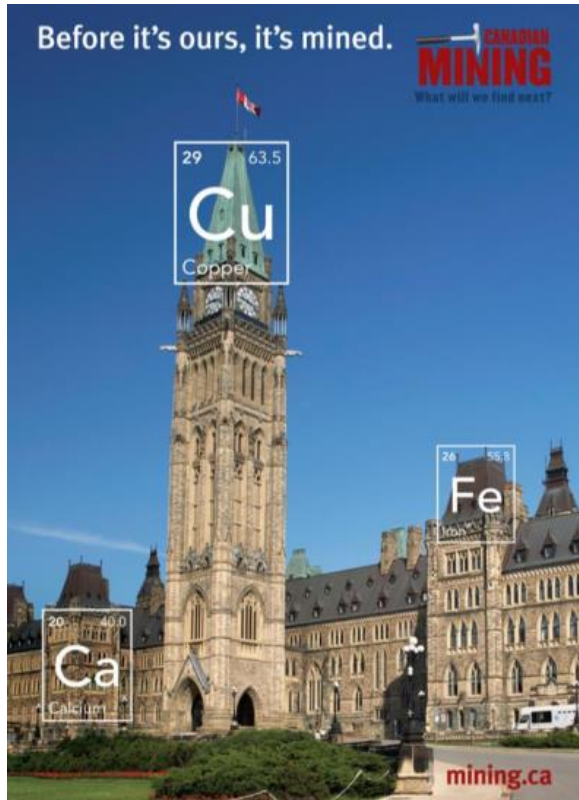


Towards Sustainable Mining
Vers le développement minier durable

TSM[®] and Responsible Sourcing

**Presented to Saskatchewan Mining Association – Saskatoon, SK
October 16th, 2018**





- ◆ The national voice of the Canadian mining industry since 1935.
- ◆ Our members are engaged in mineral exploration, mining, smelting, refining and semi-fabrication.
- ◆ Member companies account for the vast majority of Canada's output of metals and major industrial minerals.
- ◆ Associate members comprise a wide range of services and equipment supplied to the mining industry.
- ◆ Towards Sustainable Mining Initiative (TSM) – stewardship, social license and encourages excellence and continuous improvement.

Established in 2004, TSM's 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. The program's core strengths are:

- ◆ **Performance driven** – Includes a requirement to demonstrate measurable continual sustainability improvement.
- ◆ **Accountability** – Assessments are conducted at the facility level where mining activity takes place – the only program in the world to do this in our sector
- ◆ **Transparency** – Annual reporting against 23 indicators with independent verification every three years
- ◆ **Credibility** – Includes ongoing consultation with a national Community of Interest Advisory panel to improve industry performance and shape TSM for continual advancement



Canada was the first to develop an externally-verified performance system for mining operations. Since then, countries around the world have adopted TSM® to draw from Canada's expertise.

TSM® reflects our commitment to leaving a positive legacy where we operate. In turn, we're helping businesses and their customers be confident in how their products are made.

Learn more at: mining.ca/responsible-sourcing



COI Advisory Panel

Aboriginal peoples

Environmental NGO

Economic/community development

Social NGO including faith based groups

Finance/investment

International development

Labour/workplace

MAC Board of Directors

Junior Mining Company Representative

- ◆ Meets twice per year
- ◆ Work of Panel publicly available on the MAC website
- ◆ Annual COI Panel Statement published in *TSM Progress Report*

Environmental Stewardship



Tailings Management

Biodiversity Conservation
Management

Water Management (in development)

