

The Canadian Mining Story

TSM Excellence Awards

Photo: Rio Tinto IOC



The Mining Association
of Canada
L'association minière
du Canada

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Photo: Agnico Eagle

TSM Excellence Awards

Each year, the [TSM Excellence Awards](#) highlight outstanding community engagement and environmental initiatives at facilities that are implementing TSM. The awards selection committee, comprised of members of MAC's national Community of Interest Advisory Panel, received several excellent nominations for the awards and acknowledged the range of important sustainability initiatives being undertaken by Canadian mining companies. This year, the committee chose to highlight the projects that they felt to be truly innovative and demonstrative of leading practice. This led to the identification of two winners in the Environment category and one winner in the Community Engagement category.

About TSM

With Canada producing some of the lowest carbon-intensity mineral and metal products in the world, our industry can play a much more significant role in providing the materials the world needs to get to net-zero. In the face of increased demand for low carbon technologies, and the importance of ensuring the minerals and metals essential to their development are mined with commitments to environmental responsibility, Indigenous engagement and sustainability at the forefront, there is no better choice than Canada.

The world needs the mining sector for materials we depend on and it is important that globally recognized standards like [Towards Sustainable Mining](#) (TSM) be in place to ensure that the process of mining is being managed responsibly, from start to finish.

TSM, a made-in-Canada standard first developed by the [Mining Association of Canada](#) (MAC), was originally created in 2004 to drive performance improvement across a range of social and environmental issues where it mattered most — at the mine site level. The program has fostered a significant cultural shift across the sector, making it more inclusive and transparent. This focus on mine site performance makes TSM a go-to system for investors and manufacturers looking to invest in and purchase responsibly mined materials. TSM was the first mining

sustainability standard in the world to require site-level assessments. Through TSM, nine critical aspects of social and environmental performance are evaluated, independently validated, and publicly reported against 34 distinct performance indicators.

Performance is evaluated across a set of detailed environmental and social performance standards, including tailings management, climate change, water stewardship, Indigenous and community relationships, safety and health, biodiversity conservation, crisis management, preventing child and forced labour and equity, diversity, and inclusion.

TSM is overseen by a national independent [Community of Interest Advisory Panel](#), comprised of representatives from Indigenous communities, environmental organizations, labour representatives, finance, local mining communities, social and faith-based organizations and academia.

The public, investors, customers and other stakeholders are more focused on sustainable practices in the mining industry than ever before, and TSM brings confidence that the minerals and metals essential for the items we use every day are being mined responsibly.



Photo: Getty Images

A Constantly Evolving Standard

The “Towards” in TSM is intentional, referencing the constant progression that drives the improvements in the standard’s expectations of mining companies in social environmental practices. Not only are TSM’s protocols consistently updated to reach ever higher benchmarks but new elements are also added to the standard when rights holders, stakeholders, the public, customers and investors voice their interest in seeing data on how mines are performing in specific areas. This was demonstrated most recently in the area of equity, diversity and inclusion (EDI).

To meet the increased global demand for minerals and metals, the mining industry needs a highly skilled and diverse workforce, an area the mining sector, which continues to be predominantly male dominated, has historically struggled with. While there is clear potential for a more respectful, equitable, diverse and inclusive mining workforce, many companies are looking for guidance in order to best achieve this objective. The homogenous nature of the mining industry, particularly in the face of labour market shortages, must change.

In recognition of this fact, TSM developed and published brand new requirements on EDI in 2023. These standards are helping ensure that TSM remains the leading industry standard when it comes to environmental stewardship, community engagement and inclusive practices.

In 2021, MAC published comprehensive revisions to the TSM Energy Use and Greenhouse Gas Emissions Protocol, replacing it with a new TSM Climate Change Protocol.

The revised protocol includes a new performance indicator reported at the corporate level which sets out requirements related to corporate strategy, governance, and management of climate-related risks and opportunities.

It also takes a more holistic approach to the topic of climate change, incorporating site-level requirements related to physical climate risks and climate change adaptation. 2023 was the first year of public reporting for the Climate Change Protocol.

