

Case study

Integrating ESG in practice

The Canadian Mining Company (CMC) is a fictional mining exploration and production company headquartered in Toronto with operations in Ontario, Mexico and Australia and exploration in Peru and Chile. CMC focuses on the exploration and development of gold, copper and silver resources. The company is publicly traded on the Toronto Stock Exchange and its current market capitalization is approximately \$3B Canadian dollars.

As a mining company, CMC has a culture of health and safety and recognizes the critical importance of community relations in maintaining its social licence to operate. CMC has never received any fines or penalties for non-compliance with local laws and regulations, however it has experienced employee strikes causing operational disruptions at its mine site in Mexico. In addition, CMC's operations were impacted by severe wildfires in Western Australia, resulting in a three-week shutdown in the previous fiscal year. In addition, some of its facilities were damaged by wildfires and unbudgeted maintenance expenditures were required to restart operations.

CMC has observed the growing focus on ESG among its investors, lenders, insurers, governments and regulators. Last year, the company received a shareholder proposal to enhance its climate-related disclosure and articulate its plans for managing the physical risks of climate change given the impacts of wildfires on the company's Australian operations. As such, it has decided to develop a formal ESG strategy to address its most material ESG-related risks and opportunities. The CEO of CMC is accountable for the overall execution of the strategy, and the board has asked management to publish an annual ESG report to its investors and other stakeholders next year.

CMC established an internal cross-functional team to participate in the development of the ESG strategy. This included representation from different business functions, including senior management (CEO and CFO), investor relations, legal, HR, finance and the general managers from each of the mine sites. The CFO, a designated CPA with more than 20 years of experience in the mining industry, was tasked with leading this cross-functional team.

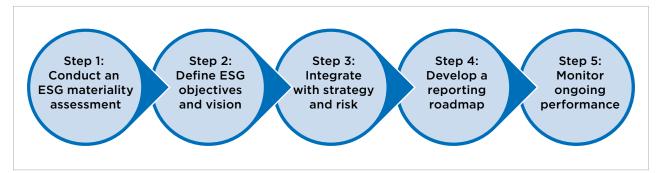
Developing an ESG strategy

Here we share how CMC integrated ESG factors into organizational strategy using the process presented in CPA Canada's guideline "Integrating ESG to create long-term value: Five steps to developing an ESG strategy." The goal of developing an ESG strategy is to enable CMC to harness competitive advantage by improving relationships with key stakeholders (with a focus on its investors, employees and communities) to drive long-term value.



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FIGURE 1: FIVE STEPS TO DEVELOPING AN ESG STRATEGY



Step 1

Conduct an ESG materiality assessment

1a: Identify a long list of potentially relevant ESG factors for the organization

As a starting point, CMC identified the following as key sources of potentially relevant ESG factors for the company:

- Mining Association of Canada (MAC) Towards Sustainable Mining (TSM) Initiative. This provides a set of principles, tools and indicators to drive environmental and social performance and ensure key mining risks are managed responsibly by mine operators.
- International Council on Mining & Metals' Mining Principles. These principles and performance requirements support responsible mining and strengthen social and environmental requirements.
- World Gold Council's Responsible Gold Mining Principles. This set of principles and performance requirements set out clear expectations for consumers, investors and the downstream gold supply chain as to what constitutes responsible gold mining.
- Extractive Sector Transparency Measures Act. This is a regulatory requirement for extractive entities active in Canada to publicly disclose payments made to governments to increase transparency and deter corruption in the global extractive sector.
- ESG ratings assessments of the company by MSCI and Sustainalytics. With investors' growing use of third-party ESG ratings, CMC felt this was an important consideration in developing its ESG strategy.
- **ESG information requests by investors.** This is an important consideration as CMC received a shareholder proposal for enhanced climate-related disclosure and its investors appear to believe climate change is material for the company.
- SASB Metals and Mining Sustainability Accounting Standard. This is a set of ESG disclosure topics and accounting metrics specific to companies operating in the global metals and mining industry.
- Task Force on Climate-related Financial Disclosure (TCFD) Recommendations. The TCFD framework - a voluntary disclosure framework for climate-related risks and opportunities was explicitly referenced in the shareholder proposal.



Based on this review, the following ESG factors were identified as potentially material for CMC:

- waste and hazardous materials management
- workforce health and safety
- community relations
- air quality
- climate change
- biodiversity and reclamation
- relationships with Indigenous peoples
- human capital management
- workforce relations
- energy management
- water management
- business ethics and transparency
- human rights

1b: Assess the potential impact of each ESG factor in terms of its impact and likelihood

Based on the long list from Step 1a, CMC used its existing impact and likelihood definitions and rating criteria from its corporate risk register to assess the potential impact of each ESG factor.

