

BIODIVERSITY, FINANCE AND MINING: UNDERSTANDING THE LINK

The Mining Association of Canada (MAC) and Millani have been working together for the last several years to cultivate increased dialogue between mining companies and institutional investors, with the aim of aligning corporate issuers' ESG (environmental, social and governance) disclosures with the evolving expectations of investors.

This discussion paper is the result of the most recent event that took place in June 2023, which brought together institutional investors and MAC members to discuss how the mining industry in Canada is addressing biodiversity loss and conservation. Millani and MAC's collaborative event welcomed a diverse group of panelists, representing the investor, corporate issuer, regulator, government, NGO, and Indigenous perspectives. The conference was followed by a roundtable discussion under Chatham house rules between investors and MAC members.

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WHAT IS BIODIVERSITY AND WHY DOES IT MATTER?

Increasing attention is being directed to issues related to biodiversity by the financial community — but what is biodiversity, and why does it matter?

Biodiversity is the variability of all living things on Earth, including plants, animals, bacteria and fungi.¹ Biodiversity can be assessed by looking at the stock of **natural capital** (Earth's stock of renewable and non-renewable natural resources, e.g., plants, animals, air and soils).² Natural capital can combine with other forms of capital to yield **ecosystem services**, which are the benefits that people, including businesses, derive from ecosystems. These include:

- **Provisioning services:** products obtained from the environment, e.g., food, water, medicinal resources
- **Regulating services:** benefits obtained from regulation of ecosystem processes, e.g., clean water, pollination
- **Cultural services:** nonmaterial benefits obtained from ecosystems, e.g., ecotourism, mental and physical health
- **Supporting services:** the natural processes that maintain the other services, e.g., nutrient cycling, photosynthesis.³

“Healthy communities need healthy societies; healthy societies need healthy environments. It matters to all of us.”

— Mining company representative

Given our reliance on biodiversity, all sectors have a role to play in preventing biodiversity loss by conserving and restoring healthy ecosystems. Given the importance of metals and minerals, specifically critical minerals, in the transition to a lower-carbon economy, it is integral that sustainable mining operations are prioritized. MAC and its members recognized this many years ago, adding its *Biodiversity Conservation and Management Protocol* to its *Towards Sustainable Mining (TSM)* standard in 2009. Mining issuers are well positioned to play a key role in proactive conservation due to the large land holdings that surround active mine sites and are taking action. For example, Teck has made a commitment to become nature positive by 2030 and is working towards its goal of conserving or rehabilitating at least three hectares of land for every one hectare affected by their mining activity.⁴ If not managed responsibly, mining activities can adversely impact the environment, leading to a higher

“Mining is the start of the supply chain. When you ask for a green product, and go down the chain, it goes all the way back to mining. So, a green product requires ‘green mining’.”

— Mining company representative

risk of biodiversity loss. Leaders in the mining sector are actively working to ensure essential transition products are produced responsibly, by integrating climate action, Indigenous engagement and biodiversity conservation into operations.

However, biodiversity conservation can be complex. The threats and opportunities depend on the ecosystem, including direct and indirect stressors. As such, the tools used to protect and conserve biodiversity need to be responsive to local circumstances, including the priorities of local and Indigenous communities.

There is increasing awareness of the business case for action beyond those working in environmental management. The OECD categorizes biodiversity-related risks under several categories:

- **Ecological:** Risks associated with biodiversity-related ecological impacts and dependencies, linked to biodiversity loss or ecosystems degradation
- **Liability:** Risks related to parties who have suffered biodiversity-related loss or damage seeking compensation for those they hold responsible
- **Transition:** Risks related to the achievement of transformative change for biodiversity, including regulatory risks, reputational risks, market risks and financial risks.⁵

These risks can easily transfer into significant business risks. For example, a lack of compliance with Canada's federal *Species at Risk Act* or *Migratory Birds Convention Act* can result in regulatory enforcement/penalties, legal costs and negative media attention, all of which can significantly damage a company's reputation with local Indigenous communities, environmental NGOs, regulators and investors.