Communities & People



Aboriginal & Community Outreach

Safety & Health Management

Crisis Management & Communications
Planning

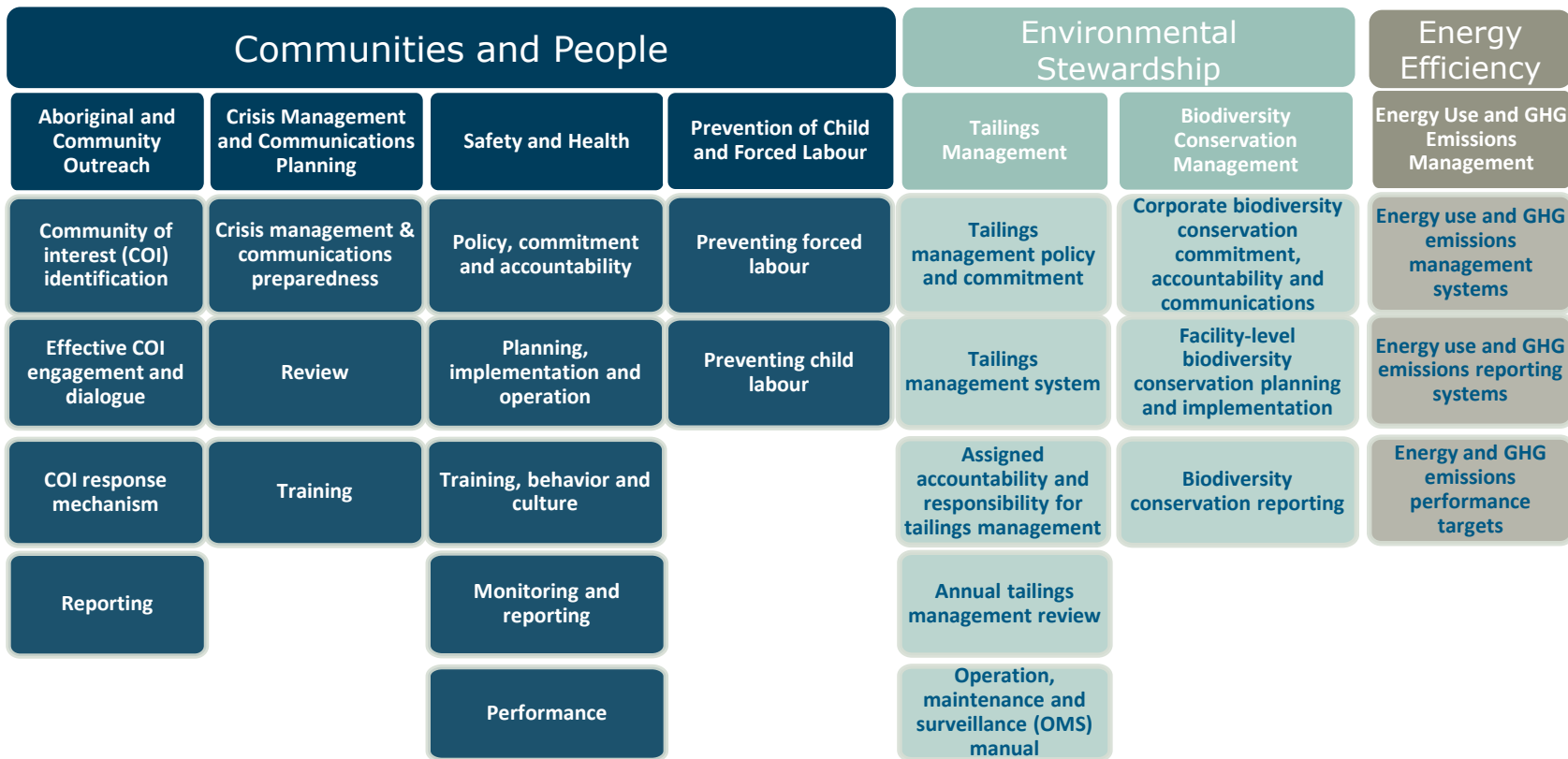
Preventing Child and Forced Labour

Energy Efficiency



Energy Use & Greenhouse Gas
Emissions Management

Developed in consultation with Community of Interest Advisory Panel



AAA

Excellence and Leadership

AA

Integration into management decisions and business functions

A

Systems/processes are developed and implemented

B

Procedures exist but are not fully consistent or documented; systems/processes planned and being developed

C

No systems in place; activities tend to be reactive; procedures may exist but they are not integrated into policies and management systems