Impact	Description	Likelihood	Description
1 Negligible	 not an important consideration for investors and capital markets no stakeholder issues (employees, community, regulators, media) 	1 Remote	unlikely to occur in any foreseeable circumstances
2 Minor	 operational impacts within normal activity negligible impact to most key stakeholders (employees, community, regulators) 	2 Low	 unlikely to occur in the next one to three years
3 Moderate	 an investment consideration by most investors and capital market participants operational impacts within normal activity stakeholder issue(s) are manageable through standard processes (employees, community, regulators) 	3 Likely	high likelihood of occurrence in the next one to three years



Impact	Description	Likelihood	Description
4 Significant	 a key investment consideration by most investors and capital market participants operational impacts affect financial performance and/or business productivity potential for increased stakeholder interest that may impact operations or affect reputation (employees, community, regulators) 	4 Certain	occurring presently
5 Extreme	 sustained investor and capital market interest and the focus of shareholder engagement business impacts affecting financial performance and/or business productivity over the long term potential for sustained stakeholder interest and/or activism that may impact operations or affect reputation (employees, community, regulators) 	5 Certain and intensifying	occurring presently, with expected material impact over multiple time frames

1c: Categorize the ESG factors based on their impact and likelihood

Based on the rankings from Step 1b, CMC categorized its ESG factors into three levels of materiality: level 1 (high priority), level 2 (moderate priority) and level 3 (low priority).

The preliminary results of CMC's are shown below:

Le	vel 1: High priority	Level 2: Moderate priority Level 3: Low priority	oderate priority Level 3: Low priority	
1.	workforce health and safety	6. biodiversity and 11. air quality reclamation 12. human capital	ation	
2.	community relations	7. labour relations management		
3.	relationships with Indigenous peoples	8. energy management 13. human rights 9. water management	3	
4.	waste and hazardous materials management	10. business ethics and transparency	s ethics and	
5.	climate change			

The concept of dynamic materiality recommends that all ESG factors identified in the ESG materiality assessment should be included in CMC's monitoring plan. This will help ensure the organization does not lose sight of changing circumstances that could impact the relative materiality of different ESG factors identified.

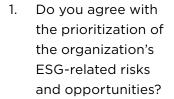
1d: Validate the preliminary findings with senior management and the board of directors

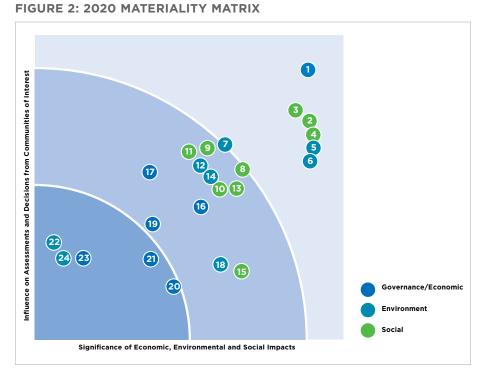
CMC conducted a validation workshop with the entire senior management team and its board.

The purpose of the workshop was to review the preliminary results of the ESG materiality

assessment and determine if any adjustments were required based on their unique knowledge of the company and its circumstances, including historical relationships with key stakeholder groups.

The validation workshop was 1.5 hours in length and focused on discussing the following questions:





- 2. Do any changes need to be made to any of the impact and likelihood assessments?
- 3. Are any relevant ESG factors missing from the assessment?

No changes were identified to the preliminary ESG materiality assessment results. Both management and the board felt the list of ESG factors was comprehensive and they discussed the interconnections between key ESG risks and opportunities identified, such as the link between health and safety and workforce relations. In many cases, CMC's leadership felt the company had a strong foundation to build on for its level 1 ESG factors. For its level 2 and level 3 ESG factors, CMC's leadership acknowledged that more should be done to proactively address these issues. Management and the board agreed that the company should focus its efforts on the level 1 ESG factors identified in the assessment and continue to monitor level 2 and level 3 ESG factors for evidence of increasing materiality over time.¹

¹ For the purposes of this case study, the focus is on level 1 ESG factors. In practice, organizations should consider including level 1, level 2 and level 3 ESG factors in their ESG strategies.