If managed well, biodiversity conservation can also present opportunities for a mining facility. Proactive and effective biodiversity conservation management may contribute to building broad stakeholder support for a project, reducing regulatory costs and reducing legal vulnerabilities.

BIODIVERSITY, INVESTORS AND FINANCIAL MARKETS

The topic of biodiversity has been steadily climbing the priority list of ESG focus areas for investors in the past few years. It now ranks as a top two focus area for investors according to Millani's latest [Semi-Annual ESG Sentiment Study of Canadian Institutional Investors](#), which was published in August 2023.⁶

SO WHY THE INTEREST NOW?

There is increasing recognition that much of the world's GDP has origins in nature, and that many essential goods and services are nature-based (pharmaceuticals, forestry, agriculture, tourism, textiles, food and beverage). As such, there is growing acknowledgement that risks and opportunities related to biodiversity need to be assessed

and disclosed in the form of decision-useful information for investors and the broader financial markets.

The UN Biodiversity Conference (COP15), held in Montreal in December 2022, was an important catalyst for the business world and investors paying more attention to biodiversity and conservation. Target 15(a) of the Kunming-Montreal Global Biodiversity Framework (GBF) asks that businesses and financial institutions regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity.⁷ Parties to the Convention on Biological Diversity are working to develop national implementation strategies to meet their 2030 targets, Canada included.

There have also been significant changes to various ESG reporting frameworks and standards to enhance biodiversity disclosures, as well as regulatory requirement updates for both issuers and investors.

DISCLOSURES FRAMEWORKS & STANDARDS

CDP

CDP (originally the Carbon Disclosure Project) updated their climate change questionnaire to include questions around biodiversity, including information on governance, commitments, monitoring and reporting. With more than 18,000 companies disclosing information to CDP on climate change, forestry and water, the inclusion of biodiversity questions will be a significant driver for increased disclosure of biodiversity information.⁸

GLOBAL REPORTING INITIATIVE (GRI)

The GRI is revising GRI 304: Biodiversity 2016. Consultation closed in February 2023 and the updated standard is expected to be released in Q4 2023.⁹

SCIENCE BASED TARGETS NETWORK (SBTN)

The Science Based Targets Network (SBTN) released science-based targets for nature, complementing the SBTN's climate targets. They give guidance to companies setting targets and help companies assess and prioritize material impacts on freshwater quality and quantity as well as land targets to protect and restore terrestrial ecosystems.¹⁰

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES (TNFD)

The Taskforce on Nature-related Financial Disclosures (TNFD) released its final disclosure recommendations on how to manage, disclose, and integrate nature-related risks in decision making processes on September 18, 2023.¹¹

DISCLOSURE REGULATIONS

EUROPEAN SUSTAINABILITY REPORTING STANDARDS (ESRS)

The European Sustainability Reporting Standards (ESRS) includes ESRS 4 on biodiversity. The draft standards include requirements for companies that report to the Corporate Sustainability Reporting Directive (CSRD) and identify biodiversity as a material topic to disclose policies, targets, action plans, and more. The first set of standards were adopted by the European Commission on July 31, 2023 for use by all entities subject to the CSRD and reporting will be effective on January 1, 2024.¹²

INTERNATIONAL SUSTAINABILITY STANDARDS BOARD (ISSB)

The International Financial Reporting Standards (IFRS) released its two first International Sustainability Standards Board (ISSB) standards in June 2023. They are currently seeking consultation on where to focus efforts next. One potential area is biodiversity due to biodiversity loss posing a significant threat to financial stability.¹³

SFDR (SUSTAINABLE FINANCE DISCLOSURE REGULATION)

The European Union's Sustainable Finance Disclosure Regulation (SFDR) has a mandatory Principle Adverse Impact (PAI) indicator on biodiversity, in which financial market participants and finance advisors will need to disclose the share of investments in investee companies with sites/operations located in or near to biodiversity-sensitive areas where activities of those investee companies negatively affect those areas.¹⁴

Figure 1 – Changes in biodiversity-related disclosures and regulations

There is clear momentum around this topic, not only from investors but the wider sustainable finance system. National action plans are being developed and regulatory requirements and reporting standards that seek to standardize assessment and disclosure of impacts, risks and opportunities related to nature are evolving. These have elevated the understanding of the role the business community can play in halting and reversing biodiversity loss. It is clear there will be higher expectations on companies and investors when it comes to disclosure of biodiversity risk.

