can be very challenging and costly for mined products. The choice of a particular chain of custody approach will depend on the kinds of claims that a VSI making about the origin and/or processing of materials. Examples of the different types of systems used are[28]:

Based on physical traceability: source identity preservation, certified content control

Not based on physical traceability: mass balance, book and claim or certificate trading

4. Main findings from the *Standards and the Extractive Economy* report

The report concluded that it was the VSIs with strong demand from downstream users, consumers and brands that were more likely to have developed traceability systems. At the time of writing, this included ASI and RJC from the large-scale mining initiatives, and IRMA was in the process of developing theirs. Overall, while many of the large-scale mining VSIs did not have traceability systems, during interviews conducted many schemes expressed that they were actively considering this option as a response to growing downstream interest.

28 For a detailed description of each of these systems, please see the full IISD report: Potts, J., Wenban-Smith, M., Turley, L. and Lynch, M. (2018). State of Sustainability Initiatives Review: Standards and the Extractive Economy. International Institute for Sustainable Development. Available at: https://www.iisd.org/library/state-sustainability-initiatives-review-standards-and-extractive-economy

Critical Analysis of Sustainability Reporting and VSIs

Company reporting on the various dimensions of sustainable development is essential, especially as the global community faces the combined challenges of climate change, natural resource degradation and exhaustion, and a growing human population. Mining activity is set to grow in the coming decades, [173] and supply chains for metals, minerals and other mined materials are notoriously opaque and difficult to trace. This reality further drives the need for robust and innovative ways to collect and share information.

VSIs are now part of this landscape. The *Standards and the Extractive Economy* report aimed to provide some clarity and insights on the diversity of VSIs in the mining sector, on the coverage of VSIs in different commodity markets, and to provide some reflections on how the VSIs interact with regulation. In terms of sustainability reporting, the relevant findings from the report are highlighted above, namely that not all reporting efforts are equal – different VSIs have different priority areas (e.g. human rights, carbon emissions, biodiversity protection etc.) and place different degrees of emphasis on reporting and access to information. There are also many differences in VSI design in terms of the levels of obligation required of members, and in types of assurance systems they demand. Fundamentally these different designs are not 'good' or 'bad', but stem from different theories of change, in which the role of information sharing can vary.

Generally speaking, VSIs are institutions that can encourage and complement governmental reporting efforts and the development of indicator frameworks. As one example, in May 2019 IISD was invited to present the *Standards and the Extractive Economy* report to a group of policy makers at the Economic Commission for Latin America and the Caribbean (ECLAC) who were seeking to better understand the experiences of VSIs in developing sustainability indicators in mining. The goal of the meeting was to assist decision-makers in improving public policy and their own indicator frameworks to guide the national mining sectors towards the achievement of the SDGs. Through forums like this, valuable lessons can be shared about the strengths, weaknesses and mostly different intended purposes of sustainability indicator frameworks.

The task is daunting. There are many challenges and pitfalls in developing sustainability indicator systems, implying that actors and organizations who undertake sustainability reporting, or sustainability assessments, and the aggregation of indicators to feed into the SDGs, must be well-equipped to undertake critical assessment of the quality and rigour of different framework designs. Challenges can be related to: temporal orientation of the data, the quantity of indicators, aggregation and integration levels, spatial focus, systems conceptualization, the definition of attributes to be measured, the unit of analysis and the availability of reliable information. [174]

While governments can take advantage of VSIs to inform their policies and indicator development processes or sustainability assessment frameworks, they should also consider playing a strong steering role in their development. Governments can set minimum requirements in their own reporting activities and 'raise the bar' for the VSIs operating in their jurisdictions. They can require sustainability reporting to have a third-party assurance system in place, establish the need to consult with a range of stakeholders in the development of indicators frameworks, to set standardized indicators, to insist on the frequency intervals and – of course – to be in compliance with all relevant minimum legal standards.

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GOVERNMENT INITIATIVES TO ENHANCE SUSTAINABILITY AND REPORTING OF THE MINING SECTOR – EXAMPLES FROM THE GROUP OF FRIENDS OF PARAGRAPH 47

The examples of government approaches towards enhancing sustainability reporting, with a focus on initiatives and policies that are directed at or impact the mining sector, have been developed with the support of governments of the GoF47. The examples are intended to inspire and encourage other governments to take measures, such as through policies, to enhance sustainability reporting of the mining sector in their countries.

South Africa

Mining is a key sector for the South African economy. South Africa is a major producer of gold, diamonds, platinum and coal and to a lesser extent chrome, vanadium, titanium and a number of other minerals including chrome. [175] The mining sector's share of GDP was 8% in 2017. [176]

There have been a number of regulatory initiatives in South Africa that aim at increasing and strengthening sustainability reporting of the mining sector. The following sections provide key information on the mining sector's legal frameworks that concern environmental and social aspects, discusses core national drivers for sustainability reporting of the mining sector as well as core legislation concerning reporting of the sector.

The core material in the following section was developed by the Department of Environment, Forest and Fisheries, South Africa. The material was developed with the support of a 'framework for evaluating national public policies on corporate sustainability reporting' which was developed through a joint GoF47 and UNEP project in 2015 and outlined in the report *Evaluating National Policies on Corporate Sustainability Reporting*. [2]

Mineral and Petroleum Resources Development Act

The Mineral and Petroleum Resources Development Act was adopted in 2002 (Act No. 28 of 2002) through a parliamentary cosultative process involving South African citizens, civil society and the business community. The Act was amended in 2008 (Act No. 49 of 2008) and it is undergoing another amendement process on its regulatory frameworks to address Environmental, Social and Economic Dimensions in accordance with the industry's impacts and requirements.

According to section 25 of the 2008 amendment act, the state may expropriate any land or any right for the purpose of providing equitable access to the nation's resources, stimulating economic growth, advancing employment and promoting the sustainable and ecological development of mineral and petroleum resources.

On 28 November 2019, the Minister of Mineral Resources and Energy published Draft Amendments to the Mineral and Petroleum Resources Development Regulations, 2019 for public comment. Once finalised the amended act will come into operation on the date of publication in the Government Gazette[29] for implementation.

National drivers for enhancing sustainability reporting of the mining sector

Accountabilty and development serve as primary drivers in the South African Mining sector. Both these drivers are derived from the South African constitution, emphasising the need to cater for South African citizens and contribute to economic growth. Mining companies are under pressure to convince stakeholders of the valuable role they play in the South African capital market and the positive social contribution they offer.

The move to more holistic reporting, both financial and non-financial, is especially relevant in the mining sector in South Africa. The sector is targeted by pressure groups, journalists and environmentalists due to the adverse social and environmental impact with which it is associated. Amongst these is land degradation, worker health and safety issues, pollution and living conditions of miners.