Define ESG objectives and vision

CMC's mission, vision and values are summarized below:

- mission: to provide minerals necessary for increased well-being for all of our stakeholders
- vision: to be a global leader in responsible mining of gold, copper and silver
- values: safety, responsibility, integrity, operational excellence

Using this as the foundation for its ESG strategy, CMC's senior management and board discussed how the priority ESG factors identified in Step 1 intersect with the company's mission, vision and values. The group discussed the connection between responsible mining conduct, acting with integrity and a culture of workplace health and safety as fundamental to CMC's everyday operations. Overall, there was consensus on the desire to be a leader in the global mining sector on its priority ESG factors.

Senior management emphasized a pragmatic approach that considers the company's existing policies and programs. As part of the discussion, CMC's senior leadership identified several strengths and weaknesses in the company's existing ESG-related programs:

- strengths: The company is an industry leader in the areas of health and safety, community relations and relationships with Indigenous peoples. This is already a source of competitive advantage in securing regulatory permits and approvals and attracting strong workforce talent.
- **weaknesses:** The company has basic environmental programs in place to comply with local laws and regulations (e.g., tailings management). However, there are no programs in place to measure and reduce greenhouse gas emissions and adapt to the growing physical impacts of climate change. Several board members saw this as an opportunity to differentiate the company and access new pools of capital available to finance a transition to lower-carbon, climate-resilient operations.

As a next step, the board asked senior management to translate their discussion into an ESG vision statement. This document will form the foundation for CMC's ESG strategy, articulating the framework for its ESG performance ambitions and ongoing reporting, with a focus on meeting expectations of investors and other financial stakeholders. The board also asked CMC's senior management team to develop an ESG reporting roadmap, including proposed KPIs and targets for priority ESG factors, for their review and approval at the next board meeting.

An example of the ESG vision statement to support CMC's ESG strategy is provided below:

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FIGURE 3: SUSTAINABILITY FRAMEWORK

SUSTAINABILITY FRAMEWORK

REPORTING

Transparently reporting on our performance helps us build trust with stakeholders by holding ourselves accountable for results and acknowledging areas for improvement.

TARGETS

Clear targets challenge us, drive improvement and allow stakeholders to assess our performance in the areas that matter most.

METRICS / INDICATORS

Metrics and indicators track our performance.

SYSTEMS

Efficient and effective management systems improve cross-functional collaboration and drive a consistent approach to risk management across the business.

STRATEGY / STANDARDS / PROCEDURE

Strategies, standards and procedures support a consistent approach and detail the minimum requirements for fulfilling our commitments.

POLICIES

Stakeholder Engagement Policy — codify our commitments to stakeholders and are the foundation of the framework.

Step 3

Integrate ESG factors into existing strategy, risk management and governance

3a: Linking ESG factors with strategic planning

As an initial step, CMC's CFO took an inventory of existing policies and mapped them against the company's priority ESG factors to determine which policies apply. The following company policies were identified as relevant to the priority ESG factors:

Priority ESG factor	Relevant CMC policies
Workforce health and safety	 code of conduct and ethics workplace violence, harassment and discrimination policy health and safety policy
Community relations	stakeholder engagement policy
Relationships with Indigenous peoples	stakeholder engagement policy



Priority ESG factor	Relevant CMC policies
Waste and hazardous materials management	environmental policy
Climate change	environmental policy

In addition to reviewing the existing policies, the CFO considered how the ESG factors identified could impact the achievement of the company's strategic objectives. The CFO prepared a memo outlining recommendations to include consideration of priority ESG factors as part of the company's existing strategic planning and budgeting processes. A summary of these recommendations is included in the table below:

Recommendation
 Develop an ESG Vision statement to articulate the link between the five priority ESG factors and the mission, vision and values of the organization.
 Assign formal responsibility to the CFO to identify, assess and respond to ESG-related risks and opportunities.
 Establish an internal ESG committee to lead the execution of the organization's ESG strategy, including developing the company's annual ESG report. The ESG committee should be chaired by the CFO and include participation from all key business functions and mine sites.
 Set targets for priority ESG factors and include progress toward ESG- related targets in annual strategic-planning discussions.
 Assign the finance team to analyze the costs and benefits of different actions to respond to ESG-related risks and opportunities. The finance team should prepare a memo for the ESG committee with recommended action plans to achieve ESG targets.
 All investments in ESG-related projects and initiatives require a business case to be completed that articulates the return on investment and payback period.
 Update annual capital expenditure planning forms and templates to integrate consideration of GHG emissions, particularly for assets with long-lived useful lives (e.g., mine site equipment, vehicle fleets).
 Assign accountability to the Finance team to support the mine sites in analyzing the costs and benefits of installing solar panels to reduce reliance on diesel fuel generators.