Good Practice →

Self-assessment

- ◆ Annual

External verification

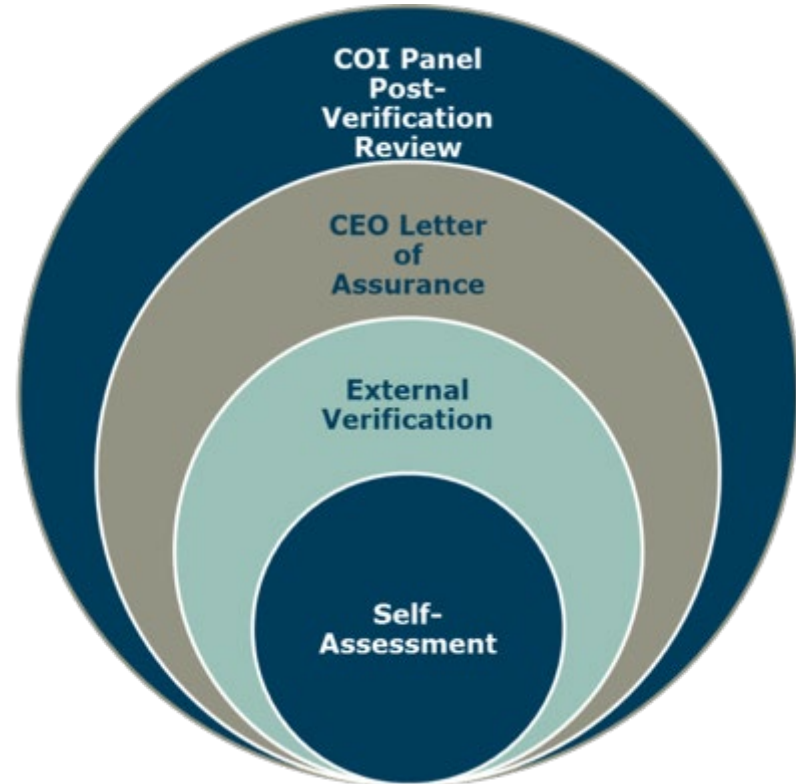
- ◆ Every three years

CEO letter of assurance

- ◆ Posted on MAC website in year of external verification

COI Panel Review

- ◆ 2 companies each year



A Governance Team (GT) Working Group has been established to review and approve responses to member companies when there is a difference in opinion between a verifier and a member company during external verification.

Process:

1. MAC receives a written request from a MAC member company to provide additional guidance on TSM protocol implementation.
2. Stratos prepares a draft response to circulate to the GT Working Group.
3. The GT Working Group provides a response within 48 hours.
4. If required, this guidance would become a Frequently Asked Question and would be inserted into the next version of the protocol.

TSM consists of seven core components that must be in place:

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



Each implementing association is required to have something in place to meet each of these seven components.

It is left up to the association, in conjunction with their Community of Interest Advisory Body, to decide how best to implement each item

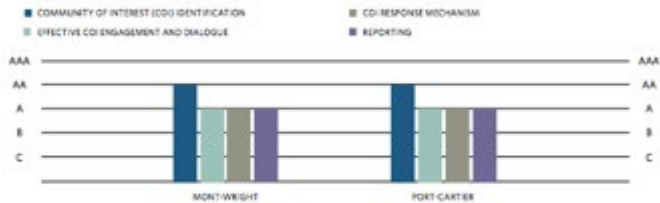


Externally Verified Results

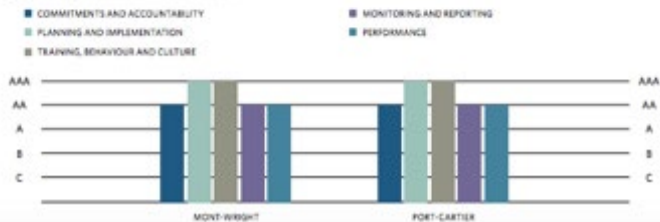
Crisis Management and Communications Planning Assessment

