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. When the time is taken to ask the right questions on social and environmental impacts and opportunities, it is possible to design out problems and design in solutions that will reduce future risks and enhance corporate stewardship.

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 its components. It began as a purely environmentalist vision and now incorporates the human, economic and cultural dimensions, transforming into a holistic practice. In this already complex context, the Environmental, Social and Governance (ESG) aspects of the sustainability concept had increased its attention from the finance and investor's sectors.

A report published in 2019 by the 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 stocks, as it appears to isolate non-fundamental 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, even bankruptcies (Bank of America, 2019).

ESG considerations in finance have evolved and metals & mining investors turned to sustainable finance to identify well-positioned miners with sustainably managed operations aligned to a low-carbon profile and which adequately mitigate for ESG externalities (Barclay, 2021). 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. When the time is taken to ask the right questions on social and environmental impacts and opportunities, it is possible to design out problems Thus, the need to understand ESG trends when considering risk analysis and business strategies becomes critical.

ESG trends for the mining sector

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

(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 attributes regarding broad social aspects and the relationships with companies' workforce and the societies in which they operate.

Policy, legal and transparency trends

Soft laws are hardening. Soft laws refer to quasi-legal instruments without legally binding force, such as recommendations, guidelines, codes of conduct, agreements, non-binding resolutions, and standards. There is an increased hardening of soft laws involving the mining sector following resolutions from two groups of institutions: the courts and international financers and regulators.

Courts are one of the major factors in this evolution of soft law 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 on a trail 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 taken into account in what the right to the environmental information is concerned (CEPAL, 2018).

This agreement, among other non-binding legal instruments, is likely to increase ESG related litigation for the mining sector and to enforce processes, such as social and human rights due diligence and consultations. Although due diligence, consultation and dialogue process are already addressed by the mining industry, there are movements towards mandatory human rights and environmental due diligence measures strengthening in Europe and that will focus the attention on these particular mechanisms (Shift, 2021).

Regarding financial institutions and regulators, The European Union has been a pioneer in demanding contextualisation and materiality when reporting the actions of companies, promoting

regulations and guidance. Now the Securities Exchange Commission (SEC) in the USA follows the same path proposing new rules that, once adopted, will require information related to carbon footprint in reports filed with the SEC. Also, the Canadian Securities Administrators (CSA) published a guidance for investment funds on their disclosure practices that relate to environmental, social and governance (ESG) considerations.

Although climate related information is currently on the spotlight, more structured data regarding non climate content will join in the future and companies will likely have to undertake a substantive update of their technical reports. Investor's interest is growing among 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 aspects.

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 supply and demand for certain commodities, products, and services as ESG risks and opportunities are increasingly considered (TCFD, 2017). The mining industry is a substantial link in the low carbon energy sector. Replacing fossil fuels with low-carbon technologies would require an eightfold increase in renewable energy investments and cause a strong increase in demand for metals. Becoming part of the renewable energy's value chain requires a shift in business strategy and culture.

As mining companies seek funding to answer to the increasing demand, ESG based funds emerge. Companies choosing this instrument will need to incorporate its gains into their ESG corporate strategy. 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 and programs to demonstrate a comprehensive understanding about ESG content embedded into business strategy.

As ESG become stronger within the mining companies' performance, the sector will need to take a more solid approach to the supply chain. To date, from a climate change perspective, focus have concentrated on reducing emissions in the own operational facilities and offices or the ones resulting from purchase of third-party electricity and heat (Scopes 1 and 2 respectively) (WEF, 2021). Fully understanding scope 3 (supply chain produced emissions) is the next step for 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 mayor players in the mining supply chain, and this presents 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. 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.

Technological trends

Technological improvements or innovations that support the transition to a lower-carbon and energy efficient economic system, effective stakeholder engagement and transparency will have a significant impact on the mining industry. With mining companies increasingly committing to Net Zero strategies, pilot projects to replace natural gas in operations are showing a trend to rethink the entire blueprint of operations. As an example, incorporating electric vehicles in mining operations and exploring the potential of using hydrogen fuel cells for powering vehicles will require modifications for ensuring recharging options underground and additional security measures.

