



Towards Sustainable Mining

An overview

TOWARDS SUSTAINABLE MINING

WHAT IS TOWARDS SUSTAINABLE MINING™?

Towards Sustainable Mining™ (TSM) is the Mining Association of Canada's (MAC) award-winning commitment to responsible mining. The program was established in 2004 and its main objective is to enable mining companies to meet society's needs for minerals, metals and energy products in the most socially, economically and environmentally responsible way.



MINING IS ESSENTIAL

From the metals needed to power our transportation to the materials required to make communication possible, it is impossible to imagine a reality without it.



THE FUTURE NEEDS MINING

Mining is essential in our transition to a low carbon economy, one that requires mined minerals and metals to be fully realized, cannot be overstated.



RESPONSIBLE MANAGEMENT

It is important that standards be in place to ensure that the process of mining is being managed responsibly, from start to finish.



COMMUNITY ENGAGEMENT

Today, communities expect more from mining companies and the industry expects much more of itself.

- An ESG standard that helps mining companies evaluate and manage their environmental and social responsibilities
- Mandatory for all mining companies that are members of TSM associations
- Overseen by a network of national advisory panels
- Implemented by over 200 companies globally

TSM Abroad

TSM consists of seven core components:

- 1. Guiding Principles**
- 2. Performance Indicators**
- 3. Facility Level Reporting**
- 4. Independent Verification**
- 5. Public Reporting of Facility Level Reporting**
- 6. Condition of Membership**
- 7. Community of Interest Advisory Body**

INTERNATIONAL MINING CHAMBERS CURRENTLY IMPLEMENTING CANADA'S TSM STANDARD



Network of National Community of Interest Advisory Panels

- Each TSM association must establish a national advisory body
- In Canada, the panel includes individuals from:
 - Indigenous groups
 - Mining communities
 - Environmental and social NGOs
 - Academia
 - Labour
 - Financial organizations
 - Members of the Mining Association of Canada's



- Biannual meetings
- Annual reviews of company performance
- Critical perspectives on emerging issues

TSM Protocols



Communities & People



Environmental Stewardship

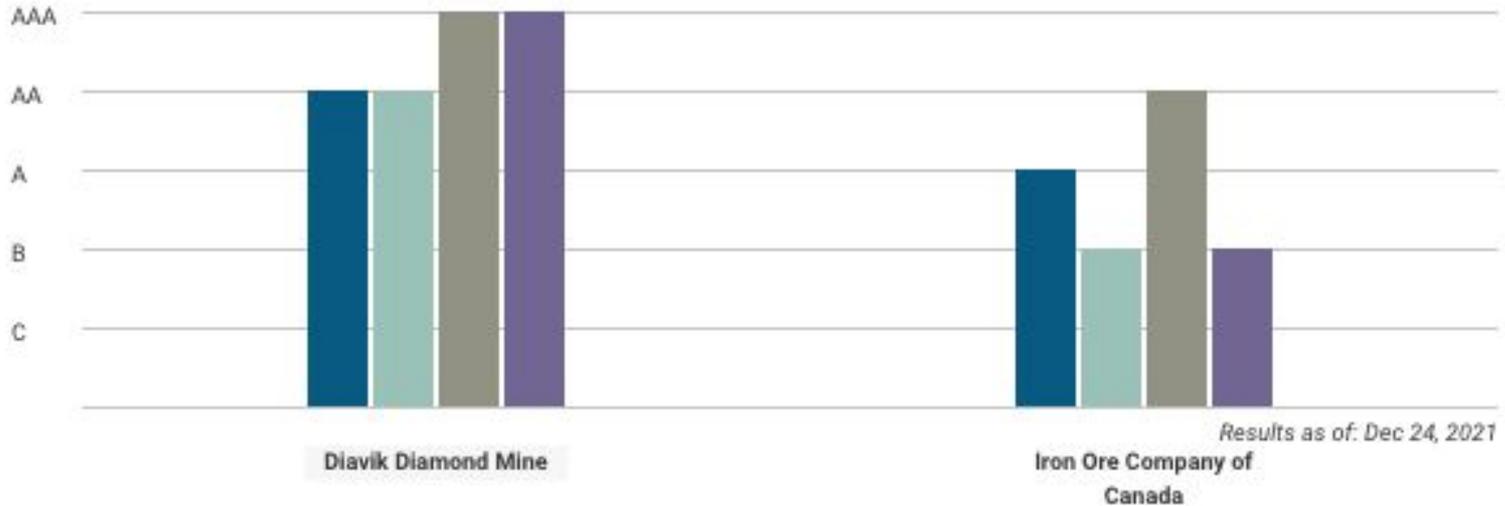
- **Tailings Management**
- **Biodiversity Conservation Management**
- **Water Stewardship**
- **Climate Change**
- **Indigenous and Community Relationships**
- **Safety and Health**
- **Crisis Management and Communications Planning**
- **Preventing Child and Forced Labour**
- ***Equitable, Diverse, and Inclusive Workplaces (in development)***