29 https://www.greengazette.co.za/

In South Africa the mining sector has been held up to greater domestic scrutiny than any other, particularly given its apartheid past, its importance to the South African economy and its relatively poor safety record. In light of the mining sector's long history it has also had a longer time than any other industrial sector in South Africa to develop high levels of reporting, including sustainability reporting.

The King IV Code of Corporate Governance of the Institute of Directors in Southern Africa of 2016 guides companies in applying integrated thinking to businesses, with emphasis on seeing the business as an integral part of society, stakeholder inclusiveness, sustainable development and integrated reporting. [177]

Another important factor in driving sustainability reporting is the the dual listing of major mining companies active in South Africa on stock exchnages in the United Kingdom or the Unites States, where corporate reporting criteria are more stringent and stakeholder pressure is significant. The South African JSE also has a responsible investment index (FTSE/JSE Responsible Investment Index [178]) and the Code for Responsible Investing in South Africa was published in 2011. [179]

Sustainability reporting in South Africa has also been driven by the South African National Greenhouse Gas Emissions Reporting Regulations that came into effect in April 2017. [180] The regulations were accompanied by technical guidelines for reporting companies. [181]

The Promotion of Access to Information Act

The purpose of the Promotion of Access to Information Act (PAIA) of 2000 [182] is to give effect to section 32 of the Constitution. Section 32 provides for "the right of access to information" and states that "everyone has the right of access to any information held by the State and to information held by another person that is required for the exercise or protection of any rights." [183]

The motivation for giving effect to the right of access to information is to foster a culture of transparency and accountability both in Public and Private Bodies; and to promote a society in which the people of South Africa have effective access to information, to enable them to more fully exercise and protect all their rights. The prescriptiveness of this Policy/Act also lies on the oversight powers of the Parliament.

The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC)

The SAMREC Code was first issued in March 2000 and adopted by the Johannesburg Stock Exchange (JSE) in their listing requirements later that year. The code underwent revisions in 2007 and 2016. The Code sets out minimum standards, recommendations and guidelines for Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves in South Africa. [184]

The SAMREC Code is one of three codes of the South African Mineral Reporting Codes (SAMCODES) which are codified sets of standards and guidelines applicable to the South African Minerals and Petroleum Industries. [185] The Code is one of 11 members of CRIRSCO (Committee for Mineral Reserves International Reporting Standards), the international family of international mineral reporting codes. The codes have common definitions and reporting framework and primarily aim at meeting disclosure demands from investors. [184]

The SAMREC Code is based on the principles of materiality, transparency and competency. It is acknowledged that no single document could cover all accepted industry practices or standards given the range of commodities, deposit types, mining methods, and available metallurgical processes. [184]

Guideline for the reporting of ESG parameters within the mining industry (SAMESG)

To support the implementation of the SAMREC Code, as well as the two other related South African Mineral Reporting Codes[30] the SAMESG guideline defines recommendations and guidance for public reporting of Environmental, Social and Governance (ESG) matters in the extractive industries. The guideline outlines

30 These are the South African Code for the Reporting of Mineral Asset Valuation (SAMVAL) and the South African Code for the Reporting of Oil and Gas Resources (SAMOG)

a mininum reporting standard and applies the 'report or explain' principle, i.e. if an organization does not report in accordance with the recommendations of the guideline it should explain why.

The guideline references various international frameworks and organizations, including the International Council on Mining and Metals, the Global Reporting Initiative, the King IV Code on Corporate Governance and the Carbon Disclosure Project.

Colombia

Colombia is Latin America's main coal producer, it has large gold, nickel and copper deposits and it is the world's largest emerald producer. [186] There is currently a growing interest in Colombia to further increase the country's copper production. [186] Other minerals that are mined in the country include silver, salt, limestone and iron. Mining represents around 2% of Colombia's GDP. [187]

The regulatory framework for mining activities in Colombia is outlined in the Constitution and the Mining Code (law 685 of 2001) as well as various environmental laws and regulations, that oblige the state, amongst other, to protect the environment and natural resources, plan their management and guarantee their sustainable development. According to the mining code all mineral resources are property of the state. [188]

In terms of environmental authorizations for mining projects, a key regulation is Decree 1076 of 2015, [189] which is a Decree of the Ministry for Environment and Sustainable Development that compiles all the Colombian environmental regulations and, amongst other, defines the authority in charge of granting environmental licenses, which is the National Environmental Licenses Authority for large mining projects.

Sustainability reporting requirement under new 'BIC' company status

In 2018 the Colombian government issued law 1901 and in 2019 decree 2046 which encourage companies in all economic sectors to become companies of general interest or in Spanish 'Beneficio e Interés Colectivo' (Benefit and Collective Interest) or 'BIC' companies.

According to the regulatory decree, a BIC company combines its commercial activity with concrete actions to promote employee welfare, social equality and environmental protection. BIC companies should uphold a business model that embeds social and environmental responsibility, transparency, innovation, and measurement and reporting of results. [190]

BIC companies are required to issue annual sustainability reports, using any of the following standards and guidance documents: [191]

- GRI Standards
- ISO 26000
- B Company Certification
- SDG Compass
- AA1000 Standards

In 2019 a total of 54 companies registered under the BIC company status. [192] It is unclear how many of these companies fall under the mining sector.

Implementation of the SDGs in Colombia

In March 2018 Colombia published its national strategy for the implementation of the SDGs. [193] In an effort to deepen the understanding of the contribution of the private sector and to achieving the SDGs, the Government of Colombia initiated a pilot project, along with GRI and the Business Call to Action alliance of the UN Development Program. The project analyzed the contribution of 70 companies across seven sectors (including mining) on five of the SDGs by analyzing the companies' sustainability reporting.

The results included the following information relating to the mining and energy sectors:

- **SDG 6 on Clean Water and Sanitation:** The mining-energy sector consumes more than 70% of ground and surface water.
- **SDG 11 on Sustainable Cities and Communities:** Investment from the mining and energy sector increased by 186% between 2016-2017. [194]

The results of the project were included in the Colombian Voluntary National Review of 2018. [195] In 2019, the partnership continued and launched the SDG Corporate Tracker, which is a pioneering initiative that invites the private sector to measure its contribution to the SDGs in Colombia. In its next phase the partnership will engage with SMEs, mixed companies and the infrastructure sector to capture data from 200 companies in Colombia. [196]

Switzerland

Commodity trading in Switzerland

Switzerland is a leading global commodity trading hub. The commodities sector plays an important role for the Swiss economy. In 2017, revenues from commodity trading accounted for about 3.8% of Swiss GDP. [197] With about 500 commodity trading companies, Switzerland is among the largest trading hubs for oil and petroleum, metals, minerals and a variety of agricultural products. The most traded commodities in Switzerland are fuels, minerals and metals (iron, copper, gold). [197]

Importance of the commodities sector for domestic and foreign policy

Switzerland directs its economic policy towards shaping the macro business environment rather than introducing specific policies for individual industry sectors. [197] The Swiss government (the Federal Council) has taken concrete steps in the past few years to enhance the Corporate Social Responsibility of the commodities sector with a particular focus on areas where the sector faces the highest risks, such as in the areas of human rights and corruption.

