



Towards Sustainable Mining

Program Overview & Verification Practices

Towards Sustainable Mining®

What is Towards Sustainable Mining?



Towards Sustainable Mining™ (TSM) is an 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.



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.



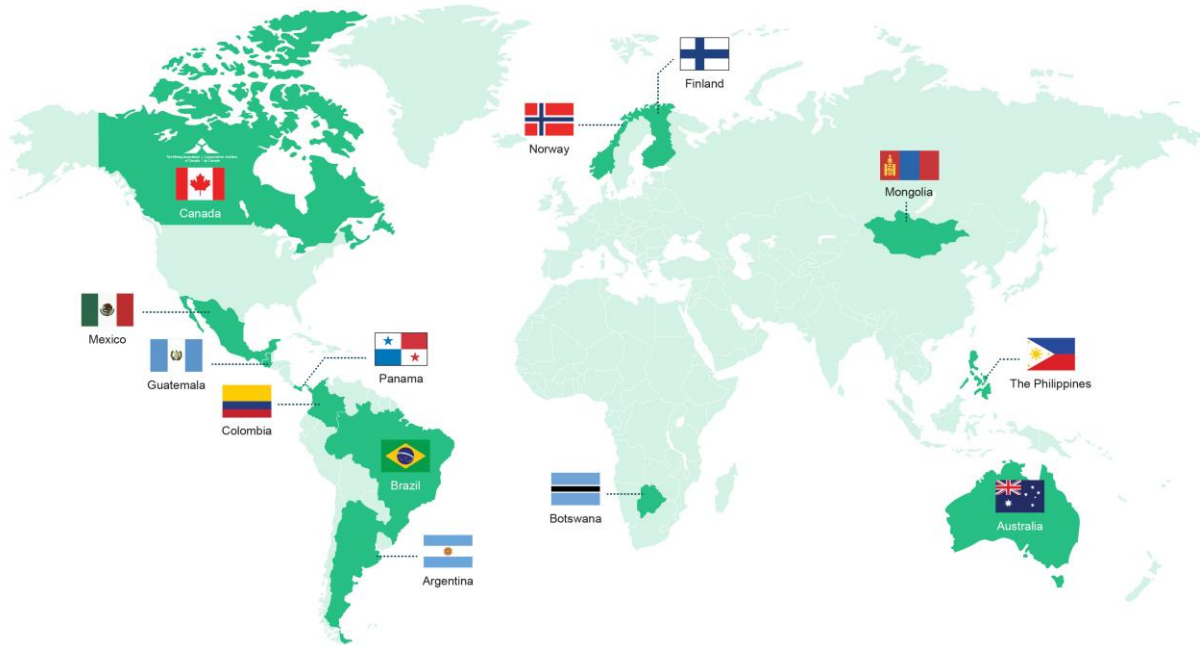
COMMUNITY ENGAGEMENT

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

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 Body

TSM – A Global Responsible Mining Standard



Adopted by national associations in 13 countries

Over 200 companies actively implementing TSM

6 national Community of Interest Panels established and more in development

Recognized by a growing number of global manufacturers and investors such as Apple, Tesla, BMW and La Mancha Capital



Network of National Community of Interest Panels (COI Panels)

Each national association implementing TSM is required to establish a COI Panel

MAC's COI Panel is comprised of individuals from:

- Indigenous groups
- Communities where mining is active
- Environmental and social NGOs
- Academia
- Labour
- Financial organizations
- Select members of the Mining Association of Canada's Board of Directors



Co-decision-making role

Independently facilitated and arms length appointment process

Critical perspectives on emerging issues

Annual reviews of company performance

TSM Protocols



Indigenous and Community Relationships

Safe, Healthy & Respectful Workplaces

Crisis Management & Communications Planning

Preventing Child and Forced Labour

Equitable, Diverse & Inclusive Workplaces

Tailings Management

Biodiversity Conservation Management

Water Stewardship

Climate Change



TSM Protocols & The SDGs



Communities & People



Environmental
Stewardship



Indigenous and Community
Relationships

Safe, Healthy & Respectful Workplaces

Crisis Management & Communications
Planning

Preventing Child and Forced Labour

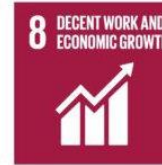
Equitable, Diverse & Inclusive
Workplaces