FACILITY	PREPAREDNESS	REVIEW	TRAINING
ARCELOMITTAL MINING CANADA S.P.	✓	✓	X
MONT-WRIGHT	✓	✓	✓
PORT-CARTIER	✓	✓	✓

Aboriginal and Community Outreach Assessment



Safety and Health Assessment



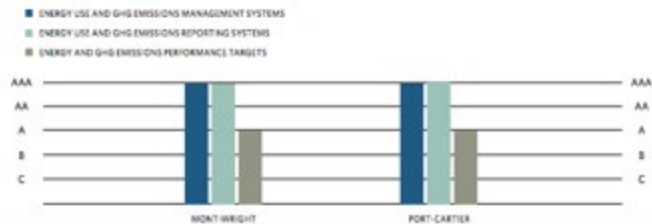
Tailings Management Assessment



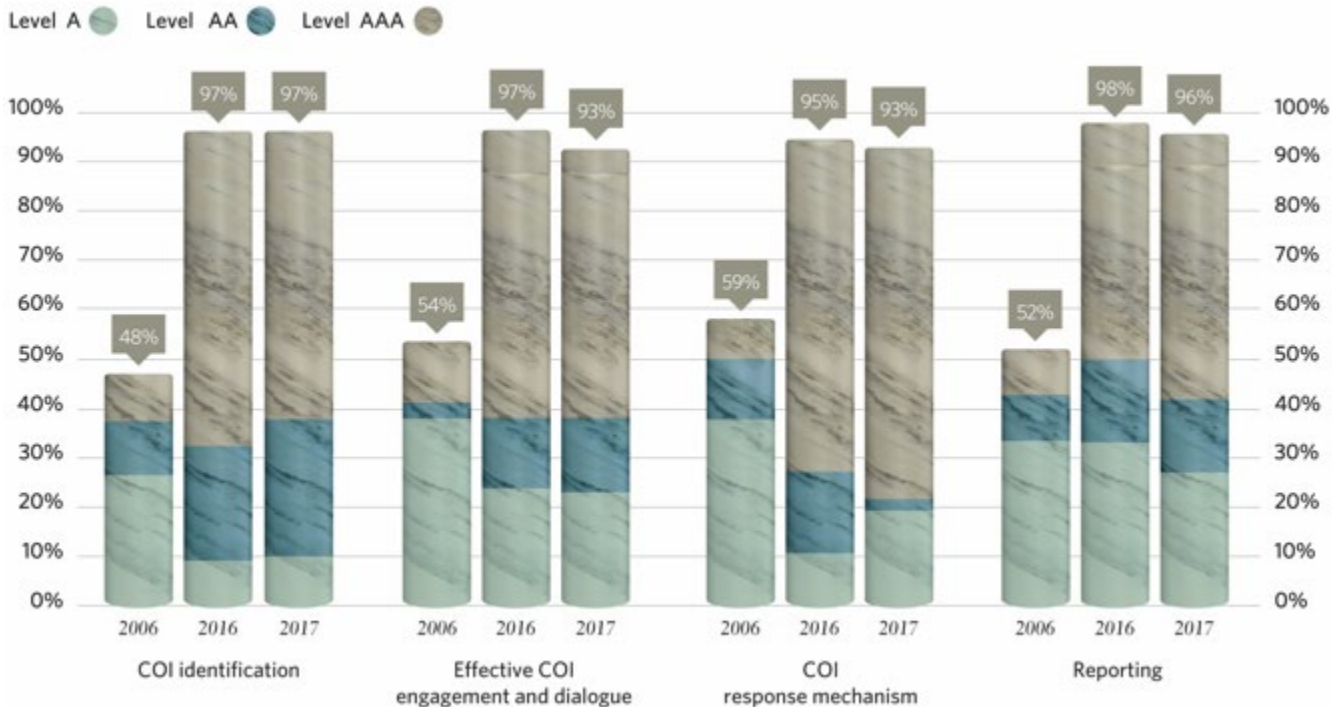
Biodiversity Conservation Management Assessment