The interconnectivity of biodiversity with other key material topics like climate and community relations has also contributed to the surge in interest from the investment community. With investors increasingly focusing on longer time horizons for investments, biodiversity and natural capital management is now being considered given its potential long-term implications. Issuers can therefore expect more scrutiny and engagement on the topic as investors try to understand the true value of biodiversity impacts, including their link to community relations and climate risk management. Sharing appropriate, decision-useful disclosures is a key component to supporting investors who are trying to understand biodiversity's financial value and its interconnectivity with other material issues.

As momentum around biodiversity disclosures has been increasing, the mining industry has been ahead of the curve, having begun reporting on the *Biodiversity Conservation Management Protocol* as part of the TSM standard in 2011. The mining sector, with its direct and clear impacts and dependencies on nature and biodiversity, has seen its issuers assessing their environmental impacts for many years and managing and disclosing on biodiversity. The *TSM Biodiversity Conservation Management Protocol* includes three indicators that provide clear direction for improving practices related to biodiversity. It also includes requirements for public facility-level reporting and independent assurance. This standard helps mining issuers ensure biodiversity considerations are integrated into decision making processes.

With existing disclosure frameworks in place, and others evolving, it is now a matter of understanding how to efficiently disclose in order to appropriately meet stakeholder expectations.

WHAT DOES BIODIVERSITY MEAN FOR ISSUERS?

The mining sector has long recognized that responsible mining development includes biodiversity conservation. This is illustrated by the robust, long-standing research and monitoring programs that are in place at mining facilities across Canada and internationally, the significant investments in nature conservation beyond the mine fence and the local partnerships with Indigenous communities that are delivering benefits for species and their habitat.

A crucial part of successful biodiversity management is building trust with local communities. Biodiversity management is a great opportunity for issuers to connect with local and Indigenous communities and addressing biodiversity impacts before, during and post mine operation can help a company to develop and maintain its license to operate.

Potential mining-related impacts on biodiversity tend to be localized and related to alteration of species' habitats. As such, effective biodiversity management needs to be responsive to local circumstances. It is therefore vital to develop partnerships between mining facilities and local and Indigenous communities and to create mitigation plans that reflect local biodiversity needs and community priorities.

“You can’t effectively protect biodiversity without cooperating, listening, and considering Indigenous communities.”

— Regulatory body representative

Increasingly, formal agreements (e.g., Impact Benefit Agreements) between mining companies and surrounding communities include provisions related to environmental stewardship and wildlife management. These partnerships not only result in positive outcomes for biodiversity but can help strengthen the overall relationship and, in turn, the company's reputation, as well as mitigate negative financial impacts.

ENVIRONMENTAL MONITORS AT VALE'S VOISEY'S BAY MINE

As part of its Impact Benefit Agreements with the Innu Nation and the Nunatsiavut Government, Vale funds independent environmental monitors who are on site at the Voisey's Bay mine at all times. The monitors report directly to the Innu Nation and Nunatsiavut Government. They have

full access to the site and actively participate in meetings related to environmental issues. This arrangement has resulted in improved environmental performance, enhanced transparency and strengthened relationships. This initiative is helping to inform the establishment of similar programs at other mining facilities.

