



## **ESG trends on the mining industry. Are we prepared?**

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### **Abstract**

ESG expectations go well beyond environmental and socio-economic impact assessment studies on a project. They include a systemic scrutiny of environmental and social practices across the mine life cycle, supply chains and in some cases into the material life cycle, incorporating a global perspective into the operations. ESG practices are increasingly part of how mining companies and mine sites are being evaluated by a wide range of stakeholders.

In capital projects, the best time to consider ESG risks and how to mitigate them is in the upfront stages such as the pre-feasibility and feasibility studies. It is at these stages where many of the long-term impacts are being locked in. If current trends hold, future demand for good governance of environmental and social performance will intensify across all industrial sectors. Demand for transparency and public reporting requirements will continue to grow, harmonization of risk and performance categories will occur while calls for positive impacts and net zero operations will increase. This paper explores what ESG trends mean for the mining industry and how to prepare for the future, considering risks from policy and legal, technological, reputational, market development and people and communities changes.

### **Introduction**

The concept of corporate sustainability has evolved over the years increasing in scope, transparency and expectations. The standards to be utilised, risk/performance categories to be scrutinized and the demand for clear goal and science-based targets sustainability efforts (e.g. reports, rating systems, standards) were initially weighted on environmental performance but today they must incorporate the human, socio-economic, financial and cultural dimensions too. In this already complex context, the Environmental, Social and Governance (ESG) aspects of the sustainability concept have gained increased attention from the financial sector.

A report published in 2019 by Bank of America highlights that ESG factors help companies have a more solid Return on Equity (ROE), a better quality for earnings stability and improved stock price, as these factors appear to isolate attributes that have real earnings impact. ESG-based investing offers long-term equity investors substantial benefits in mitigating price risk, earnings risk, and even existential risk for US stocks (Bank of America, 2019).



ESG considerations in finance have evolved considerably. Metals and mining investors are turning to sustainable finance models to identify well-positioned companies with sustainably managed operations aligned to a low-carbon profile, and adequately mitigating ESG externalities (Barclay, 2021).

### **ESG trends for the mining sector**

For this paper's purpose, ESG trends findings are structured following 4 analysis groups inspired by the transition risks categories proposed by the Task Force on Climate-related Financial Disclosures (TCFD):

- (i) Policy, legal and transparency: policy factors attempting regulating actions linked to ESG performance or promoting its further implementation, reporting and accountability.
- (ii) Market: actions affecting market conditions or how products and services are offered, and attributes tied to changing customer or community perceptions regarding an industry or company.
- (iii) Technologies: technological improvements or innovations connected to ESG performance.
- (iv) People and communities: ESG traits regarding broad social aspects and the relationships with companies' workforce and the societies in which they operate.

### ***Policy, legal and transparency trends***

Soft laws, which refer to non-legally binding, quasi-legal instruments, such as recommendations, guidelines, agreements, and voluntary standards are increasingly hardening in the mining sector. This follows resolutions from two groups of institutions: the courts, and international financiers and regulators.

Courts are one of the major drivers in the evolution of soft laws into hard ones, where judges are embracing international soft law concepts of liability. For example, the non-binding Escazu agreement for Latin America. This regional agreement refers to access to information, public participation, and justice in environmental matters in Latin America and the Caribbean. The agreement was quoted in 2018 by Argentinian judges in a trial<sup>1</sup> related to an oil and gas company indicating that, while the agreement does not imply international legal responsibility, it constitutes as an interpretative guideline to be considered regarding what the rights to the environmental information are needed (CEPAL, 2018). This agreement, among other non-legally binding instruments, is likely to increase ESG related litigation for the mining sector and to enforce processes.

Regarding financial institutions and regulators, now the Securities Exchange Commission (SEC) in the USA is proposing new rules that, once adopted, will require to submit information related to carbon footprint in reports filed with them. Also, the Canadian Securities Administrators (CSA) published a guidance for investment funds on their disclosure practices that relate to ESG considerations.

Although climate related information is currently in the spotlight, more structured data regarding non-climate risks will be added in the future and companies will likely have to undertake a substantive update of their technical reports. Investor's interest is growing in the work of the Taskforce on Nature-related Financial Disclosures (TFND). Launched in 2021, the TFND seeks to inform how nature loss poses both risks and opportunities for business, providing a disclosure framework for organisations to report and act on evolving nature-related risks, such as biodiversity and habitat loss.

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<sup>1</sup> <https://www.terram.cl/carbon/download/energia/electricidad/minuta/Fallo-FARN-c-YPF-1.pdf>



## ***Market trends***

While the ways in which markets could be affected by climate change are varied and complex, one of the major ways it can happen is through shifts in the supply and demand for certain commodities, products, and services as ESG risks and opportunities are increasingly considered (TCFD, 2017). Replacing fossil fuels with low-carbon technologies will require an eightfold increase in renewable energy investments and this will result in a strong increase in demand for certain minerals and metals (IEA, 2022). Thus, the mining industry is key in this transition.

The renewable energy and EV battery sectors are highly sensitive to supply chain risks that could undermine the reputation of their technologies and products. Initiatives such as the Responsible Minerals Initiative (RMI) and the Aluminium Stewardship Initiative (ASI) are examples of where market actors, and other stakeholders, are collaborating to define ESG performance expectations for mining companies and in the case of ASI for actors along the full aluminium supply chain.

The increasing demand for minerals and metals for the energy transition is driving the integration of ESG into financing mechanisms. According to estimates from Bloomberg Intelligence, ESG investments are set to balloon to \$50 trillion by 2025 from about \$35 trillion in 2021,<sup>2</sup> ESG funds are portfolios of equities or bonds for which ESG factors have been integrated into the investment process testing how sustainable the company's performance is regarding its ESG criteria. But to close the loop between sustainability related gains and sustainable governance, ESG strategies should link the incoming funds with an equal increase of investments regarding social and environmental solutions.