Process	Recommendation
Compensation and incentives	 Include ESG-related KPIs in short-term compensation plans for senior management teams to drive ESG performance and achievement of ESG-related targets.

3b: Integrate material ESG-related risks into ERM processes

The finance team completed a gap assessment based on the corporate risk register to determine if any additional ESG risks needed to be added. The existing corporate risk register had sufficient coverage of four out of five ESG factors identified as priorities for the company, except for climate change. CMC noted that this gap existed given the relatively new investor focus on this issue, the growing impacts of extreme weather, rapidly changing stakeholder expectations of companies' contributions to climate change, and new laws and regulations designed to reduce GHG emissions. CMC's senior management team decided to add two risks to the corporate risk register to capture the issue of climate change:

- climate transition risk: potential impacts of policy to reduce GHG emissions, changes in markets and demand for products and services, and reputational risks associated with perceived inaction on climate change.
- **climate physical risk:** potential impacts of extreme weather events, such as wildfires and droughts, on operations and assets.

The general managers at the sites also noted the need to include location-specific transition and physical risks in the site-level risk registers. This would include local laws and regulations, potential reputational impacts from local community concerns about climate change and predicted physical impacts of climate change in different regions where the company operates. This will help CMC to ensure all employees understand the need to continually assess and mitigate these risks.



Develop a reporting roadmap

4a: Select relevant reporting standard(s) and framework(s)

CMC's senior management team decided to use the SASB Standard for Metals and Mining companies and the TCFD recommendations as a starting point in their roadmap. These were chosen after considering the target audience

of investors and other financial stakeholders. In the future, CMC plans to explore using the UN SDGs to report on positive impacts of the company's ongoing ESG-related initiatives as this is of interest to local communities and Indigenous peoples.

4b: Identify KPIs to measure, monitor and report progress

The CPA-led finance team conducted a gap assessment to determine the level of effort required for each proposed metric under the SASB Standard and TCFD framework to give CMC a sense of how easily the company could provide the recommended disclosure for its priority ESG factors. The gap assessment classified KPIs into high, medium and low effort based on whether required data to calculate a KPI was already gathered or could be easily gathered as part of the existing data collection processes.



Based on the gap assessment, CMC's finance team made recommendations on which KPIs could be reported in the company's first ESG report and which KPIs would need to be collected and reported on in future years. These recommendations were used to inform the development of CMC's three-year ESG reporting roadmap. The ESG roadmap was included in the board meeting materials for Step 5 below.

For the data already gathered, the finance team provided three years of historical data and a trend analysis to inform CMC's target-setting activities. They also noted where proposed KPIs and targets aligned with existing strategic priorities and targets included in CMC's performance scorecard. Below is a summary of the recommended targets developed by senior management in consultation with the finance team. The team included this in a memo to the board in Step 5.

Priority ESG factor ²	Proposed KPIs (including relevant SASB codes from metals & mining standard)	Proposed targets	Link with CMC's performance scorecard
Workforce health and safety	 MSHA all-incidence rate (SASB Code: EM-MM-320a.1) fatality rate (SASB Code: EM-MM-320a.1) near-miss frequency rate (SASB Code: EM-MM-320a.1) average hours of health, safety and emergency response training for full-time employees (SASB Code: EM-MM-320a.1) average hours of health, safety and emergency response training for code: EM-MM-320a.1) average hours of health, safety and emergency response training for contract employees (SASB Code: EM-MM-320a.1) 	 zero fatalities zero near-miss frequency rate achieve above industry-average hours of health, safety and emergency response training for full-time and contract employees (industry research to be conducted on industry average and costs to deliver) 	 zero fatality target already reflected in scorecard as part of safety pillar percentage of full-time employees receiving annual health, safety and emergency response training already reflected in scorecard as part of safety pillar

As noted in footnote 1 above, this case study focuses on Level 1 ESG factors for illustrative purposes. In practice, KPIs should be established to monitor Level 1, Level 2 and Level 3 ESG factors for evidence of changing materiality.

