Canada’s National Orphaned and Abandoned Mines Initiative (NOAMI)

Gilles Tremblay and Charlene Hogan
NOAMI and MEND Secretariat
Presentation Highlights

- Canadian jurisdictional regime
- Workshop on Abandoned Mines
- National Orphaned and Abandoned Mines Initiative (NOAMI)
  - Creation of NOAMI
  - Planning Activities
  - NOAMI Projects
  - Jurisdictional Partners
Jurisdictional Regime in Canada

Multiple jurisdictions

- Federal Government regulates mining in Nunavut, international waters, reserves, and matters affecting fishery
- Provinces regulate within their borders
- Jurisdictions responsible for orphaned and abandoned mine sites
Challenges in Dealing with O&A Mines

Policy implications:

- Legislative tools lacking
- Funding in short supply
- Third party assistance difficult
- Often no closure plan / no closure objectives
- Financial and legal responsibility unclear
- First Nation issues

Liabilities:

- Environmental issues
- Public Health and Safety
- Reclamation and re-use of abandoned mine lands
Liabilities – Environmental and Economic Issues

- Air quality (dust)
- Soil contamination
- Acidic Drainage/Metal Leaching
- Aesthetics
Liabilities - Health and Safety Issues

- Mine openings
- Abandoned Infrastructure
- Subsidence
Abandoned Mines as a Federal Policy Issue: Recommendations

IGWG (1999):
• “A Canadian abandoned mines forum could be organized to…formulate a national strategy…participation should include all stakeholders

MiningWatch Canada (2000):
• “A working level committee should be created to exchange information….membership would consist of… various stakeholders and environmental groups

Mining Association of Canada (2000)
• “Mines Ministers should establish a joint industry-government working group assisted by other stakeholders, to review the issue of abandoned mines and report its findings at the 58th Annual Mines Ministers Meeting in 2001”
Key Recommendation for O/A Mines

Ministers Ministers Conference 2000

Ministers endorsed the task force’s recommendation that a multi-stakeholder workshop be held, and a National Advisory Committee established to develop a program and advance the issue.
Workshop on Abandoned Mines – Winnipeg June 2001

Five major themes discussed:

- Building a National Inventory
- Community Perspectives
- Setting Standards and Rational Expectations
- Ownership and Liability Issues
- Identification of Funding Models
Workshop on Abandoned Mines – Winnipeg June 2001

Participants developed consensus, guiding principles and recommendations including:

- creation of a multistakeholder initiative to address policy issues
- funding would be provided by F/P/T members, MAC and PDAC
- administered by a Secretariat at NRCan.

Initiative approved at the 2001 Mines Ministers Conference.

The Opportunity:

The steering committee for the workshop estimates that, if adequate resources and resolve were directed to orphaned/abandoned mine reclamation, the majority of sites could be remediated within 5-10 years.
Consortia Approach in Canada

- NOAMI adopted multistakeholder consortia model
- Co-operative initiative among industry, various levels of governments, non-governmental organizations and Aboriginal Canadians
- Address issues of national importance
  - MEND, AETE
- Ensure that government policy is based on sound science
- Benefits
  - Open sharing for evaluation of technologies
  - Collaborative efforts result in a better perspective of the issues
  - Continuity
  - Avoids duplication
  - Cooperative problem solving
National Orphaned/Abandoned Mines Initiative (NOAMI)

- Launched in March 2002 at PDAC Conference
- Advisory Committee formed, Secretariat at NRCan
- Annual Work plan developed

North Coldstream Mine - Burchell Lake, ON
NOAMI Partners

Multistakeholder partnership with representatives from:
• Government of Canada
• Provinces and Territories
• First Nations
• NGOs
• Industry
What Does NOAMI Do?

Does not have mandate or $ to clean up mines

Instead, NOAMI:

• Identifies:
  • Obstacles or barriers to progress
  • Ways to eliminate or reduce barriers
  • Ways to do things smarter and engage more people
• Influences Decision Makers and enables more informed choices
• Provides a “safe place” for lively discussion and debate among members
• Reports to Mines Ministers through IGWG
• Communicates: Maintains active website/workshops
The overarching goals of NOAMI are to provide tools to remediate existing orphaned and abandoned properties and to prevent the occurrence of new orphaned and abandoned mines in the future.