As ESG become a stronger influence on mining companies' performance, the sector will need to take a more strategic approach to the performance of the supply chain. To date, from a climate change perspective, focus has been concentrated on reducing emissions related to scopes 1 and 2 (WEF, 2021). Fully understanding scope 3 (supply chain produced emissions) is the next step in the climate roadmap. If we extend this example into all ESG contents, it means that mining companies that are committing to ESG strategies should consider how to help their supply chains becoming more sustainable.

Locally based, small and medium or community owned business are important players in the mining supply chain. Their own ESG performance pose a major challenge as they might not be accessing the required and relevant knowledge, technological developments, transparency practices or funding for betterments in their ESG practices, collaterally affecting the mining industry. More alliances and responsible supply chain programs are needed to effectively incorporate as well as unlock supply chain ESG potential and to explore alternatives to direct funding, to reduce organizational barriers and to speed up much needed outcomes.

## ***Technological trends***

Technological improvements or innovations that contributing to ESG performance will have a significant impact on the mining industry. While some mining companies are creating the baselines needed to understand their emissions and climate related risks, and to set net-zero targets, others are already seeking solutions to unlock carbon capture technologies and become carbon negative. This involves strategic alliances and coalitions to study, test, measure and ensure that methods are efficient. Carbon mineralization is emerging as a possible solution regarding carbon neutrality, allowing companies to rethink tailings management. Tailings have been seen as a liability, but they could play a part in helping achieve climate

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<sup>2</sup> [ESG by the Numbers: Sustainable Investing Set Records in 2021 - Bloomberg](#)



goals through the process of carbon mineralization (Hiyate, 2021) and have the potential to reposition the industry as an ally in the worldwide goal of fighting climate change.

Another technological trend relates to transparency in the mining industry. Blockchain has the potential to generate credible, consistent, and transparent ESG data for reporting. Raw ESG data, such as the electricity usage, wastewater and green gas emissions are usually collected by companies as part of regulatory requirements and increasingly as part of corporate sustainability reporting. The dispersed nature of the data can present challenges to its authentication and, as data is provided after closing reporting cycles, changes to ESG strategies may not reflect future performance. Blockchain technologies are a promising solution to address data issues and to provide real time ESG information to track performance and strategies development (Liu et al, 2020).

Smart devices and the growing participative science are drivers for ESG trends as well. Collaborative platforms and efficient dialogues will leverage transparency and accelerate ESG results. Nowadays, decision-making needs to rely on information from various sources, including scientific research, indigenous and local knowledge, participatory and community-based research. However, in some countries, the lack of data, or sometimes the lack of validation process of it, present a barrier to the decision-making process. Participatory science can contribute to data collection on vulnerabilities, factors, trends, and changes in many key areas related to ESG (UNESCO, 2019). Any citizen from mining related communities can become a scientific volunteer, regardless of their knowledge background.

### ***People and communities related trends***

As described previously, technological solutions and low emission operations emerge and ESG knowledge is spreading. This will inevitably change the nature of interactions with communities and workers. From a workforce perspective, reskilling is needed to incorporate digitalization and data analysis knowledge. The mining sector operates in a wide spectrum of countries and many of them are facing challenges in the educational sector, adding a layer of complexity for effective and timely training in new skills. On the other hand, companies will need to understand how essential local knowledge enhances business results, by unlocking effective stakeholders' engagement programs, traditional knowledge understanding and creating opportunities to integrating community inputs into project designs.

From a governance perspective, communities are considering becoming shareholders of mining companies, gaining partial ownership and accessing to decision making processes. During the 2022 Nunavut Mining Symposium, the community weight in the possibility to procure a sizeable number of shares, moving the Inuit associations in the direction of becoming part owners of industry (Lohead, 2022). In 2021, Skeena Resources and the Tahltan Central Government (TCG) announced that they have entered into an investment agreement, pursuant to which TCG has agreed to invest into Skeena by purchasing a portion of Tahltan investment rights (Mining.com, 2021). This new perspective on shareholder's structure will not only change the scope on business decisions and reshape engagement strategies, especially at midsized and smaller companies, but it will also harden the concept of stakeholder capitalism where value and decision making are a shared responsibility.

### **Conclusions**

- Hardening of soft laws might raise ESG related litigation. Interest will move towards nature-related financial disclosure, including impacts on biodiversity.
- As ESG based funds grow, ESG strategies should link incoming funds with an equal increase of investments regarding social and environmental solutions and programs to demonstrate a comprehensive understanding about ESG content embedded into business strategy.



- The sector will need to take a more solid approach to the supply chain. Alliances and responsible supply chain programs would need to unlock supply chain ESG potential and consider alternatives to direct funding to reduce organizational barriers and speed results.
- Net-negative and carbon reduction strategies are showing a trend to rethink and redesign operations. Companies piloting carbon capture technologies are leading the industry path and repositioning as an ally in the worldwide goal of fighting climate change.
- Blockchain solutions present betterments for transparency and traceability along the supply chain and has also the potential to generate trustable ESG data for reporting and for corroborating strategies in time.
- Smart devices and a growing participative science are allowing more effective stakeholders' engagement programs. Collaborative platforms and efficient dialogues will leverage transparency and accelerate ESG results.
- Interaction with communities and workers will change driven by technological solutions. Debates about reskilling programs and the incorporation of digitalization and data analysis knowledge will reflect on dialogue process. New alliances will require to diversify economic opportunities.
- From the governance perspective, communities will reshape their position in the business landscape becoming shareholders by acquiring shares and ensuring investment rights.

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