In view of the public interest around the commodities sector, especially trading, and its significance for domestic and foreign policy, the Federal Department of Foreign Affairs (FDFA), the Federal Department of Finance (FDF) and the Federal Department of Economic Affairs, Education and Research (EAER) published in 2013 a "Background Report on commodities" [198] establishing the basic policy objectives of the Federal Council for this sector. The report made 17 recommendations on improving the overall business environment and addressing risks, including those related to corruption, human rights and reputation. [197] These recommendations were monitored and reassessed every second year.

Federal Council report of 2018 - recommendations for increased transparency in the commodities sector

Following three status reports since the Background Report, the Federal Council undertook a fresh assessment of the commodities sector in 2018. In view of progress achieved in recent years, but also persisting challenges and emerging trends, the report outlines various policy options to further consolidate Switzerland's position and mitigate certain risks. To this end, 16 new recommendations were formulated. Three of these recommendations (6, 7 and 12) relate to Corporate Responsibility and increased transparency in the commodities sector.

- Recommendation 6 advocates reinforcing the application of due diligence, in particular through implementation of relevant OECD guidances and the UN Guiding Principles on Business and Human Rights.

- Recommendation 7 concerns suggests that Switzerland pursue activities with the EITI in terms of furthering transparency of payments to governments in commodities trading as well as pursue commitments to the Voluntary Principles on Security and Human Rights.

- Recommendation 12 is particularly relevant to the sustainability reporting agenda as it aims to reduce the environmental impacts of natural resource extraction and trading activities and to enhance environmental transparency and environmentally responsible corporate governance. It emphasizes the importance of collaboration with international organizations such as the EU, OECD, UNEP and UNECE (United Nations Economic Commission for Europe) as well as through the work of the Group of Friends of Paragraph 47.

Sustainability initiatives with respect to commodity trading

In 2018, following a long consultation process, the FDFA and the State Secretariat for Economic Affairs SECO (part of the EAER) issued the "Commodity Trading Sector Guidance on Implementing the UN Guiding Principles on Business and Human Rights". [199] Elaborated in cooperation with the trading sector, civil society and cantonal authorities, this document aims to enable traders ensure that the value chains which they are in charge of do not entail human rights violations. The Trading Guidance has seen a wide uptake from the commodity trading sector in Switzerland and abroad.

Another effort by the Swiss Government was, together with commodity traders and the EITI, to develop a transparency framework within the EITI for payments by traders. This has built more transparency around extractive value chains.

Sustainability initiatives with respect to commodity value chains

In 2012, the SECO launched the Better Gold Initiative for Artisanal and Small-Scale Mining [200] as a new support to sustainable mining value chains, in cooperation with the private sector, represented within the Swiss Better Gold Association (SBGA), including refiners, jewelers, watch makers, financing institutions and banks. The initiative enables artisanal small scale (ASM) gold mines in three Latin American countries (Bolivia, Colombia and Peru) to fulfill ESG criteria enabling them to export gold to Switzerland. The initiative helps small-scale miners and mining cooperatives improve their technical knowledge and performance in managing environmental and social risks and supports the Fairtrade, Fairmined and Reponsible Jewellery Council certification systems. [201]

The SECO participated at the launch of the Responsible Mining Index (RMI), an evidence-based biennial assessment of the economic, environmental, social and governance (EESG) policies and practices of 38 large-scale mining companies that operate in more than 780 mine sites and together account for 28 percent of the world's mining activity by value of production. [202]

CSR Action Plan 2020-2023

On 15 January 2020 the Federal Council adopted the revised CSR Action Plan 2020-2023. [203] Since the adoption of the CSR position paper with the 2015-2019 Action Plan, important progress has been made.

Based on the awareness raising activities already carried out in recent years, the focus will now be on effective support for companies and stakeholder dialogue. In the promotion of transparency, due to international developments (e.g. at the OECD), the review of the implementation of CSR instruments and digitisation are also considered.

The CSR Action Plan puts a specific focus on the increased transparency of companies, with a focus on promoting sustainability reporting and harmonizing reporting approaches but also focusing on other types of transparency linked to environmental and social issues, such as improved information on companies' products.

In terms of sustainability reporting the CSR Action Plan notably includes the following information:

- The expectation of the Federal Council on 14 August 2019 that Swiss companies should account for their respect of human rights and environmental standards wherever they operate. This position was reiterated in the parliamentary debate on an indirect counterproposal for the Responsible Business Initiative. [204]
- The active collaboration of Switzerland in the Group of Friends of Paragraph 47, in particular through collaboration with UNEP.
- Switzerland's collaboration with GRI on a project called 'CSR for competitive business' which in particular focuses on facilitating reporting of SMEs. An important outcome of the project was a digital tool to facilitate the sustainability reporting process.
- Support for the work of the Extractive Industry Transparency Initiative (see information on the EITI in Chapter 3).
- Support for the work of the Responsible Mining Foundation.

On 18. June 2020, the Parliament adopted the Revision of the Company law; among other novelties, the revision introduces an obligation on mining companies registered in Switzerland to disclose payments to governments and foresees the possibility for the Federal Council to extend this requirement to traders, following possible developments abroad.

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EXAMPLES FROM OTHER COUNTRIES

Canada

Canada is a leading mining country and one of the largest producers of minerals and metals. [205] Canada is one of the top five producing countries for over 13 major minerals and metals, including potash, uranium, niobium, nickel, cobalt, gold, diamonds and platinum. [206] The mining sector contributed 5% to the Canadian GDP in 2018 [205] and accounted for 20% of the value of Canadian goods exports. [205]

Environmental Code of Practice for Metal Mines

The Environmental Code of Practice for Metal Mines from 2009 is a guidance document adopted by Environment Canada (government department). [207] The document is applicable for the life cycle of mining, from exploration to mine closure, and includes recommendations for the development and implementation of environmental management tools, management of wastewater and mining wastes and prevention and control of air emissions. The Code applies specifically to metal mines but also provides useful guidance for all sectors of the mining industry. Recommendations on reporting on the different environmental impact of mines is included throughout the document. Recommendations in the code do not carry regulatory status. [207]

Minerals and Metals Policy and Action Plan

The "Minerals and Metals Policy of the Government of Canada: Partnerships for Sustainable Development" (the Policy) was established in 1996. [208] The Policy contributes to three central areas of the federal governments agenda:

- Promoting Economic Growth and Job Creation.
- Furthering an Efficient and Effective Federation.
- Meeting the Challenge of Sustainable Development.