Task groups were formed to address key issues:
- Information Gathering Towards National Inventory
- Community Engagement
- Legislative and Institutional Barriers to Collaboration
- Funding Approaches
- Jurisdictional Legislative Review
- Mine Closure and Return of Lands to the Crown
- Communication – Overarching
Budget for NOAMI

The Mining Association of Canada agreed to act as treasurer.

First Year - It was estimated that total funding requirements of $100,000-$150,000 was required to complete research projects, produce reports and facilitate meetings.

Funding model proposed:

The mining industry contributed approximately 30% of the funds and the remainder was equally distributed among all jurisdictions.

Each jurisdiction is being asked to contribute a set amount ($5,000.00) to make up the remaining 70%.

In 2005, this amount increased to $15,000 from each jurisdiction.

In 2012, this amount decreased to $5,000.
On an Annual Basis

Annual General Meeting held since 2009

• Work plan for coming year developed.
• Update of ongoing projects
• Budget and program (GANT chart) review
• 5th AGM – held New Liskeard, ON June 2013

Several teleconferences of Advisory Committee and Task Groups

Status report of the Advisory Committee and Task Groups and the end of year budget statement are provided to IGWG members in Spring, along with request for funding
NOAMI Highlights 2002-2012

Guidelines and Toolkits:
- Brochure on Guiding Principles in Community Involvement
- A Toolkit of Funding Options for Abandoned Mine Rehabilitation
- Modular Toolkit for Community Engagement

Published Reports
- Reviews of national and international inventories, funding models, and barriers to collaboration
- Community case studies
- Jurisdictional legislative review relating to OAMs.
NOAMI Highlights 2002-2012

Information Sharing
- NOAMI website: www.abandoned-mines.org
- Five workshops
- Newsletters (NOAMI Nugget)
- Reports and Workshop Proceedings
- Presentations - national/international
- Six Year Performance Report

• Summarizes the work of NOAMI since its inception, including publications and activities
• Includes the accomplishments of the jurisdictional partners
• “Looking Ahead” section notes remaining challenges and future recommended activities
National Inventory

• Web-based national inventory on orphaned/abandoned mines
• Portal links to jurisdictional databases
• Website to be launched at EMMC 2014 in August
• Available to the public
• Feature-based classification of sites
• Bilingual
Abandoned Mine Sites Inventory

- Ontario - 6,500 historic sites, many in public domain (Cowan, 2002)
- Canada - over 10,000 sites (Mining Watch, 2000)
- Nova Scotia - over 6,000 mine openings
- Quebec - 89 sites (Bienvenu, 2002)
- BC - 1,898 sites (Stewart, 2002)
- Manitoba - 290 sites (2002)
Feature-Based Classifications
Return of Mining Lands Project

- NOAMI principle “Work towards eliminating future abandonment must continue, including the strengthening of regulatory approaches”
- Guidance Document (Cowan Minerals 2010) examines key components related to mine closure and management of long-term liabilities
- Issues examined include:
  - financial assurance and cost estimation
  - long-term monitoring and maintenance
  - corporate failure
  - emergency legislation
  - relinquishment/return of mine lands
- Focussed workshop in 2011
- Roadmap developed to explore RML
Case Studies / Decision Making Process for the Relinquishment of Closed Mine Sites (Cowan Minerals 2013)

- Reference document examines case studies of closed Canadian mine sites returned, or in process of being returned, to the Crown
- Five-step decision making process created based on sum of information.
- Key factors that need to be assessed to determine if a site could be returned or should remain responsibility of the operator
- Starting point for jurisdictions to develop policy and regulatory program
Work Plan for 2014

Criteria for long-term stewardship of closed mine sites

• Provide direction for planning and delivery of effective long-term stewardship
• Develop list of site attributes
• Review of best practices for management

First Nations pilot study workshop

• Two training workshops to be held in QC for FN
• Information on regulations and tools for rehabilitation in QC
• Identify best practices in management of O/A mine sites
• Resource material will include NOAMI workshops and NOAMI Community Toolkit
Government Partnerships and Programs

Brewery Creek, YK

2005

2008
Jurisdictional Highlights

Most provinces have programs or funds put aside for OAMs:

- **Québec** - Ministère des Ressources Naturelles et de la Faune
  $880\text{ M }$ committed

- **Ontario** – Abandoned Mines Rehabilitation Program
  $103.6\text{ M }$ invested from 2003-2013

- **Manitoba** – Orphaned/Abandoned Mine Site Rehabilitation Program
  $170\text{ M }$ spent / $45\text{ M }$ allocated for work in 2014-2015

- **BC** - Crown Contaminated Sites Program
  $277\text{ M }$ committed (of this $167\text{ M }$ expended 2001-2013)

- **Newfoundland/Labrador Department of Natural Resources**
  > $30\text{ M }$ spent in recent years

Federal government - Northern Contaminated Sites Program
Federal Contaminated Sites Action Plan (FCSAP)

• Speech from the Throne in Fall 2002 announced the intention to accelerate the clean up of federal contaminated sites.