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Priority ESG factor ²	Proposed KPIs (including relevant SASB codes from metals & mining standard)	Proposed targets	Link with CMC's performance scorecard
Community relations	 number and duration of non-technical delays (SASB Code: EM-MM-210b.2) percentage of total local employment at mine sites amount of annual community investor (company-wide and by country of operations) 	 zero non-technical delays increase percentage of local employment at all mine sites invest 1% of annual average earnings before taxes to local communities (best practice) 	 goal to secure regulatory permits for exploration site in Chile as part of operational excellence pillar goal to improve workforce relations at mine site in Mexico as part of integrity pillar
Relationships with Indigenous peoples	 percentage of proved reserves in or near Indigenous land (SASB Code: EM-MM-210a.2) percentage of probable reserves in or near Indigenous land (SASB Code: EM-MM-210a.2) engagement processes and due diligence practices with respect to Indigenous rights (SASB Code: EM-MM-210a.3) number of agreements with Indigenous peoples 	 negotiate agreements with Indigenous peoples affected by our operations zero significant disputes with Indigenous peoples 	 not currently reflected in scorecard addresses an important gap



Priority ESG factor ²	Proposed KPIs (including relevant SASB codes from metals & mining standard)	Proposed targets	Link with CMC's performance scorecard
Waste and hazardous materials management	 total weight of tailings waste (SASB Code: EM-MM-150a.1) percentage of total weight of tailings waste recycled (SASB Code: EM-MM-150a.1) total weight of mineral processing waste (SASB Code: EM-MM-150a.2) percentage of total weight of mineral processing waste recycled (SASB Code: EM-MM-150a.2) number of tailings impoundments, broken down by MSHA hazard potential (SASB Code: EM-MM-150a.3) 	 zero significant tailings-related environmental incidents establish annual safety inspections and dam safety reviews at all operating mines complete annual tailings governance reviews on a rotating basis for each operating mine 	zero significant tailings-related environmental incidents already reflected in scorecard as part of safety pillar
Climate change	 gross global Scope 1 and 2 GHG emissions (SASB Code: EM-MM-110a.1) GHG emissions intensity per ounces produced (total company-wide and for each mine site) percentage of gross global Scope 1 emissions that are covered under emissionslimiting regulations (SASB Code: EM-MM-110a.1) number and duration of operational disruptions due to extreme weather 	 set target to reduce absolute GHG emissions by 30% by 2030 set target to achieve net zero by 2050 develop a climate change adaptation plan to build resilience at mine sites, starting with Australian operations 	 not currently reflected in scorecard addresses an important gap



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Monitor ongoing performance

CMC's senior management team provided the draft ESG vision statement, proposed KPIs and targets and a three-year ESG reporting roadmap for the board's review and approval. These documents will form the foundation of the company's ESG strategy and serve as a guide for monitoring ongoing ESG

performance. The board approved the proposed ESG strategy documents and asked CMC's senior management team to report on the company's progress toward ESG-related targets on a quarterly basis, as part of overall performance scorecard reporting to the board.

As a next step, CMC's senior management team will develop the company's first ESG report. The board will review and approve the ESG report as part of its oversight of the company's external reporting. The inaugural ESG report will showcase the principles, priority ESG factors and outline the company's targets and implementation plans. The CFO will be responsible for the development of CMC's annual ESG report, working closely with all lines of the business to ensure an integrated approach.





Key learnings

In recognizing that ESG is a journey that requires continuous iteration and improvement, CMC was able to build upon its existing foundation to demonstrate its ESG performance, while continuing to identify opportunities for further improvements in the long-term.

By developing a formal ESG strategy that is linked with CMC's mission, vision and values, the company is embedding ESG at its core to generate long-term value for all stakeholders. CMC's ESG strategy enables a purposeful shift toward becoming a more resilient, adaptable and innovative organization.





About the author

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Sarah is an ESG and climate change expert with over a decade of work experience as a thought leader, consultant, facilitator and auditor. She regularly presents to executive teams and boards of directors on the link between ESG and climate change with financial and operational performance and long-term value. Sarah helps her clients establish ESG and climate change strategies that align with strategic priorities, enabling effective integration with existing risk and strategy processes.

Prior to joining ESG Global Advisors, Sarah was a principal at CPA Canada where she produced research, thought leadership and guidance for companies to integrate climate change considerations into business strategy, risk management, governance and reporting. Previously, Sarah held senior roles at PwC and MNP working with the energy and mining sectors.

She is the National Academic Director and Lead Instructor for the Institute for Corporate Directors (ICD)'s Board Oversight of Climate Change program. She also facilitates a module on ESG and sustainable finance in the ICD's Director Education Program. Sarah sits on the Board of Directors of Leading Change and Sustainable Buildings Canada. She has a Bachelor of Commerce from McGill University, ISO 14064-3 Certification for Greenhouse Gas Verifications, and received the 2018 Emerging Leader Award from CPA Ontario.





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