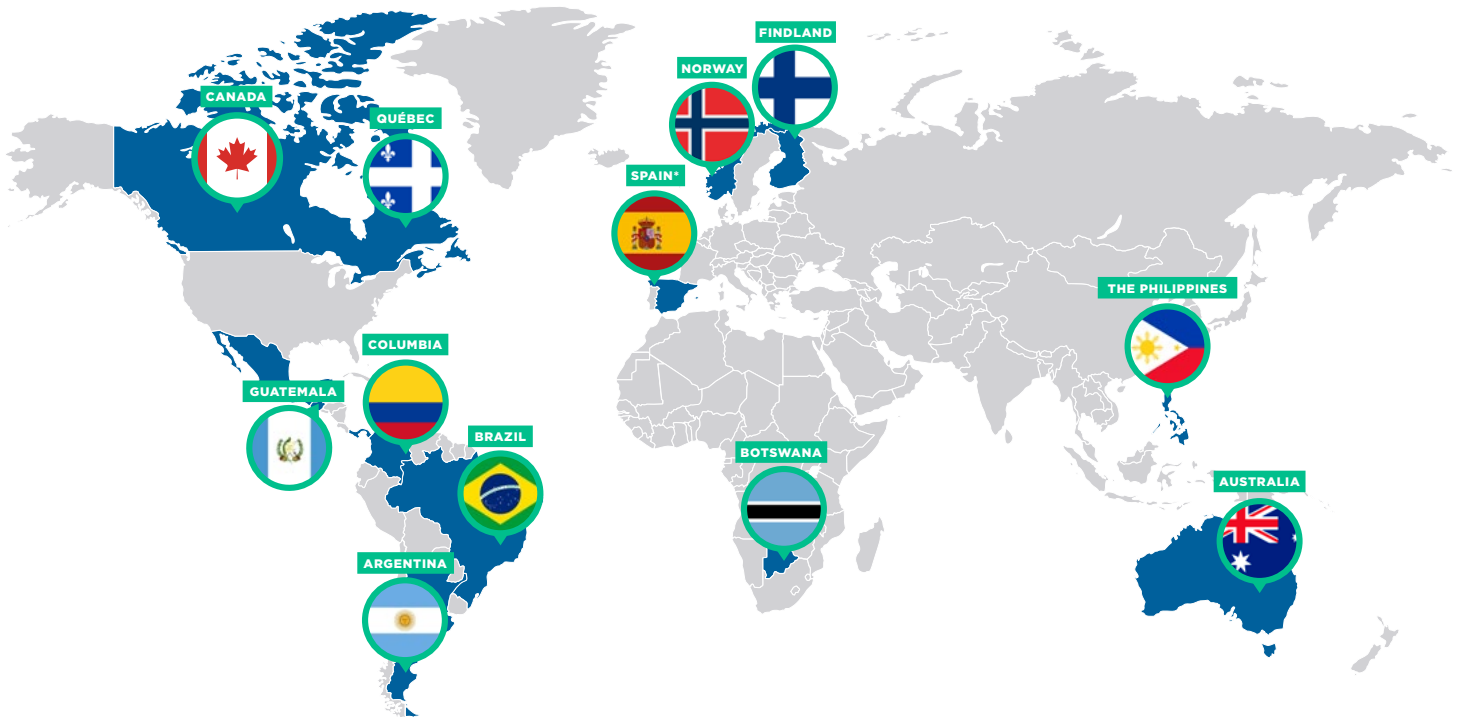
Global Leadership

A mandatory component of MAC membership, TSM enhances credibility and ensures companies are being held accountable in critical areas of the mining process. Having been adopted by 14 mining associations around the world, TSM is the most widespread ESG program of its kind.

Other jurisdictions are taking note of the program's success in enhancing public, investor and consumer confidence in the way companies mine. National

industries that adopt the program are openly committing to going beyond the word of the law when it comes to sustainable practices. Beginning with Finland in 2015, TSM is now in the being or is in the process of being implemented by mining chambers in Norway, Botswana, Brazil, Argentina, Australia, Colombia, Guatemala, Mexico, Panama and the Philippines.

Jurisdictions where mining associations are implementing TSM



TSM Environmental Excellence Award – Rio Tinto IOC

Winner: Rio Tinto IOC - Abandoned Site Rehabilitation Partnership – Nitassinan Cleanup

In partnership with the First Nations of Quebec and Labrador Sustainable Development Institute (FNQLSDI), IOC is helping to clean up old outfitting facilities and legacy dumpsites on Nitassinan, the ancestral homeland of the Innu. By using IOC rail cars to recover and transport the discarded materials along the 418-km stretch of QNS&L Railway to Sept-Îles, Rio Tinto has found a unique way to rebuild lasting relationships with members of the Uashat Mak-Mani Utenam community and offer an expanded approach to environmental reclamation and remediation.

As part of this project, FNQLSDI environmental specialists, members of the Uashat Mak Mani-Utenam community and machinery operators are dismantling decommissioned buildings and infrastructure and cleaning up abandoned sites and facilities. The goal is to restore the land as close to its original state as possible. The team at QNS&L Railway, which is owned by IOC, handles the logistics of transporting the materials and provides all the necessary equipment.