• Budget in February 2003 announced $175 million over two years.

• A new investment of $3.5 billion towards the clean-up of federal contaminated sites was announced in the 2004 Speech from the Throne and reaffirmed in the 2004 Budget.
Short list of three options for tailings pond closure

- Move tailings
- Cover tailings
- Combination of both

Faro Mine

AANDC - Northern Contaminated Sites Program
Province of British Columbia

- Legislation introduced in 1969. First of its kind in Canada (maximum of $500 per acre)
- Limit raised to $1000 per acre in 1975 - actual cost possible
- Limit removed in 1989. Policy decision to reduce risk to government
  - Reclamation requirements site specific
- Equity Silver Mines:
  - Security reviewed every five years since 1991, and is adjusted accordingly. At one time amount reduced from $47 million to $32 million with the application of a cover over the waste rock piles. Now at $62.5 million because of lime and other unanticipated costs.
Britannia Mine

- BC - $75-100 million est.
- $30 million from previous owners;
- General gov’t revenues for remainder
- Agreement with EPCOR to construct/operate WTP;
- Example of Private-Public Partnership promoted by BC Government
- Plant will operate indefinitely

www.britanniamine.ca
Province of Québec

- Mining Act in 1995 requires mining companies to have approved reclamation plans for sites in operation.
- Financial guarantee equivalent to 70% of the estimated cost for reclamation of waste storage areas:
  - 15 yearly payment of less
- Monies returned when reclamation work done.
- Environmental Quality Act is for sites that ceased operating before 1995:
  - Active companies need to reclaim their inactive sites.
- New regulations being promulgated (to 100% for complete site reclamation).
Québec Contaminated Sites Program

Five different types of partnerships:

• Between Ministries (MRNF & MDDEP)
• With Local Organizations (historic or recreational)
• With Aboriginal Peoples
  • Agreement for the restoration of exploration sites in the North
• With Mining Industry
  • Manitou – Goldex Project
  • Osisko – Malartic Project
• With Forest Industry
Albert Mine Site
Deinking residues cover

- Cu: 1879-1907
- Tailings: 4.5 ha, Acid Mine Drainage
- Cover: 1.2 meter deinking residues + compost
Manitou Mine Site

Tailings Ponds: 42 ha, Acid Mine Drainage
Total disturbed area: 200 ha

1942-1981: Cu, Zn, Au
Bankruptcy: 2002

Spill zone: 6 km long - 50 to 300 m wide
Manitou Goldex Advantages

- Government estimated savings: 12 M$
- No delays to bring Goldex mine into full production
- Reduction of the natural resources required to rehabilitate the site
- Avoid construction of large tailings site for Goldex Mine
- No additional cost to Agnico-Eagle Mine
- No additional environmental responsibilities for Agnico-Eagle Mine
NOAMI Conclusions

NOAMI is....

• A forum for multi-stakeholders to work together.
• Making a difference in policy and program development, both nationally and internationally.
• A meeting place for exchange of information and practical examples.
• The only initiative of its kind in the world.
• Jurisdictions across Canada are cleaning-up many of these legacy sites and acting to prevent new ones.
To download NOAMI reports or workshop proceedings please visit:

National Orphaned/Abandoned Mines Initiative (NOAMI)
www.abandoned-mines.org
For further information, contact

Gilles Tremblay
Manager – MEND/NOAMI Secretariat
Natural Resources Canada
328 - 555 Booth Street
Ottawa, Ontario, Canada
K1A 0G1
Gilles.Tremblay@nrcan.gc.ca

http://www.abandoned-mines.org
http://www.mend-nedem.org
The Butchart Gardens

NATIONAL HISTORIC SITE OF CANADA

Thank you

Natural Resources Canada

Ressources naturelles Canada

Canada