While some mining companies are getting the baseline to understand their emissions and climate related risks, to set net zero targets, others are already seeking solutions to unlock carbon capture technologies helping remove carbon from the atmosphere and become carbon negative. This involves strategic alliances and coalitions to study, test, measure and ensure that methods are efficient. Carbon mineralization emerge as a possible solution regarding carbon neutrality and it is allowing to rethink tailings. Tailings have been seen as a liability, but they could play a part in helping achieve climate goals through the process of carbon mineralization (Hiyate, 2021) and has 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 solutions present betterments for transparency and traceability along the supply chains. Blockchain has also the potential to generate trustable, consistent and transparent ESG data for reporting. Raw ESG data, such as the electricity usage, wastewater and green gas emission are usually collected and sent manually. But it presents challenges to its authentication and, as data is provided after closing reporting cycles, changes into ESG strategies will happen in a posterior stage. Blockchain technologies provide promising solutions to address the data authentication issues and connection to smart devices can provide in time ESG data to continuously track performance and strategies development (Liu et all, 2020).

Smart devises and the growing participative science are drives for ESG trends as well. As communities have more access to knowledge and connections, they can be active participants in stakeholders' engagement programs. 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 this data, presents 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 spreads. 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 fast 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 and even integrating communities' inputs into project designs.

The need for new skills and the redesign of mining operations will reflect in dialogues with unions. New alliances will be required to diversify economic opportunities answering to possible obsolesce of trades. This opens a new opportunity to revitalize local procurement programs and value chain redefinition by exploring green procurement options, co-creating new skill trainings with unions and redefining mining closure by incorporating solid economic diversification analysis enabling sustainable economic solutions beyond the mine's life cycle.

Effective stakeholders' engagement processes and local alliances strengthened relationships with communities, will become critical as monitoring and analysing companies' involvement in ESG controversies is increasing as part of the risk assessment process, supporting investors in understanding where gaps may exist between public ESG commitments, and operational practice. A report from Moody's affiliate, V.E, analyses companies' involvement in ESG controversies, including the mining and metals industry. In 2020 3,655 controversies where captured, impacting 1,413 companies, and more than 50% of those controversies were linked to social issues with a raise in climate-related controversies linked to continued shareholder activism and climate liability lawsuits. 35% of assessed companies provide no public response to the allegations that they face (V.E., 2020).

From a governance perspective, diversity and inclusion actions are already taking place, but they tend to focus on a gender-based perspective. The following steps will go beyond gender and shall discuss the inclusion of multicultural representatives in company boards that develop multinational mining operations, ensuring all demographics and cultural aspects of the business are represented. In 2021, the SEC approved Nasdaq's new board diversity rules, showing the time has come to open public company boardrooms to directors with a broader set of backgrounds, experiences, and identities (Moats, 2021).

Conclusions

- Hardening of soft laws might raise ESG related litigation and increase movements towards mandatory human rights and environmental due diligence. Interest will move towards nature-related financial disclosure, including impacts on biodiversity.
- As ESG based funds grow, companies can unlock green finance opportunities. But ESG strategies should link the 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, consistent, transparent ESG data for reporting and for corroborating strategies in time.

- Smart devises and the growing participative science are allowing more effective stakeholders' engagement programs. Collaborative platforms and efficient dialogues will leverage transparency and accelerate ESG results. Effective stakeholders' engagement processes will become critical as monitoring and analysing companies' involvement in ESG controversies is increasing as part of the risk assessment process.

- Interaction with communities and workers will change driven by technological solutions. Reskilling programs and the incorporation of digitalization and data analysis knowledge will reflect in dialogue process. New alliances will be required to diversify economic opportunities.

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