Tailings Management

Biodiversity Conservation Management

Water Stewardship

Climate Change



Communities and People

Indigenous and Community Relationships	Crisis Management and Communications Planning	Safety and Health	Equitable, Diverse & Inclusive Workplaces	Prevention of Child and Forced Labour
Community of interest (COI) identification	Crisis management & communications preparedness	Commitments & Accountability	Leadership & Strategy (Corporate)	Preventing forced labour
Effective COI engagement and dialogue	Review	Safety & Health Management Systems	Advancing EDI (Facility)	Preventing child labour
Effective Indigenous engagement and dialogue	Training	Psychological Safety & Respectful Behaviour	Monitoring, Performance & Reporting (Facility)	
Community impact and benefit management		Training, Behaviour & Culture		
COI response mechanism		Monitoring & Reporting		
		Physical Safety & Health Performance		

Environment and Climate Change

Tailings Management	Biodiversity Conservation Management	Water Stewardship	Climate Change
Tailings management policy & commitment	Biodiversity commitment	Water Governance	Corporate Climate Change Management
Tailings management system	Biodiversity planning & implementation	Operational Water Management	Facility Climate Change Management
Accountability & responsibility for tailings management	Biodiversity conservation reporting	Watershed-Scale Planning	Facility Performance Targets and Reporting
Annual tailings management review		Water Reporting and Performance	
Operation, maintenance and surveillance (OMS) manual			



TSM Protocols

Rating System

AAA

- Excellence and leadership.

AA

- Systems and processes are integrated into management decisions and business functions

A

- Good practice. Systems and processes are developed and implemented.

B

- Procedures exist but are not fully consistent or documented. Systems and processes are planned and being developed.

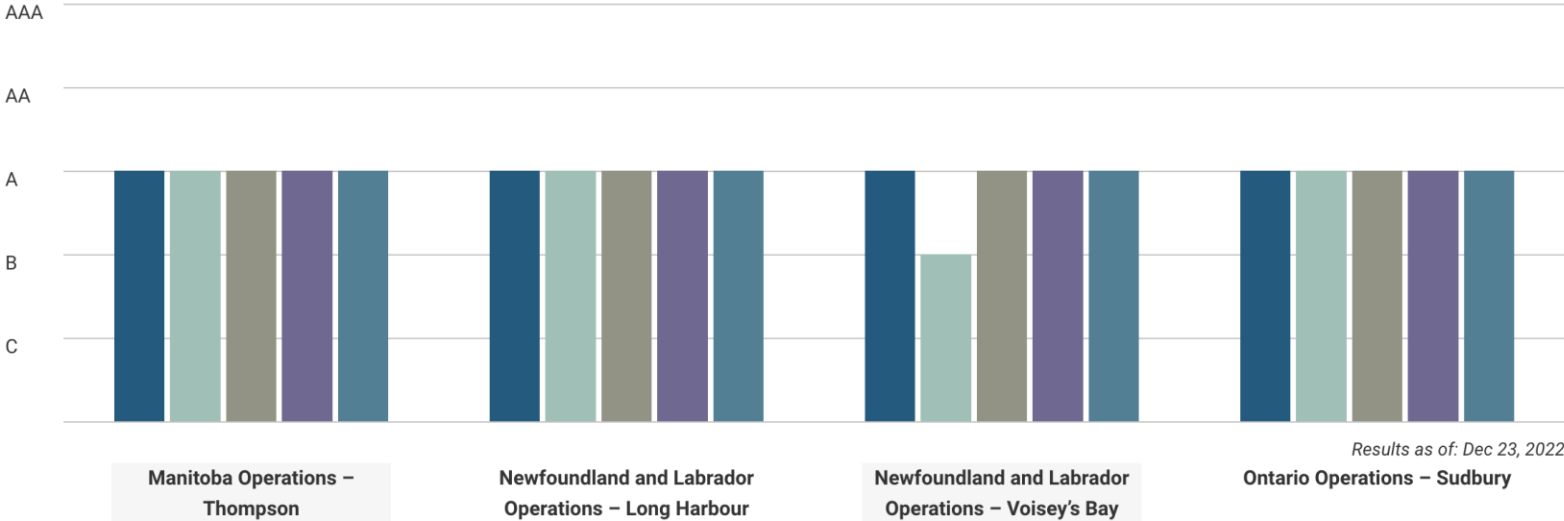
C

- Does not meet all the criteria for Level B

Facility-Based Public Reporting

Tailings Management Assessment

- Tailings management policy and commitment
- Tailings management system
- Assigned accountability and responsibility
- Annual tailings management review
- Operation, maintenance and surveillance (OMS) manual