Once the FNQLSDI team has prepared the materials, the QNS&L team loads the materials into railway cars for shipment by train to Sept-Îles. IOC's Environment Department ensures the materials are transported and disposed of in accordance with the applicable laws and regulations (e.g., by providing collection containers).

The safe transport and disposal of residual hazardous materials is all handled free of charge.

The QNS&L railway is the only link between Sept-Îles and northern communities, both for passenger services (Tshiuetin Rail Transportation) and the transportation of goods and ore. The railway is also the only overland route into Nitassinan. It's a very busy railway and adding this type of project to the already complex logistics during the summer maintenance period requires significant coordination between the various teams, particularly since the equipment used for recovery and transportation is generally used only for the railway maintenance program.

Rio Tinto IOC's role in the FNQLSDI's program for the restoration of abandoned sites meets well defined goals for Indigenous communities, particularly that of Uashat Mak Mani-Utenam. It increases the company's understanding of Innu land use and traditional knowledge and allows IOC to build connections and deepen relationships with various communities of interest.

Building strong collaborative relationships in a context that extends beyond IOC's regular operations has been a key component in the creation and maintenance of trusted relationships with communities. Rio Tinto believes that all mining companies have a role to play and need to broadly support their local communities, even if that means stepping outside the usual framework.



TSM Environmental Excellence Award – Agnico Eagle

Winner – Filtered Tailings Management at Agnico Eagle’s Laronde Mine

Since its inception in 1988, the LaRonde Mining Complex had been utilizing slurry tailings deposition, reaching maximum storage capacity over the years. Seeking additional storage space became imperative, leading to the launch of a transformative project. The transition to filtered tailings management was aimed at addressing environmental concerns, while also ensuring operational efficiency and community well-being.

A comprehensive comparative study conducted by a dedicated task force assessed various storage approaches, considering operational, investment, and rehabilitation costs. All factors combined, even though the capital investment was higher, the transition to filtered tailings emerged as the most viable option on the long term.

The transition to filtered tailings represents a paradigm shift in mining practices. Notably, the LaRonde Complex stands as the first Canadian mine to complete the transition of stacking tailings on top of slurry beaches inside of existing tailings storage facilities, thereby minimizing its environmental footprint.

Key innovations include the utilization of waste rock between the filtered tailings and the slurry beaches to reinforce them. This process eliminates the need for costly ground improvement measures. Additionally,

a storage basin was built to store process water and manage rainfall, eliminating the need to store large quantities of water in the tailings pond, and thereby reducing associated risks. Finally, filtered tailings can also be repurposed, for example, to facilitate the reclamation of old tailings storage facilities, enhance progressive rehabilitation or be used as backfill material.

Stakeholder engagement emerged as a driving factor of success with this project, with Agnico Eagle actively involving community representatives and regulatory bodies throughout the project lifecycle. This collaborative approach fostered transparency and ensured that sustainability goals were aligned with local concerns and regulatory requirements.

While each mining site presents unique challenges, the success of the LaRonde Complex project underscores the potential for broader applicability. By considering operational costs, as well as rehabilitation and environmental factors, mines worldwide can explore similar transitions to filtered tailings management.



Photo: LaRonde Complex

TSM Community Engagement Excellence Award – Eldorado Gold

Winner – Eldorado Gold Planning for Social Closure at Lamaque

Advanced planning to address the social impacts of a mine closure is a nascent practice. While the profound social impacts that a mine's closure can have on communities are well-known, they are often not addressed until the mine is nearing the end of its operating life.

Eldorado Gold Québec is demonstrating exceptional forethought and proactivity in the development of its mine closure plan for the Complexe Minier Lamaque. Despite the fact that the mine's operating life is projected to be at least 8 more years, the company has already drawn up an action and public participation plan for the social aspects related to the closure of its Lamaque mine.

A working group has been created, with a mandate to establish the vision, identify the risks and opportunities to be considered, create an action plan

and identify measurable success factors for the six planning components identified by the Monitoring Committee: Community Contributions, Future Site Uses, Employment and Lifestyle, Environmental Protection and Biodiversity Conservation, Landscape and Heritage, and Safety.

Eldorado is welcoming the active involvement of all stakeholders, including local communities, employees, regional authorities, and environmental groups, at a very early stage in its planning process, enabling various viewpoints to be considered and ensuring that all decisions are acceptable and beneficial to all parties.

Eldorado's early approach to the social closure of Lamaque is an exemplary practice for all mine operators to include social considerations in reclamation and rehabilitation plans.



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