More recently, during 2018-2019, the Canadian government initiated a nation-wide multi-stakeholder consultation resulting in the Canadian Minerals and Metals Plan for 2020 [209], which includes a vision and targets to drive Canadian mining forward. The plan is the first in a planned series of action plans for the mining and metals sector.

Both the Policy and Action plan put emphasis on integrating sustainable development, with key emphasis on environmental protection, but they do not specifically cover the topic of corporate sustainability reporting.

The Canadian government's support for Responsible Business Conduct

Extractive industries (such as mining and oil and gas) play an important part in Canadian economic development and prosperity. In addition to local operations, Canada's mining sector is also one of the country's largest outward investors and is a recognized global leader. However, in some instances, Canadian mining companies have faced challenges in resource rich developing countries, where weak governance can contribute to local and/or national conflicts that are difficult to resolve. To assist Canadian companies in these circumstances, the Canadian government, through the Canadian Trade Commissioner Service (TCS), has taken concrete steps to promote Responsible Business Conduct (RBC) of Canadian operations abroad. [210]

One of the ways in which Canada advances RBC is through measures to improve transparency and accountability in the extractive sector, including the mining sector. In 2015 The Canadian Extractive Sector Transparency Measures Act (ESTMA) entered into force. The Act requires extractive entities active in Canada to publicly disclose specific payments made to all governments in Canada and abroad. [211] ESTMA reporting is in line with the requirements of the EITI, of which Canada is one of the supporting countries as well as a donor. [212]

Sustainability Reporting in the Canadian Mining Sector

The Canadian mining sector is a leader when it comes to sustainability reporting with 27% of companies reporting on their environmental and social performance according to a study from 2017. [213] The emphasis on sustainability reporting by the mining sector in Canada may in part be explained by the extensive environmental and social impacts of the mining sector in Canada (in line with other countries with mining activities).

Other key drivers for sustainability reporting of the Canadian mining sector is the Mining Association of Canada's Towards Sustainable Mining (TSM) program and the Responsible Business Conduct program of the Canadian government (discussed above). The TSM program is supported by the Canadian government and referenced under the Responsible Business Conduct program (discussed above). Under the TSM program MAC member companies commit to reporting on a set of TSM Guiding Principles through annual TSM Progress Reports. Results of each of the mining facilities under the program are publicly available and externally verified every three years. [68] Further information on the Mining Association of Canada's TSM program can be found in Chapter 7.

The Canadian CSR Strategy

In 2014 the Canadian government introduced an update to its Corporate Social Responsibility (CSR) Strategy from 2009. The enhanced CSR Strategy is entitled "Doing Business in the Canadian Way: A Strategy to Advance Corporate Social Responsibility in Canada's Extractive Sector Abroad." [214] The strategy emphasizes key international initiatives for CSR and promotes the GRI Standards for sustainability reporting as well as the SDG Compass which is a tool that helps companies align their strategies and reporting to the SDGs. The government has also put in place a Canadian Ombudsperson for Responsible Enterprise to provide mediation and other services to help resolve conflicts should they emerge. In parallel to the CSR Strategy, the Canadian government actively promotes various international standards for Responsible Business Conduct including the OECD Guidelines for MNEs and the associated Due Diligence Guidance on Responsible Business Conduct and other related sector and topic specific OECD guidance documents. [210]

Mexico

Mexico is the world's largest producer of silver, and also a top-10 world producer of other minerals including gold, fluorite, lead, graphite, manganese, zinc, salt and bismuth. In addition, Mexico includes vast reserves of unexploited minerals. [215] The share of the mining sector of Mexico's GDP has decreased from 8% at the end of 2010 [216] to around 4% in 2018 [217] but the level of investment has started rising again. [218]

According to the Constitution, all minerals found in Mexico are owned by the country but private companies may exploit these minerals through a concession granted by the federal government. Mining activities are regulated by the Mexican Mining Law. [215]

Sustainability reporting in Mexico

As outlined in *The Road Ahead: KPMG Survey of Corporate Responsibility Reporting* of 2017 sustainability reporting in Mexico has surged in recent years due to a mix of government regulation, stock exchange innovation and investor pressure. Reporting rates among large companies in Mexico increased from 58% in 2015 to 90% in 2017, largely due to new regulation. [25]

Since 1996, as part of the North American Agreement on Environmental Cooperation within Mexico, US, and Canada, facilities must annually report their pollutants released to the air, water and land or for disposal or underground injection; and transferred off site for recycling, treatment or disposal to the national Pollutant Release and Transfer Register (PRTR). [219]

The General Law for Prevention and Comprehensive Management of Waste (from 2003, reformed in 2015) states that mining companies must present their waste management plans to the authorities. [220]

Furthermore, any company can ask for a voluntary environmental audit process which consists of a methodological evaluation of a company's processes to determine its environmental performance. During the audit process compliance with legal dispositions is verified as well as adherence to voluntary and international norms. An action plan is then issued with specific actions for which progress must be reported to be evaluated and certified. [221]

According to the National Water Law (from 1992, reformed in 2020) [222], people and companies having a concession for the use of water must provide information to the authorities containing indicators about the quality of their waste water discharges.