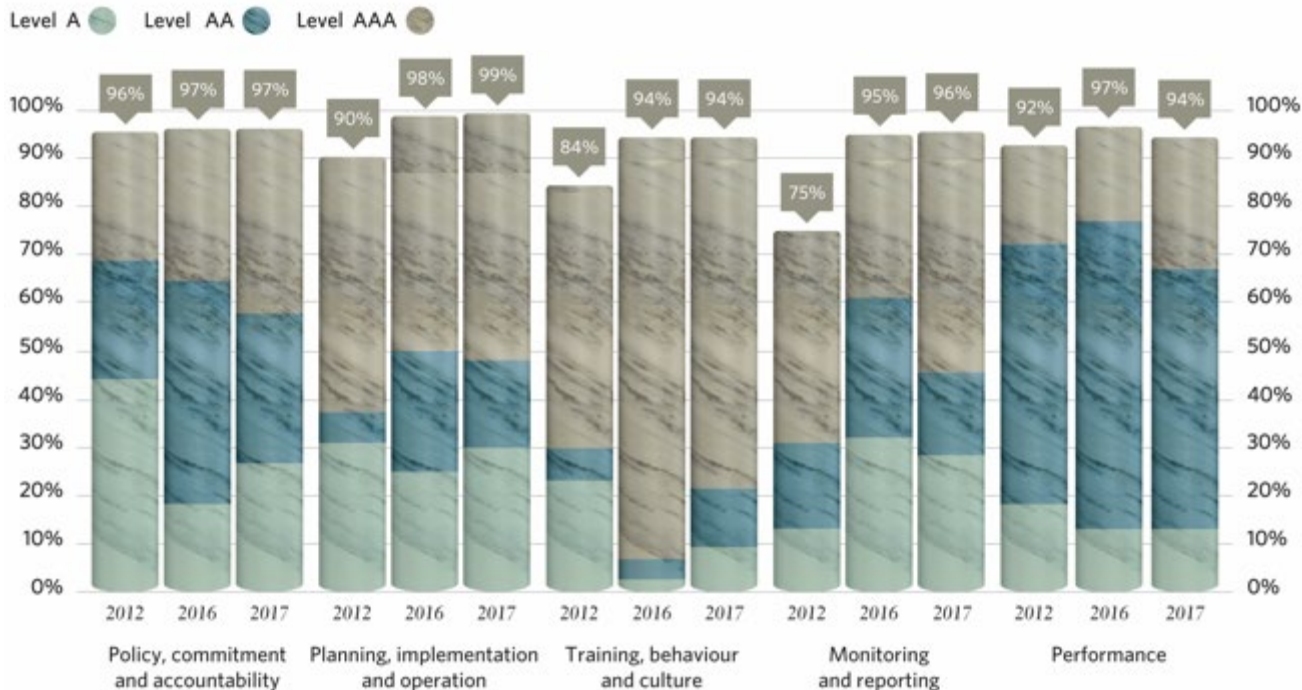
Energy Use and GHG Emissions Management Assessment