Results as of: Dec 23, 2022



Continual Improvement

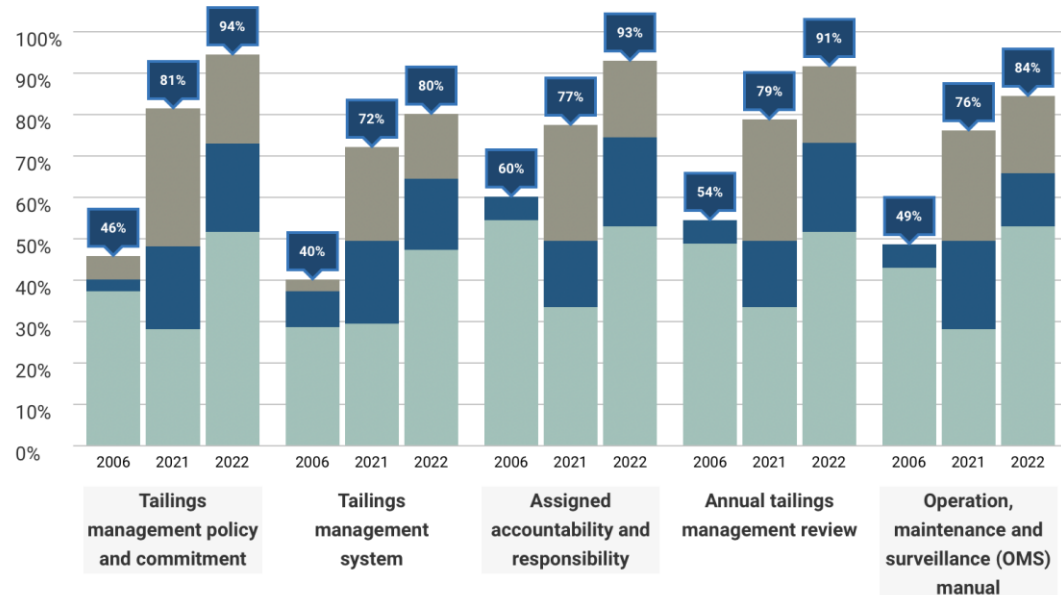
- Improvements in industry performance are measurable and meaningful over time
- Companies commit to demonstrate continual improvement until they achieve good practice

Tailings Management

Percentage of Facilities at a Level A or Higher – 2006, 2021 and 2022

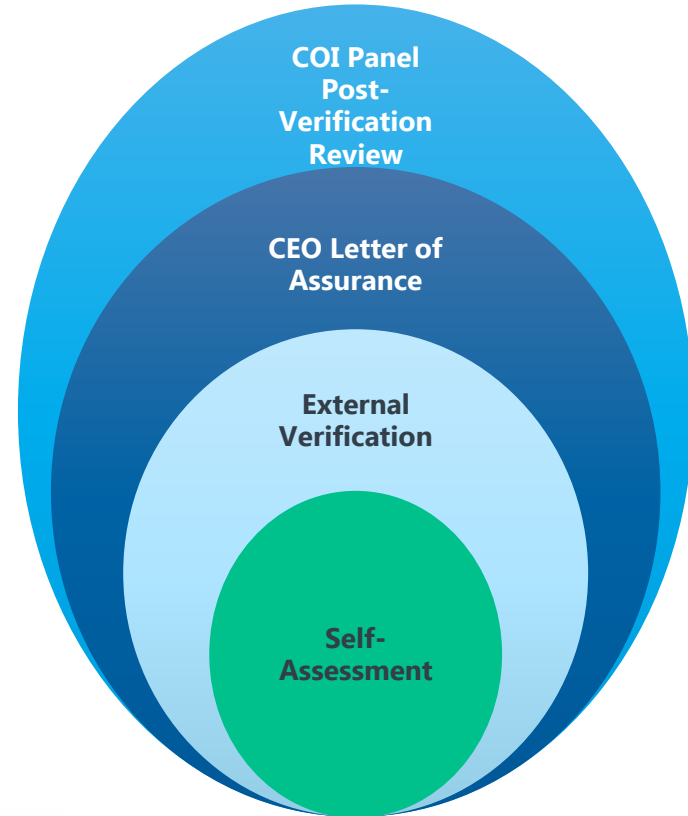
Level A ● Level AA ● Level AAA ●

Last Updated: Jan 09, 2023 (86% Facilities Reporting)