In 2013 the Mexican government issued the General Law on Climate Change, which requires companies to report on their carbon emissions. The law was implemented in the period 2015-2017. [25]

Another important factor encouraging sustainability reporting was the Mexico's stock exchange Bolsa Mexicana de Valores (BMV) introduction of Mexico's first sustainability index in 2011. [223] In order for them to be listed on the index, which can help attract new investments, companies need to publish sustainability reports. [25] According to the BMV website there are 111 companies listed under the materials sector which cover mining and metals companies. [224] The reporting methodology proposed by the Integrated Reporting Framework has been popular amongst Mexican companies due to its focus on meeting the information needs of investors. [25]

India

The mining sector in India accounts for 2,5% of India's GDP. [225] Many of the key companies of the sector are SOEs. India is abundant in natural mineral resources and the country is one of the world's main producers of iron ore and bauxite. [225] India is the third largest producer of coal, behind the US and China. [226]

Section 135 of India's Companies Act on CSR

In 2013 India introduced Section 135 to its Companies Act, adding a requirement that companies that have reached a certain value, turnover or profits[31], establish a Corporate Social Responsibility (CSR) committee as a sub-committee of the company's Board of Directors. The CSR committee should then propose a CSR Policy for Board approval. In addition, companies are required to spend at least 2% of their average profits on areas related to the CSR Policy. [227]

Regulation for large public companies to produce Business Responsibility Reports

In India the top 500 listed companies on the National and the Bombay Stock Exchanges are required to produce Business Responsibility (BR) Reports, which are to be included in their annual reports. In its notice of November 2015 to all entities listed on India's stock exchanges, the Securities and Exchange Board of India (SEBI) prescribes a template for the information that should be included in BR Reports. [228]

The regulation initially covered the top 500 public companies but was extended to the top 1000 companies in November 2019. [229] If companies are already publishing sustainability information in a specific sustainability, integrated or annual report, the company does not need to submit another BR report but needs to specify where the nine BR principles are covered in their reporting. The regulation calls for reporting on a diverse range of sustainability areas including GHG gas emissions, energy use, stakeholder engagement and labor and human rights. [228]

31 Net worth of rupees five hundred crore or more, or turnover of rupees one thousand crore or more or a net profit of rupees five crore or more during any financial year, see further information on https://www.mca.gov.in/SearchableActs/Section135.htm

Although not directly aimed at companies in the mining and metals sector, the regulation on business responsibility reporting affects many of India's largest mining and metals groups are listed on India's stock exchanges.[32]

National Guidelines on Responsible Business Conduct (2018)

In 2011 The Indian Ministry of Corporate Affairs issued the National Voluntary Guidelines on the Social, Environmental and Economic Responsibilities of Business (NVGs). Building on the NVGs, a new guidance entitled the National Guidelines on Responsible Business Conduct (NGRBC) was released in 2018. The new guidance integrates the 'Respect' pillar of the United Nations Guiding Principles and the UN Sustainable Development Goals. [230] The NGRBC reflects and supports the Business Responsibility regulation referred to above and provides additional guidance on BR reporting as well as specific guidance for BR reporting of SMEs.

China

China is the world's largest producer of coal, gold and most rare earth minerals. China is also the world's leading consumer of most mining products, in particular of thermal coal and iron ore. [231] Following the economic growth in China from 1980s until the 2000s the number of mines increased from 6,000 to more than 230,000. Today more than 100,000 mines are currently operating, including mines for coal, construction materials and small mines. [232] The Chinese coal sector has had one of the worst global records for fatalities. [232] Although safety of miners remains a big concern in China there have been a lot of improvements in safety standards and relevant government measures over the last two decades. [233]

Government promotion of sustainable development in the mining sector

In order to meet a slowdown in economic growth and ongoing environmental issues, such as a high level of pollution, China increasingly sees sustainability as crucial to ensure long-term viability for its economy as well as the quality of life for its citizens. [234]

The 13th 5 year-plan of the Chinese government (2016-2020) puts a specific emphasis on embedding sustainable development across the Chinese economy. The plan makes multiple references to enhancing sustainable development of the mining sector, for example through enhanced environmental controls, innovation in mining techniques (including further atomization of coal mining operations) and shutting down mines that use outdated techniques or are environmentally undesirable. [235]

In 2016 China released its national plan for implementing the 2030 Agenda for Sustainable Development through translating each of the Sustainable Development Goals (SDGs) into specific action plans. [236] Sustainability reporting has been an important entry point in implementing the SDGs in China. [237]

Drivers for sustainability reporting in China

In line with the increased focus on sustainable development in the latest 5 year-pan of the Chinese government there has been growing pressure on Chinese companies to enhance their environmental and social performance and report on their progress. There have been several reporting requirements or guidelines for companies to report ESG information, most of which were published in the last 10 years. [237] For example, the State-owned Assets Supervision and Administration Commission of the State Council has issued regulations and guidance for Chinese SOEs and the China Securities Regulatory Commission also requires listed companies to provide information on their ESG performance. [237]

Chinese stock exchanges have also issued guidance and requirements for ESG disclosures in recent years. The Shanghai Stock Exchange issued its *Guidelines for Environmental Information Disclosure of Listed Companies*

32 See list of public Indian mining and metals companies on https://www.moneycontrol.com/stocks/marketinfo/marketcap/bse/mining-minerals.html

in 2008 and the Shenzhen Stock Exchange issued its Social Responsibility Instructions to Listed Companies in 2006. [238] There is a trend towards more mandatory ESG disclosure with emphasis on materiality of the reported information to meet growing investor demand for ESG information of key relevance to companies' operations. For examples, the Hong Kong Stock Exchange is requiring all listed companies to issue a statement on the board's consideration of ESG risks, as well as how it determines what ESG matters are material to the business (applicable from July 2020). [239] As the stocks of nine of China's biggest mining companies are either traded on the Hong Kong Stock Exchange or the Shanghai Stock Exchange, they need to apply the increasingly stringent ESG disclosure requirements to meet the needs of investors. [240]

The results of the different regulatory drivers and voluntary approaches to sustainability reporting is described as followed in the 'Carrots and Sticks' report on trends in sustainability reporting regulation and policy of 2016, emphasizing the important role of Chinese SOEs in encouraging sustainability reporting:

"The system in China illustrates the close interrelation between voluntary and mandatory approaches. In this case, industry regulatory bodies and local governments follow the regulatory approach of central government, while state-owned enterprises act as 'pilots' to set an example to others." [241]

Sustainability reporting of the Chinese mining industry

The practice of sustainability reporting has grown steadily by Chinese companies, from 19 companies issuing sustainability reports in 2006 to 3040 in 2016. [241] The quality of sustainability reporting has also been improving, partially due to an increased understanding of material issues and growing use of international reporting standards by Chinese companies. [237] The mining industry has been one of the industries with the highest quality of sustainability reporting. [242]

In terms of the mining industry, mining companies have been quick at meeting requirements for sustainability reporting as stipulated in regulation from government and stock exchanges in order to maintain legitimacy. Regulation has been key to enhancing the rate of sustainability reporting in the mining industry [243] although there has not been a specific regulatory focus on sustainability reporting of the industry. Rather, as has been the case in a number of other countries, mining companies are covered by reporting regulations such as for listed companies and SOEs, as noted above.