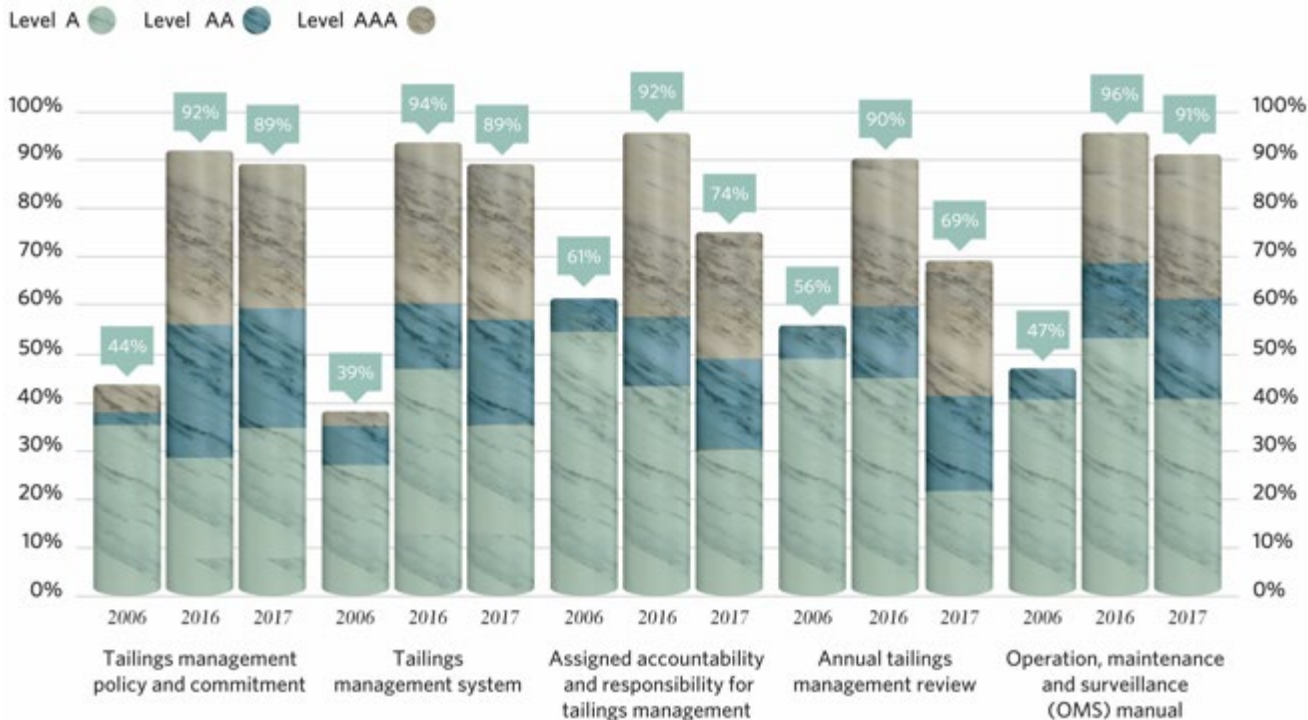
Aboriginal and Community Outreach Assessments Percentage of Facilities at a Level A or Higher 2006, 2016 and 2017



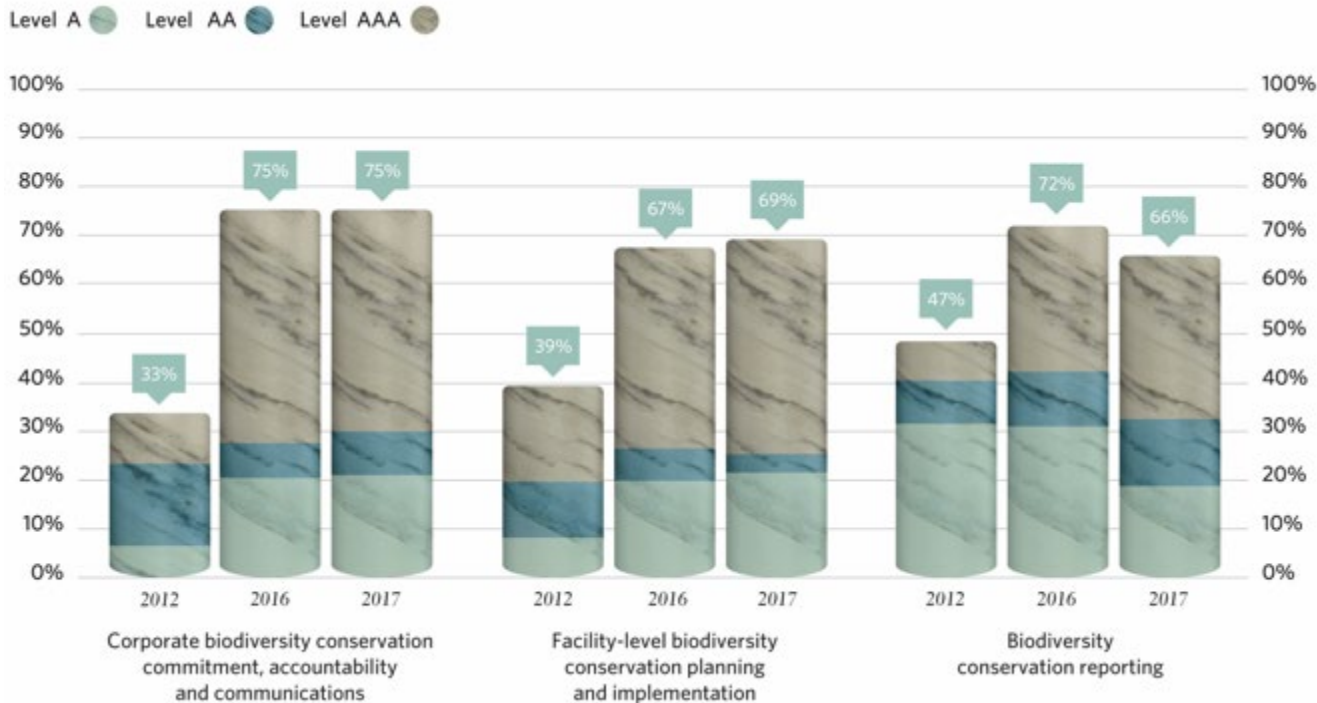
Safety and Health Assessments Percentage of Facilities at a Level A or Higher 2006, 2016 and 2017