Verification Process

- Annual self-assessments
- External verification of self-assessments by trained verifiers every three years
- Verification summary reports published with identified gaps to reach Level A
- Advanced community notice of verifications and community inclusion
- Mandatory site visit
- Document review and interviews with communities and workers
- Letter signed by CEO that the results are externally verified according to requirements
- Potential for selection by the COI Panel for a post-verification review



Verifier Requirements – Independence

- Represent a legal business entity and clearly describe relationships in any larger organizational structure
- Not have ownership ties to a MAC Member
- Not convey the impression that the use of other services would result in preferential treatment
- Disclose any technical or management work that their company has been retained by the client to perform on any subject areas covered by the external verification
- **Not perform** any activities related to the external verification of TSM indicators **if the verifier has performed technical or management work on those indicator areas at the facility in the past three years**



Verifier Requirements – Training

- **TSM training workshop** once every three years (*unless exempt in Verification Oversight Process, to be discussed on a later slide*)
- **Annual update webinar** (*January*)
- **Experience in auditing and subject** matters relevant to the verification: 5 years or 10 completed audits
- **Audit designation** (see complete list in Terms of Reference)
- For qualified professionals, registration with professional organizations
- Client's responsibility to ensure that the verifier meets these minimum requirements, with attestation by the CEO in the letter of assurance



Site Visits

- Site visits are a requirement of the TSM external verification process.
- Site visits provide an opportunity for a Verifier to hold interviews or brief discussions with a broader range of employees and other communities of interest (COI) and to conduct direct observation over the course of the verification.
- If security or other risks prevent a site visit from taking place, the Verifier and client should discuss this issue, and their plan to conduct a remote verification, with the relevant mining association.



Sampling

- The Verifier must verify each TSM protocol at each of the Client's facilities for which they have been contracted to conduct an external verification.
- All criteria must be verified during a facility's first external verification.
- The Verifier has the independence to conduct sampling among a given protocol's requirements based on standard auditing practice and professional judgment.
- Any sampling strategy used must be disclosed in the Verification Report.



Engagement with Communities of Interest (COI)

- Requirement to interview a selection of COI representatives to confirm evidence to support Level A or higher results
- Client uses existing communications mechanisms to provide advance notice of verification to relevant COI, including invitation to engage with the verifier
- Verifier to select COI based on discussion with the client
- Verifier exercises judgement in terms of which COI to interview and how many interviews to conduct
- Level of engagement with COI should increase in relation to the level of performance reported by the client
- Target set for number of worker interviews required based on the square root of the total workforce with a maximum cap of 60 interviews*

**Pilot project with the Copper Mark*



Addressing Minor Issues

- If a minor issue in meeting a criterion is identified during the verification and would require limited effort to address, the verifier can grant the client ten working days to address the issue.
- The Client must then provide the Verifier with evidence that the issue has been fully addressed.
- The Verifier will review this evidence to inform the final verified performance results for the facility.



Verifier-Client Disagreements

- If the verifier and client disagree on the interpretation of one or more criterion, they should contact MAC to discuss.
- In cases where a disagreement in interpretation requires new interpretation advice, MAC will engage a sub-committee of its TSM Governance Team and a third party to resolve the issue.
- Further details on the dispute resolution process are provided in the *TSM Verification Guide*.



Reporting

- **Verification Report** for publication alongside the client's externally verified results on the MAC website (*template included in TSM Verification Guide*)
 - Verifier to provide brief commentary about key findings, types of evidence consulted, types of COI interviewed, and any gaps to achieve Level A
- **Online Reporting System:** Client submits verified TSM performance
 - Verifier will receive automated notifications to confirm reported results, to be reviewed in a timely manner
 - Facilities are also expected to include an action plan to address gaps identified to reach Level A in the company profile on the TSM webpage



Standards Alignment

- MAC is collaborating with the International Council on Mining and Metals, the Copper Mark, and the World Gold Council on the **Consolidated Mining Standards Initiative**.
- The ***TSM Responsible Sourcing Alignment Supplement***, allows companies to use their TSM performance, with some additional criteria, to meet the requirements of:
 - International Council on Mining and Metals' Mining Principles
 - The Copper Mark
 - World Gold Council's Responsible Gold Mining Principles
 - Responsible Minerals Initiative's Risk Readiness Assessment
 - ResponsibleSteel
- The **Integrated Audit Protocol** streamlines audits against TSM and multiple standards, beginning with Responsible Jewellery Council (RJC) and Initiative for Responsible Mining Assurance (IRMA).



Questions?