There has also been growing use of international voluntary guidelines, notably the GRI reporting guidelines[33] , by Chinese mining companies. This increased emphasis on international standards has largely been the demand of the international market which Chinese mining companies have increasingly been entering to respond to growing global resource and energy demand. Survival in the international market means adhering to stricter sustainability standards and providing information on key environmental and social indicators, such as those included in the GRI reporting guidelines. [243]

Chinese Mineral Supply Chain Guidelines

Although China produces a number of materials it is still dependent on minerals and metals from abroad. Chines companies have increasingly invested in mining assets in other countries, notably in developing countries but also in countries like Canada and Australia. [232]

In 2015 the Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains [244] were launched by the Chinese Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (CCCMC). The guidelines, which were developed in collaboration with Chinese and international partners, including Global Witness and the OECD, include a 5-step risk-based supply chain check process, including reporting, for minerals which reflects the OECD Minerals Guidance (see Chapter 2). The guidelines apply to all Chinese companies that extract or use minerals or mineral products at any point in the supply chain and apply to all mineral resources, with a primary focus on 3TG. [245]

33 The GRI Standards, replacing the G4 Guidelines, were launched in 2016. Following a transition period of two years the GRI Standards became effective in July 2018

The scope of the guidelines extends beyond a due diligence for conflict minerals to also include wider environmental and social issues that are reflected in a related guidance of the CCCMC from 2014, the *Chinese Guidelines for Social Responsibility in Outbound Mining Investments*, which aim at "improving CSR and sustainability strategies as well as effective management systems, to strengthen their capacity of social responsibility governance and sustainable development." [244]

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GOVERNMENTS SUPPORTING NATIONAL MINING ASSOCIATIONS – INNOVATIVE APPROACHES TO ADVANCING SUSTAINABILITY

The Mining Association of Canada's Towards Sustainable Mining Program

Chapter contributed by the Mining Association of Canada

In 2004, in efforts to encourage sustainable mining practices, the Mining Association of Canada (MAC) developed the Towards Sustainable Mining (TSM), a program focused on enabling mining companies to meet society's needs for minerals, metals and energy products in the most socially, economically and environmentally responsible way. MAC members commit to a set of TSM Guiding Principles, [246] which concern several aspects of mining companies' responsible approach to social, economic and environmental performance.

The Canadian government has played a key role in promoting the adoption of TSM globally. The inclusion of TSM in Canada's Enhanced Corporate Social Responsibility Strategy has enabled Canada's network of Embassies and High Commissions to champion TSM in the countries in which they work. Further information on initiatives of the Canadian government in promoting responsible business conduct and sustainability reporting of the mining sector can be found in Chapter 6.

Public Reporting and Assurance

Specifically, the TSM program requires mining companies to annually assess, publicly report and verify their facilities' performance across several critical environmental and social areas, including tailings management, water stewardship, Indigenous and community relationships, safety and health, biodiversity conservation, crisis management, energy use and greenhouse gas emissions management and preventing child and forced labour. The reporting for each facility (mine) is publicly available and externally verified every three years. The 2019 TSM Progress Report shows how there has been steady performance improvement amongst MAC members. Although it can take some time for facilities that are new to the TSM program to achieve MAC's goal of Level A performance in all indicators, TSM has clearly helped drive the adoption of better and best practices over time. In fact, over time, MAC has seen a growing number of facilities going beyond good practice to achieve Level AA and Level AAA performance ratings.

TSM's verification process

Transparency is essential to the credibility of the TSM program, and to that end the initiative is overseen by an independent Community of Interest (COI) Advisory Panel, which consists of individuals from Canada's three Indigenous communities, environmental organizations, labour representatives, individuals involved in finance, local mining communities, social and faith-based organizations, academics and those involved in international development. This panel provides guidance and advice on the development and maintenance of TSM and plays a critical role in the reviewing facility performance. Figure 10 demonstrates the key parts of the verification process. [247]

Figure 10: Verification levels in the TSM program [247]

While implementation of the program is a requirement for all MAC members' Canadian operations, many choose to voluntarily apply it to their international sites. Since its inception, mining chambers from around the world have adopted TSM to draw from Canada's expertise and global interest is growing at a rapid pace. Over the past several years, the program has spread beyond Canada to eight countries on five continents, including Finland, Argentina, Botswana, Spain, the Philippines, Brazil and Norway with many other countries having expressed interest in the program.

Voluntary cooperation to promote sustainable mining in Finland

Chapter contributed by the Finnish Network for Sustainable Mining

The Finnish Network for Sustainable Mining was established in May 2014 to promote sustainability in mining and exploration in Finland. The network was set up as a result of a major environmental accident that occurred in a large nickel mine in Easter Finland (previously known as Talvivaara).

The accident occurred in autumn 2012, when a tailings dam started to leak massive amounts of untreated wastewater into local fresh waters. This caused major uproar in the Finnish public and forced the Finnish government to set up a roundtable process to improve the sustainability of mining practices in spring 2013.

National Action Plan on Sustainable Mining

As a result of this process, Finland published a national action plan on sustainable mining. [248] It contained 35 recommendations, two of which suggested that Finland should have a platform of cooperation, which would bring together the mining sector and its key stakeholders to discuss and improve the sustainability of mining operations in Finland.

These two recommendations were eventually taken up by the Finnish Innovation Fund (Sitra), which established a temporary secretariat in Helsinki to develop the structure and mode of operations of the network.

During the next 18 months, the secretariat brought together representatives from the mining sector and its key stakeholders, including two environmental NGOs, the farmers' and landowners' association, the reindeer herders' association, labour union and the Regional Council of Lapland. Together, they prepared in five working groups the key documents and instruments that would later be implemented in mining operations and exploration.

The Canadian TSM standard adjusted to the Finnish context

The sustainability standard used by the Finnish network draws from the Mining Association of Canada (MAC), adjusted to the Finnish legal framework. In addition to the existing six protocols (stakeholder participation, biodiversity, energy and GHG emissions, tailings management, safety and health, and crisis management), the network developed two additional instruments covering water management and closure of operations.

Once operational, MAC and the Finnish Mining Association signed a license agreement, whereby MAC approved the use of the Canadian TSM standard in Finland. Later on, similar agreements were signed with other countries that have introduced similar measures as in Finland.

Companies implementing the Finnish sustainability standard are required to report on an annual basis the improvements and results achieved within its eight protocols. First self-evaluations from mining companies took place in autumn 2019. A wider selection of replies is expected in October 2020.

Experiences from the first evaluations raised the need for some adjustments and clarifications in the protocols. The network has set up a working group to go through the texts and prepare decisions to be taken by the board.

Similar adjustments were made to the sustainability standard for exploration, which contained initially four protocols (stakeholder participation, biodiversity, safety and health, and crisis management). The initial standard proved to be too cumbersome to be properly implemented in practice. Consequently, the working group proposed modifications that simplified its implementation without watering down its requirements. The new standard for exploration contains three protocols (stakeholder participation, environment and safety), which are divided into four steps (profiling, reservation, exploration and departure).