Tailings Management Assessments Assessments Percentage of Facilities at a Level A or Higher 2006, 2016 and 2017



Biodiversity Conservation Management Assessments Percentage of Facilities at a Level A or Higher 2006, 2016 and 2017



Corporate Benefits

- ◆ Environmental & social performance driver
- ◆ Risk identification & management tool
- ◆ Assistance in access to capital
- ◆ Emerging opportunities to obtain preferential market access through responsible sourcing
- ◆ Obtaining social license
- ◆ Recruitment & retention
- ◆ Innovation & learning

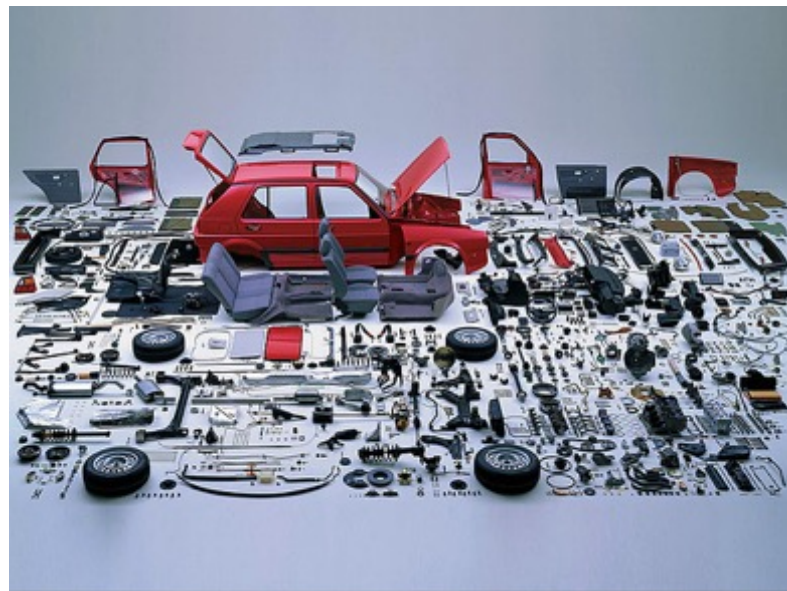
Industry Benefits

- ◆ Provides a strong industry level narrative on how environmental and social concerns are addressed
- ◆ Measures collective industry progress on meeting environmental and social objectives
- ◆ Raises sector performance, including lowest performers
- ◆ Positions participating national industries as global leaders in responsible practice
- ◆ Catalyzes a national dialogue on issues of importance and reduces opposition
- ◆ Only standard that enables a national industry to focus on most significant issues in their country

History and Context of TSM

- ◆ Important to document why TSM was developed and how it has achieved credibility and strengths.
- ◆ TSM has developed from 4 core protocols, and with the addition of the Water Protocol will be 8 protocols.
- ◆ TSM experiencing rapid growth through adoption by other national mining bodies
- ◆ A quickly evolving area of demonstrating responsible sourcing of metals and minerals in the manufacturing supply chain.
- ◆ Need to continue to find the optimum balance between managing burden and ensuring the ongoing credibility of the initiative.





