

# ***MAC Guide on Climate Change Adaptation for the Mining Sector***

**Charles Dumaresq**

**VP, Science and Environmental Management**

**Mining Association of Canada**



The Mining Association  
of Canada

L'association minière  
du Canada

# About the Mining Association of Canada (MAC)

- The national voice of the Canadian mining industry since 1935
  - Similar role to SMA, but at national level
- Members engaged in mineral exploration, mining, smelting, refining and semi-fabrication
  - Member companies account for 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 (TSM)***

- TSM launched by MAC in 2004
- Industry-led program to improve environmental and social performance in critical areas beyond legal requirements
- Program strengths:
  - Performance measured at facility-level, results externally verified and publicly reported
  - Monitored by external Community of Interest (COI) Advisory Panel
  - Encourages continual improvement
- Participation mandatory for MAC members for operations in Canada
- Adopted by industry associations in Quebec, Finland, Argentina, Botswana, the Philippines, Spain, Brazil, Norway, and Australia
- Recognition that *TSM* represents best practice

# TSM Focus Areas and Performance Measurement Protocols

## Environmental Stewardship



Tailings Management  
Biodiversity Conservation  
Management  
Water Stewardship

## Communities & People



Community & Indigenous Relationships  
Safety & Health Management  
Crisis Management & Communications Planning  
Preventing Child and Forced Labour

## Climate Change



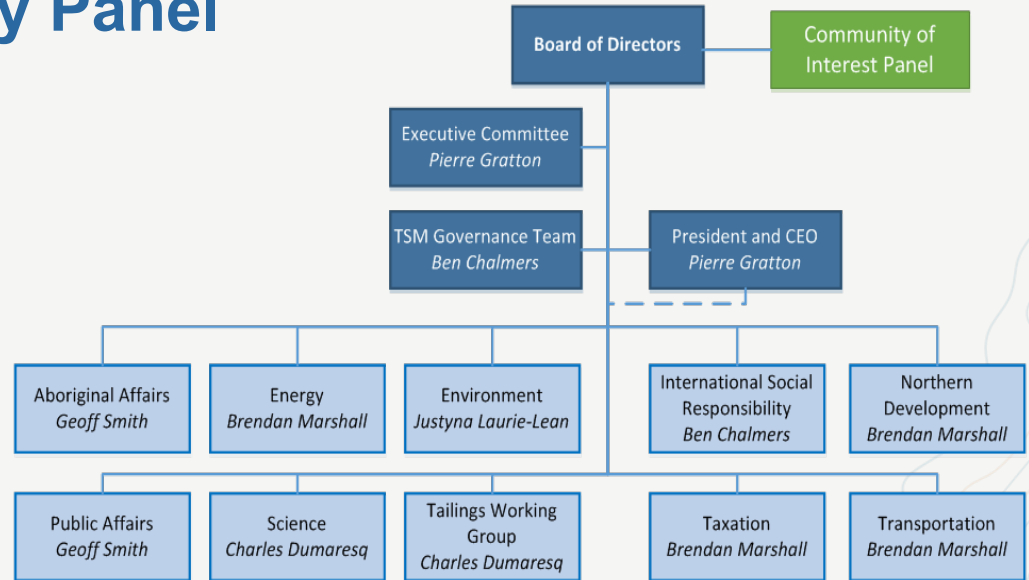
Climate Change (emissions  
management and adaptation)

## Community of Interest Advisory Panel



# Role of the COI Advisory Panel

- Members include representatives of:
  - Indigenous Peoples
  - Environmental NGO
  - Economic/Community Development
  - Social NGO
  - Finance/Investment
  - International Development
  - Labour/Workplace



- Panel advises on development and implementation of *TSM*, including:
  - Encouraging improvements in social, environmental and economic performance of the industry
  - Identifying current and emerging priority issues (environmental, social/cultural and economic)

# COI Panel Challenge to MAC on Climate Change

2016: Panel issued a statement on climate change to MAC with calls to action in the following areas:

- Implementation and continued development of *TSM*
- Operational areas (e.g., mine sites, processing plants and smelters)
- Relations with local and Indigenous communities
- Supply chains
- Public and policy engagement
- Disclosure of climate risks and opportunities

2017: MAC responded to Panel with commitments including:

- Look for opportunities to more explicitly link *TSM* protocol requirements to climate change action
- Deepen engagement in Natural Resources Canada's (NRCan) Adaptation Platform
- Better leverage supply chains in the transition to a lower carbon economy
- Explore pathways toward achieving a suitable, singular, streamlined and comprehensive climate change risk disclosure approach



# Launch of Project

- Development of guidance document part of MAC's response to the Panel statement
- Initiated in 2018 with funding from NRCan's Climate Change Adaptation Platform
- Developed by Golder with support from Lorax Environmental Services
- Development was preceded by a literature review and gap analysis
- Objective: develop climate change risk and adaptation best practice guidance document for the Canadian mining sector, including:
  - Providing clear direction on the approach, information sources and documentation requirements to incorporate climate change considerations into decision making
  - Outlining decision-making processes at all stages of the mine life
- Significant input from MAC members, NRCan, Environment and Climate Change Canada's Canadian Centre for Climate Services, and the International Finance Corporation

# TSM Requirements for Climate Change Adaptation

- In parallel with development of the guide, MAC undertook a review and major update to the existing *TSM Energy Use and GHG Emissions Management Protocol*
- In May, MAC released a new *TSM Climate Change Protocol* and the *Guide on Climate Change Adaptation for the Mining Sector*
- Following this protocol, facilities will:
  - Put in place corporate commitments, governance, and processes at board and management levels to support consideration of climate change implications in business strategy
  - Develop facility-level systems to manage energy, GHG emissions, physical climate impacts and adaptation
  - Set facility-level energy and GHG emissions performance targets and reporting annually on energy, GHG emissions, potential physical climate impacts, and adaptation measures





# Protocol Level A Requirements

- A process for the management of physical climate impacts and adaptation is established that includes:
  - Assessment and identification of potential physical climate impacts, with a review of this analysis scheduled at predetermined intervals
  - Consideration of risks resulting from potential physical climate impacts in relevant facility-level decision-making
  - Identification, prioritization and implementation through business planning of adaptation measures that respond to the identified physical climate impacts
- A process is in place to promote awareness of climate change mitigation and adaptation, including relevant corporate commitments and facility-level targets, to employees and contractors
- The facility gauges the level of importance of climate change mitigation and adaptation in relation to relevant or affected communities of interest (COI) and engages as appropriate



# Overview of Guidance

- Guidance does not address specific risks and potential adaptation measures
- Rather, it describes a stepwise approach to:
  - Increase resilience of mines, reducing potential for impacts and need for more costly adaptation measures later in the life cycle
  - Take advantage of climate change opportunities for improved mine management, such as longer growing seasons that can help enhance revegetation and reclamation activities
- Intent is to provide owners with tools that can be used to consider climate-related risks and opportunities and incorporate climate change adaptation into decision-making
- Guide can be applied globally, although application in other countries may require identification of appropriate sources of climate data