NÍ HADI XA INITIATIVE

The Ní Hadi Xa initiative, meaning “People Watch the Land Together” in the Chipewyan Dëne Sųłné language, was established in 2014 by Gahcho Kué Mine, a joint venture between De Beers Group and Mountain Province Diamonds, and six Indigenous communities. Together, they conduct environmental and traditional knowledge monitoring at the diamond mine located in the Northwest Territories. The program employs five Indigenous individuals from local communities, including those with environmental management and traditional knowledge experience. Ní Hadi Xa provides a forum for collaborative environmental monitoring and management, with all policies and monitoring programs co-designed and approved by the Governance Committee. The initiative supports in-depth discussion on mine development updates and proposals, with any environmental monitoring findings or concerns directly relayed to Gahcho Kué for incorporation into the mine’s environmental management and monitoring framework.

WHAT ARE INVESTORS LOOKING FOR?

FOCUS ON THE MATERIAL SECTORS

The learnings and challenges found in the mining sector can guide future analysis of biodiversity in other sectors. When assessing supply chains, investors are looking for biodiversity disclosures from companies that use a lot of water and/or depend on natural resources, such as fossil fuels, agriculture and forest products.

USE MARKET LEADING STANDARDS

Throughout the discussions, the need for comparable information was heard. With evolving disclosure expectations (see Figure 1), there is a clear need for disclosure to align with leading standards to avoid the current comparability challenges that investors, and other ESG-report users, have.

PROVIDE DECISION-USEFUL DATA

The term ‘raw data’ brought up differing points of view from investors and issuers during discussions. Investors asking for raw data may be supplied with details such as daily water analysis results and daily sightings of wildlife on a mine site. As such, the perspective of what is decision-useful may

vary, again highlighting the need for disclosure standards. Aligning on what data is useful will be essential for issuers to focus their efforts on ensuring positive biodiversity and conservation results, while providing investors with useful information to help them make decisions.

When standards are referred to, often the data, and the performance around the topic, are the first things that come to mind. However, qualitative context is also valuable, especially when the complexity of biodiversity is considered. It is difficult to establish a one-size-fits-all template for disclosing biodiversity-related impacts, dependencies and opportunities. The risks depend on a number of local factors, many of which will be outside of the control of the mining facility, including ecosystem type, state of species at risk and their habitat, actions of others on the landscape and climate change impacts. Given this broad range of elements to consider, providing the context around the data will be useful.

THE COMPLEXITY OF BIODIVERSITY: IT’S ABOUT THE LOCATION

Unlike disclosing on GHG emissions for instance, there is no widely used or accepted quantitative measure of biodiversity as it is so location-specific. As such, it becomes challenging to provide comparable and decision-useful data points to investors, especially those who own a portfolio of companies in different sectors and jurisdictions.

“Every effort by a mining company needs to be tied to the local context, local species, local communities.”

— Mining company representative

WITH THESE CHALLENGES IN MIND, WHAT IS AVAILABLE TO INVESTORS NOW?

EXISTING TOOLS

The TSM standard has been in use by the mining sector for close to 20 years. Its *Biodiversity Conservation Management Protocol*¹⁵ sets out a template for investors to understand the quality of management around the topic, and could be used as a base for other sectors. TSM can be leveraged as a screening tool to identify comparable indicators and help investors determine where to prioritize engagement efforts. Unlike other evolving disclosure standards, it is finalized, is currently in use, and an assurance process is in place.

Nature Action 100+, a collaborative engagement initiative, will be officially launched in 2023, providing a mechanism for investors to voice their opinions and engage with other leaders to facilitate real change and best practices. The metals and mining sector has been announced as one of the target industries. Participating in a collaborative engagement with multiple investors, thus representing more assets under management, allows investors to be resource efficient as they can maximize their level of influence with fewer internal resources.

A high-level roadmap was produced by UNEP Finance Initiative, in cooperation with the Secretariat of the Convention on Biological Diversity (CBD), the United Nations Development Programme (UNDP), the World Bank, Finance Montreal and the Finance for Biodiversity (FfB) Foundation on how financial actors can align financial flows with the Global Biodiversity Framework (GBF): 'Aligning financial flows with the Kunming-Montreal Global Biodiversity Framework'. It proposes recommendations to financial actors on how to integrate the GBF in policies and decision-making processes.¹⁶

NATURE-BASED SOLUTIONS

Innovative nature-based solutions are available on the market, with the largest debt-for-nature deal made in May 2023: the Galapagos bond (US \$656 million), which will funnel at least US \$12 million into conservation of the islands.¹⁷ Other examples include those in Belize, the Seychelles, and Barbados.