Responsible Sourcing

“ ...also referred to as supply chain responsibility, is a voluntary commitment by companies to take into account social and environmental considerations when managing their relationships with suppliers.”

Other Standards and Approaches

- ◆ Examples of supply chain sourcing requirements:
 - ◆ Responsible Jewelry Council (e.g., diamonds, gold)
 - ◆ Responsible Steel (e.g., iron ore, coking coal)
 - ◆ Responsible Business Alliance (variety of metals and minerals used in electronics and elsewhere)

- ◆ Examples of other mining based standards
 - ◆ Initiative for Responsible Mining Assurance (IRMA)- large scale mines
 - ◆ Alliance for Responsible Mining- artisanal and small scale mining in Latin America, Africa and Asia

- ◆ Other industry standards
 - ◆ ISO, provincial safety standards



Objectives

- ◆ Examine ways in which Towards Sustainable Mining (TSM) can continue to be a leader in in the field of sustainability performance management systems while offering flexibility to users of TSM and equivalency with other systems wherever possible.
- ◆ Increasingly companies are being asked to meet a variety of systems and to report on their sustainability initiatives to other bodies. TSM will strive to maintain its credibility and strengths while meeting the flexibility requirements of its users.



Examples of Work to Date

- ◆ Joint audit of Canadian diamond mine for Responsible Jewelry Council and TSM
- ◆ Working closely with Responsible Steel to incorporate TSM as mining level requirements for steel production
- ◆ IRMA recognizes TSM Tailings Protocol as best practice.
- ◆ Participation in iSeal workshop to discuss responsible mining approaches
- ◆ MAC developed a cross-walk on indigenous and community outreach to help inform the renewal of the TSM Aboriginal and Community
- ◆ Development of Preventing Child and Forced Labour Protocol to address Apple Supplier Responsibility Standards.



Challenges

- ◆ Frequently other standards need to address issues not found, or are low risk, in Canada (e.g., Child and Forced Labour)
 - ◆ Possible solution- demonstrate the existence of Canadian laws and regulations that address these risks so that MAC members can more easily communicate to the Supply Chain.
- ◆ Different standards have different approaches. For example, standards may address biodiversity risks but not in similar ways at the Criteria level.
 - ◆ Demonstrate consistency of intent between standards, although this can be difficult for auditors/verifiers.





Apple Supplier Responsibility Standards

Applicable Upstream Standards for Large Scale Mining Companies & Artisanal and Small Scale Mining ("ASM/SSM")*								
Organization/ Standard	Human Rights & Labor			Health & Safety		Environment		
	Conflict	Child Labor	Forced Labor	Occupational Health & Safety	Community Health & Safety	Water Consumption Abstraction	Tailings	Pollution
Better Sourcing**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCCMC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fairmined**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fairtrade Gold**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IFC Performance Standards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IRMA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ITSCI**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a
Mining Association of Canada (TSM)	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RJC Chain of Custody**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
World Gold Council	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n/a	n/a	n/a	n/a	n/a

MAC has integrated Prevention of Child and Forced Labour components into TSM.

For more information please contact:

Ben Chalmers
Vice President, Sustainable
Development
Mining Association of Canada
bchalmers@mining.ca
613-233-9391

Pierre Gratton
President & CEO
Mining Association of Canada
pgratton@mining.ca
613-233-9391



The Towards Sustainable Mining® program is driving performance improvement in how mining operations protect the environment and engage with their communities. Through TSM®, we are providing the responsibly-sourced minerals and metals that power electric vehicle technology.

TSM® reflects our commitment to leaving a positive legacy where we operate. In turn, we're helping businesses and their customers be confident in how their products are made.

Learn more at: mining.ca/responsible-sourcing