Annual Public Reporting by Facilities

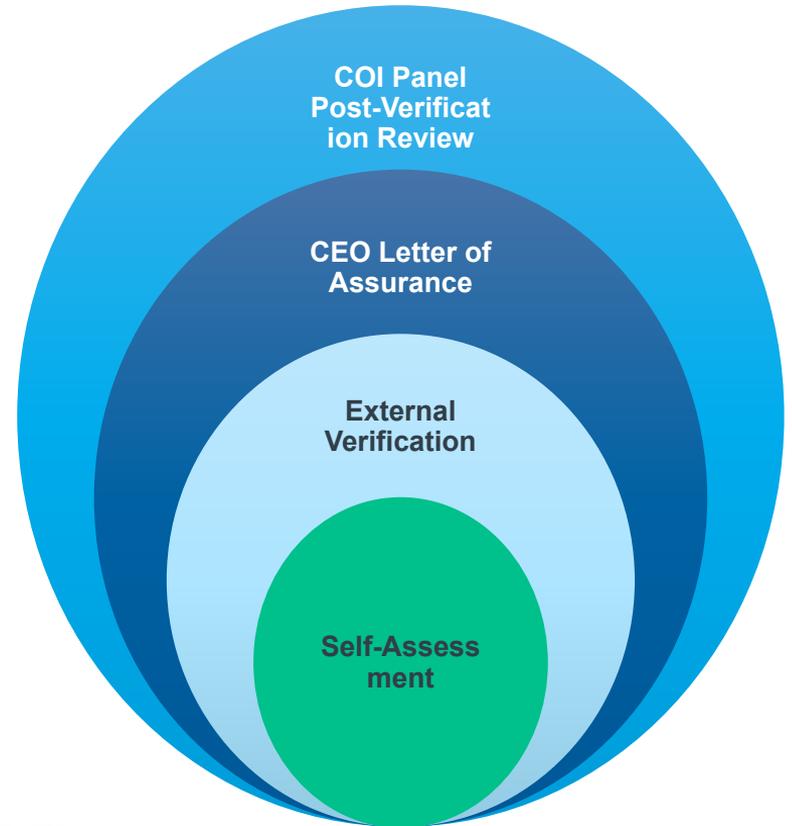
Water Stewardship Assessment

- Water governance
- Operational water management
- Watershed-scale planning
- Water reporting and performance



Verification Process

- Annual self-assessments externally verified every three years
- Public verification summary reports
- Notice of verification to communities and community interviews by verifiers
- Letter signed by CEO to confirm accuracy of verified results and conformance with requirements