Both standards (mining and exploration) are divided into five levels, where the national legislation represents the lowest C level. Companies applying either standard pledge to aim at least for the A level.

Exploring new technological solutions

Currently, there have been discussions whether the network should introduce a common digital platform for the implementation and annual reporting of its standards. So far, however, mining companies have been reluctant to embrace joint reporting devices as many of them already have individual digital systems.

The network is based on voluntary participation. It provides a platform for cooperation and discussions, which have improved understanding between the mining sector and its stakeholders on concerns that should be considered when planning mining operations.


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CONCLUSIONS

The world needs increasing amounts of metals and minerals to support its growing population and the increasing production of renewable energy (such as batteries for electric cars and solar panels) to meet the urgent global challenges of climate change. Amidst this growing demand, there has been pressure on mining companies to enhance their economic value contribution to local communities (notably in developing, resource rich countries) while also improving the management of their environmental and social impacts. This is in part a response to frequent local community unrest and opposition to new mining projects as well as serious accidents that have occurred in recent years, including recurrent failures of tailing dams. The Brumadinho dam collapse in Brazil in January 2019 is a tragic reminder of the vulnerability of communities and the environment to large-scale mining operations. The mining sector and its upstream and downstream supply chains have been hard hit by the COVID-19 pandemic and will, as many other sectors, need to rethink how they organize their operations and supply their materials and services. While difficult, this also brings an opportunity to better integrate sustainability factors into mining operations.

The urge for greater and more meaningful reporting of the mining sector's sustainability impacts comes from a variety of sources, notably from local communities affected by mining activities, and investors that put increasing value on ESG factors in their investment decision making. NGOs and consumers have also been active advocates of increased responsibility of the sector. The SDGs have emerged as an important element in encouraging the mining sector to enhance its sustainability efforts in collaboration with other stakeholder groups, notably governments. To date, mining companies have taken a selective and relatively shallow approach to integrating the SDGs into their sustainability reporting. This is not surprising as, although businesses are crucial for achieving the goals, the SDGs are not meant as a framework for corporate sustainability reporting but designed for reporting at the government level. Mining companies are lacking a common understanding of how to holistically assess their sustainability performance, which is a precondition to effectively reporting towards the SDGs. It is imperative that governments work with mining companies to gain a clearer understanding of how to scale up progress towards achieving SDG targets of national, regional and local priorities.

Sustainability reporting frameworks and standards have played an important role in framing and encouraging sustainability reporting of mining companies. However, the number of reporting initiatives, and their different approaches and target audiences, have contributed to confusion amongst mining companies and their stakeholders. In addition, the lack of national regulation on sustainability reporting for the sector may have played a role in the perceived lack of quality of reporting as mining companies are largely free to decide what information they disclose. In the countries where there is regulation relevant to sustainability reporting in mining, it is often limited to a specific impact such as GHG emissions or waste. There have been some recent developments that provide hope for a move towards strengthened sustainability disclosures of the sector. These include increased disclosure and third-party verification (assurance) requirements, for example in the updated Principles of the ICMM, which now require reporting at the mine-site level. The launch of the first audits of mines against IRMA's global multi-stakeholder-governed standard for responsible mining in 2019 is another example of a recent positive development. The Responsible Mining Foundation is driving stronger public disclosure of corporate-level and mine-site-level data on the management of economic, environmental, social and governance issues. Further, the Foundation is encouraging continuous improvement in the operationalization of the open data principles by mining companies (i.e. data disclosures in ways that make the information accessible, useful and usable by other stakeholders).

Local procurement is emerging as an area where mining companies, communities and governments can find mutual benefits, and where transparency through reporting is essential to mitigate risks (for example risk related to corruption). In an effort to standardize the way mining companies report on their local procurement, the initiative Mining Shared Value launched its reporting framework Mining Local Procurement Reporting Mechanism (LPRM) in 2017. Governments have a key role to play in encouraging local procurement practices of the mining sector, and help the sector and affected communities to be better prepared and resilient to meet potential future health crisis that may impact or halt mining operations, as has been the case with COVID-19. To support those efforts, governments can use the LPRM as a tool to gain a common understanding between governments, mining companies, suppliers and other stakeholders, of the key disclosure areas to focus and report on in local procurement. A wider uptake of the LPRM can also help standardize the way mining companies and governments report on local procurement and help advance progress on SDG 8 on decent work and economic growth. For its part, the EITI also has started to more proactively encourage reporting on the procurement practices of extractive industry companies. At the EITI's October 2019 Board Meeting, the board agreed to start sharing disclosure practices on supply and service contracting.

The mineral supply chain is highly complex and involves various companies, agents and intermediaries located in different parts of the world. There has been growing public awareness of the human and environmental costs associated with the metals and minerals used in products such as mobile phones or computers and pressure on production companies to ensure that the materials they use have been responsibly sourced, i.e. that they have not negatively impacted the environment and human rights. There are many challenges to obtaining visibility on the origin of and sustainability impact associated with minerals and metals along the mineral supply chain. For example, traders in the sector are largely small companies that are privately owned and rarely disclose information on their activities, neither financial nor sustainability related. The increasing focus on responsible mineral sourcing is an important element of enhancing progress on SDG 12 on responsible consumption and production and is putting pressure on mining companies to demonstrate that they manage their operations in an environmentally and socially responsible way. This is not only important for mining companies to keep their social license to operate but also to maintain access to markets that are increasingly sustainability conscious.

Contributing to improving the transparency of the origin and the impacts of complex mineral supply chains, various VSIs have been developed, with different objectives and areas of focus. Some VSIs directly target the mine-site, such as IRMA which offers certification that the mining process adheres to high environmental and social standards. Other VSIs apply to all key actors in the supply chain (e.g. ASI). The ways in which VSIs may directly impact the transparency of mining companies of their sustainability performance vary widely depending on the focus and coverage of the VSIs. Governments have a key role to play in finding the best way to work with an interplay of regulation and VSIs in their jurisdictions to achieve optimal results.

Although research has shown that government regulation is a key factor in improving sustainability performance and transparency of the mining sector, governments have generally not been proactive in developing specific policies and initiatives targeted at the sector. Rather, governments have introduced policies that cover reporting of a wider group of companies, such as large companies or SOEs (both of which include mining companies). There is an important opportunity for governments to play a stronger role in providing the necessary direction and national context for sustainability reporting of the mining sector and more widely in helping the sector in defining how to assess its sustainability in the national and local context. Governments have a range of options such as introducing minimum requirements for sustainability reporting, interacting with VSIs as noted above, providing financial support for impact measurement and endorsing initiatives of the mining sector that have proven successful in advancing sustainability performance and reporting of the sector.