The use of genomics in mining is another innovative solution and currently an emerging field. The Mining Microbiome Analysis Project (MMAP) was launched to build a repository of microbes and geochemical data, using samples from over 15,000 mining sites. Some of Canada's largest mining companies have partnered with academic and research centers to extract DNA from mine site samples and use the data to develop technologies that can process, extract or leave metals behind.¹⁸

CALL TO ACTION

TO SUCCESSFULLY CONTINUE THE DIALOGUE ON BIODIVERSITY, IT IS IMPORTANT TO:

Translate biodiversity risk into financial language

The key is translating issuers' biodiversity data into the language of financial performance. Investors are looking for data, both qualitative and quantitative, and the context of why management of the topic is relevant and important for a company.

Align nature-based disclosures

A clear understanding is needed on how the different frameworks and standards overlap, and what they each highlight as material information:

- What type of data is required?
- What kind of data is being measured and reported?
- What is decision-useful information for both investors and issuers?

Collaborate

Collaborating with and seeking input from nature-related NGOs can advance the financial sector's understanding of the metrics that matter. Collaboration within companies and across countries, but also between stakeholder groups, across sectors, and with Indigenous communities, is essential.

Leverage existing work

The mining sector is relatively advanced on how it manages and discloses biodiversity risk. TSM provides a user-ready framework to assess a company's biodiversity-related risks, opportunities, and through its scoring system, demonstrates areas of improvement. Educating the market about TSM and the work that has already been completed, as well as how it interacts with SASB, TCFD, GRI – and the newly release ISSB standards, will demonstrate the work that has been done and can be replicated, not just for mining but other sectors as well.

ENDNOTES

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- 5 Biodiversity: Finance and the Economic and Business Case for Action, OECD Library
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- 7 Press release: Final text of Kunming-Montreal Global Biodiversity Frameworks available in all languages, 22, Convention on Biological Diversity, December 2022
- 8 CDP Climate Change 2022 Questionnaire, CDP
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- 14 Review of SFDR Delegated Regulation regarding PAI and financial product disclosures, EBA, EIOPA, ESMA, Joint Committee of the European Supervisory Authorities, April 2023
- 15 Biodiversity Conservation Management Protocol, Towards Sustainable Mining
- 16 Aligning financial flows with the Kunming-Montreal Global Biodiversity Framework, UNEP FI, July 2023
- 17 Ecuador seals record debt-for-nature swap with Galapagos bond, Reuters, May 2023
- 18 New project promotes using microbes in mining, CIM Magazine, February 2022



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ABOUT MAC

The Mining Association of Canada (MAC) is the national organization for the Canadian mining industry. Its members account for most of Canada's production of base and precious metals, uranium, diamonds, metallurgical coal, and mined oil sands, and are actively engaged in mineral exploration, mining, smelting, refining and semi-fabrication. MAC works with governments, plays an education role for different stakeholders, and encourages sustainable practices, while promoting the Canadian mining industry's value creation and leadership worldwide. Through Towards Sustainable Mining (TSM), MAC members and the members of other mining associations around the world are required to assess and report on key areas of ESG performance.

For more information, please visit www.mining.ca or www.tsminitiative.com

ABOUT MILLANI INC.

Millani provides advisory services on ESG integration to both investors and companies.

For the past 15 years, Millani has become the partner of choice for institutional investors. By providing advisory services on implementing material ESG issues into investment strategies and decision-making processes, Millani helps reduce risks, increase returns and create value. Millani also regularly develops leading thought leadership pieces on investor and disclosure trends. The firm leverages this expertise and experience to help corporations, both public and private, create strategies, engage with stakeholders and strengthen their disclosures, supporting the organizations in their access to capital and optimization of market value.

For more information, contact us at info@millani.ca or visit our website: www.millani.ca