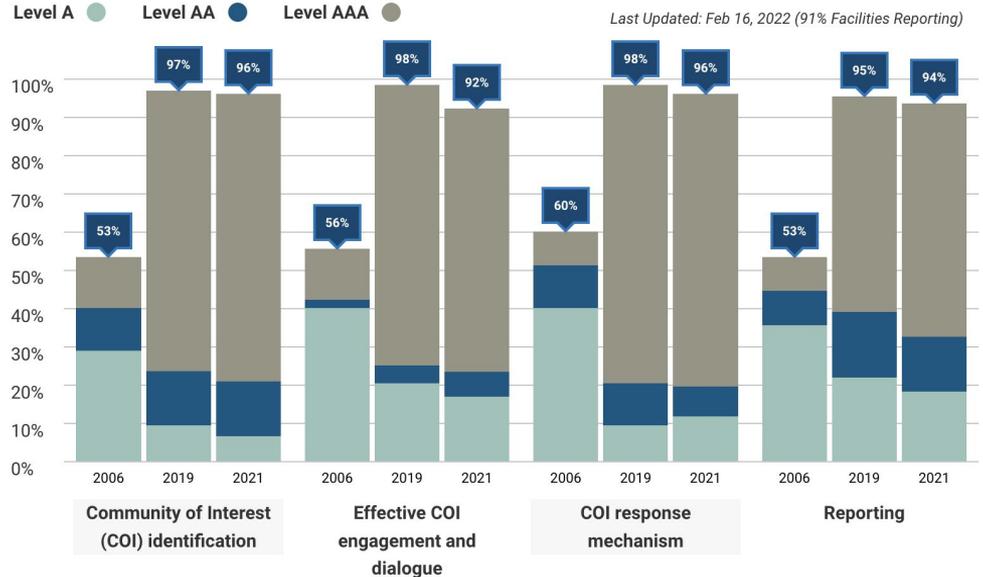
- Potential selection by the

Continual Improvement

- Improvements in industry performance are measurable and meaningful over time
- Companies commit to demonstrate continual improvement until they achieve good practice

Indigenous and Community Relationships

Percentage of Facilities at a Level A or Higher – 2006, 2019 and 2021

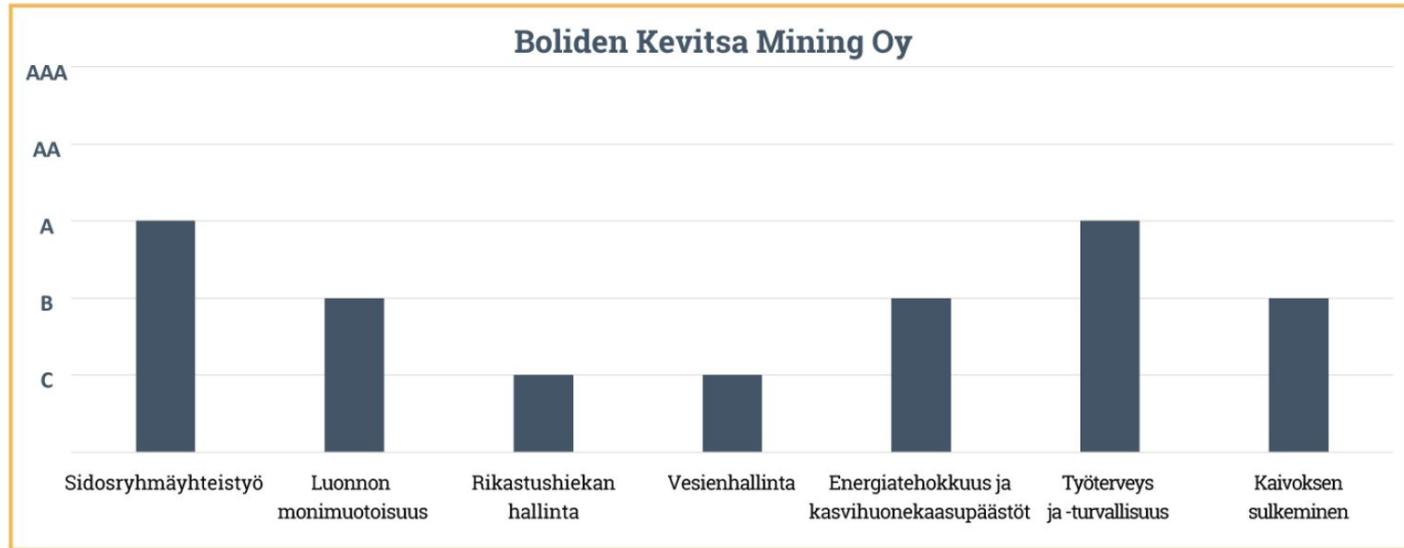


External Verifications by TSM Partner Associations

Tulokset

*Results for Boliden Kevitsa Mining
Results verified in 2021*

Vuonna 2021 todennetut tulokset



Stakeholder engagement

Biodiversity

Tailings management

Water management

Energy and GHG emissions

Occupational health and safety

Mine closure



Standards Alignment

- The *TSM Responsible Sourcing Alignment Supplement*, allows companies to use their TSM performance, with some additional criteria, to meet:
 - International Council on Mining and Metals' Mining Principles
 - International Copper Alliance's Copper Mark
 - World Gold Council's Responsible Gold Mining Principles
 - Responsible Minerals Initiative's Risk Readiness Assessment
 - ResponsibleSteel
- The *Mining Minerals and Metals Partnership Integrated Assessment Protocol* allows mines to be assessed against multiple site-level standards (TSM, IRMA, RJC) in a single audit.