Examples of countries that have taken concrete steps towards enhancing the sustainability management and transparency of the mining sector include South Africa and Canada. The two countries have taken widely different approaches, reflecting their respective international and national contexts. South Africa has developed a number of regulations that aim at increasing and strengthening sustainability reporting of its mining sector and has promoted integrated reporting, i.e. a more holistic view to reporting through integrating sustainability factors with financial elements at the outset. In Canada, the government has endorsed the Mining Association of Canada's TSM program, which assists mining companies in enhancing its sustainability performance, including through reporting. Other relative actions of the Canadian government include a CSR Action Plan that focuses on advancing the sustainability of Canada's mining companies abroad and references and encourages various international sustainability guidance such as the OECD Guidelines for MNEs and the GRI Standards for sustainability reporting.

As identified in this report, there is a lack of connection between EIAs, that are generally required in the government approval process for mining projects, and the sustainability information disclosed by mining companies. One factor of this lacking link is that sustainability reporting of mining companies largely focuses on the corporate level (often including several mines), and not on the specific mining activities. An increased focus on a more granular level of sustainability reporting at the mine-site level is an essential factor in enhancing the quality and relevance of sustainability reporting of mining companies for their local and international stakeholders. The engagement of the EITI with governments, in the context of the implementation of the EITI Standard, has started to increasingly integrate environmental factors, in addition to a focus on financial transparency of mining. This has been largely a result of NGO pressure to further address environmental challenges through the EITI process. As governments rely on corporate reporting for much of its EITI related disclosures, enhancing the link of EIAs and sustainability reporting may be an area where the EITI could play an enhanced role.


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RECOMMENDATIONS

Recommendations for the international community and governments

- It is recommended that **governments play a more active role in guiding and/or directing the mining sector in determining what aspects to focus on in their sustainability management and reporting at the mine-site level**, to better meet the needs of local communities, investors and other stakeholders. As follow-up to the UNEA-4 resolution on Mineral Resource Governance, the international community, including UNEA/UNEP, could support governments in this process.

- **In framing policies and strategies for the approval of mining projects, governments should, at the outset, integrate a review of environmental and social impacts alongside economic factors.** When the review of environmental and social aspects of proposed mining projects are conducted by different government authorities (such as ministries) than the economic factors, effective communication between the different approval authorities should be ensured during the approval process to allow for a holistic view of a project's net value at the national as well as local community levels. Having a clearer understanding of the perceived positive and negative impacts of the project, with associated action plans, will provide for a better understanding of the key areas that would need specific management and should be highlighted in the mining company's sustainability reporting. The international community could support countries in that endeavor.

- **Governments should play a role in enhancing the link between the outcomes of EIAs and the eventual disclosure requirements of mining companies for their environmental and social performance.** This link may be advanced through encouragement of sustainability disclosures at the mine site (project) level, which should reflect the key environmental and social risks identified and proposed mitigation measures as well as eventual EIA related environmental and social management plans. The enhanced connection between EIAs and sustainability reporting would also benefit from a strengthened connection with national environmental, social and economic priorities related to sustainable development and the SDGs at the national level (see more details in the following recommendation).

- In line with the implementation of national action plans and reporting on the SDGs, **governments are encouraged to communicate to mining companies the key environmental and social issues that relate to the SDGs, and other key environmental and social issues, at the national level**, eventually including reporting guidance on what Key Performance Indicators should, at a minimum, be included in the reporting of mining companies.

- **Governments should engage with the mining sector to provide the national environmental, social and economic context (including challenges and opportunities) for mining projects, including in the context of the SDGs**. Depending on the national context, this engagement could include communicating relevant data (e.g. on water quality and availability, pollution levels and local employment and procurement opportunities) – using open data principles, that mining companies can integrate into their sustainability strategy, management, and reporting. An active engagement between governments and the mining sector is also encouraged for the development and implementation of action plans for the SDGs.

- For countries where the trading of minerals and metals is an important sector, **governments are encouraged to engage in enhancing the transparency of the trading of minerals and metals**, eventually building on due diligence that is already required by law for financial institutions in the country. This recommendation relates both to transparency of the financial aspects of trading as well as increased transparency of the origin of minerals and metals in the context of responsible mineral sourcing. In defining actions in this area governments are encouraged to refer to the relevant work of the EITI. The international community could support countries in this work.

- In order to enhance the quality and reliability of sustainability disclosures of mining companies, governments should **encourage or mandate third-party verification** (assurance) **of sustainability reporting of mining companies, at the mine-site level.** In this respect, governments can consider referring to IRMA's mine-site focused multi-stakeholder standard, which offers independent third-party verification and certification for industrial-scale mining and promote IRMA certification of the mines operating in their countries.

- It is recommended that the international community, including UNEP, engage in a discussion with governments on how to move towards more coherent and harmonized VSIs to enhance their effectiveness in achieving responsible mineral sourcing. Following these discussions **governments are encouraged to explore the impacts of VSIs operating in their jurisdictions and how VSIs could eventually be used to complement, or integrate, into relevant regulations.** Governments could also explore whether VSIs could be used as platforms for engagement with businesses on topics where the technical expertise of the VSI would be of value.

Recommendations for mining companies

- In terms of their sustainability reporting, mining companies may opt for reporting both at the local (national or regional) and global level to meet the information needs of their different stakeholders. However, sustainability disclosure data at the mine-site level should at least be available for the communities affected by the mining project and other relevant stakeholders, such as the government and investors.

- Mining companies should explore the use of modern technology for real-time monitoring of environmental and health and safety data and adapt their communication to stakeholders accordingly.

- Mining companies are encouraged to report granularly on their environmental and social impacts at the mine-site level, taking into account the needs of the affected communities, and obtain independent third-party verification of the reported data.

Other recommendations

- In the upcoming creation of a new GRI Standard for the mining sector, GRI is advised to direct their reporting guidance for mining companies to the mine-site level, eventually in addition to the corporate level. This would be in line with the recent update of the ICMM Principles (that now focus on performance at the mine-site level), which refer to the GRI Standards in their reporting requirements for their member companies.

- Given the lack of a global understanding of what can be considered as environmentally and socially sustainable mining operations, it is recommended that interested international organizations explore the development of a holistic sustainability assessment standard with Key Performance Indicators and alignment with the SDGs for the large-scale industrial mining sector, in collaboration with governments, the mining sector and other relevant stakeholders.

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