

**Environment & Sustainable Mining Workshop
Thursday, April 7, 2011, Holiday Inn, St. John's**

Participants

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Gerry O'Connell, NL Chamber of Mineral Resources
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Douglas Ballam, Nature Conservancy of Canada
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Linda Wrong, Labrador Iron Mines Holdings Ltd.
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Group Facilitators – DNR Staff

Tony Burgess, Manager, Mineral Industry Analysis
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A brief summary of points made during discussion is provided below.

Topic: Orphaned and Abandoned Mines

Inventory

- List of abandoned sites needed. Big ones known but many small ones may not be.
- What is a mine – quarry, smelter, peat, exploration sites - define
- Prioritize based on environmental and safety issues.
- Abandoned mine sites should be assessed for historical significance.
- Fixed date for completion of list.
- When setting priorities look at remoteness/public accessibility, chemical issues, consider eco-regions. Involve environmental agencies and other sustainable initiatives.

Funding

- A fund should be established by government and industry, prioritize. Biggest issue getting and maintaining funding resources. How big a budget would be needed as a working fund? Seek funding through Mineral Strategy.
- How to fund reclamation, part of mining tax could be assigned to this area, priority basis.

- Pooling federal and provincial resources to fund, operate like an insurance company. Company involvement?
- Industry should set up trust fund to finance rehab.
- Current mines should not be taxed to fund historical liabilities.

Liabilities

- Abandoned sites have liabilities – need good samaritan legislation to attract larger companies with financial resources to explore on abandoned sites. A lot of sites with potential are left to juniors.
- Clear policy and legislation on what liabilities are if a company explores or operates a abandoned site is needed.
- Need to be cautious to extent of release of liability for working in abandoned mine sites.

Other

- Allow creative solutions to rehabilitate sites other than working site, a registry of sites requiring fish habitant or other environmental rehabilitation would help.
- Mine project assurances are not public, current legislation makes them confidential, this is an issue for monitoring groups. Why is this necessary?
- Gather information on abandoned sites by canvassing public for local knowledge.
- Use MUN (&others) research / resources when deciding on method of rehabilitation of tailings, heavy metals etc

Topic: Minimizing the Environmental Footprint of Mining; Green Mining; Tailings Disposal

General comments

- We need to incorporate environmental responsibility into training of professional mines personnel - cradle to grave, exploration to remediation – full spectrum of geo-scientific training
- Environmental conscience needed with professionals on the ground.
- Strategy approach is segmented – requires holistic approach revolving about sustainability.
- Mining sustainability needs to look at recycling and long term benefits of infrastructure and training
- Need balanced approach to sustainable development
- No net loss is minimum and should be higher – industry funds required.
- Industry needs to know NL is not open for “ business at any cost”
- Innovation required and public consultation and consent needed from exploration stage forward
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Tailing disposal

- Science and justification flawed in using natural water bodies for tailings disposal.
- Fisheries habitat compensation difficult to quantify, scientifically flawed
- Lakes natural choice many times for tailings disposal – physical and chemical stability
- Water is our most important resource and trumps all others
- There is a long term risk & cost of elevated tailings. Operational risks of alternatives can exceed risks of using natural water bodies and have much larger footprint.

- The province should not be seen as a dumping station within Canada
- In areas where tailings disposal in lakes no longer allowed mining continues
- Mining Companies want to avoid environmental risk, cost is too high not to.
- Natural water bodies should not be an option for tailings disposal
- Industry needs to be encouraged/forced to be technologically innovative to find an alternative to eliminate the use of natural water bodies for the disposal of tailings
- Province needs to research alternatives and possibly give tax breaks to spur research by companies.

Topic: Climate Change and GHG

Problems

- Mining Industry – 15 % of GHGs but relatively high because of province's small population
- Iron ore major contributor through pelletizing, but this process results in emissions savings elsewhere
- Remote areas – diesel generation means greater emissions
- Peat mining is a future potential contributor
- Setting targets in isolation eg. Australia – a competitive disadvantage
- Vast quantities of Carbon are stored in Newfoundland and Labrador's peatlands, and the carbon is released when peatlands are disturbed (eg peat mining, other mines, etc)

Solutions

- Increased hydro production and transmission
- Increased plant efficiencies – technology upgrades – service equipment
- Alternative energy – wind-solar-geothermal-nuclear
- Maintain protected areas-carbon capture-increase wetlands
- Education and Awareness
- Govt. research – better data
- Govt. incentives to incorporate greener technology
- Facilitate industry access to existing funds
- Develop a strategy for conserving peatlands and soil carbon to mitigate and offset the effects of mineral exploration and development

Topic: Access to Land – protected areas

- All agreed that pressures from population growth and needs of society mean that difficult choices will have to be made in this matter.
- There is a need for certainty. All stakeholders want to see the Protected Areas Plan settled or finalized.
- There is a perception that Mines Branch has opposed the creation of Protected Areas and is not aligned with the stated policy of Government.
- The establishment of a Mineral Strategy should be linked/coordinated with the finalization of the PAP.
- The PAP needs to be a comprehensive and transparent plan. What is the methodology used (criteria) to determine protected area. Is it consistent for all areas?
- Access to land needs to be preserved as much as possible to ensure the economic future of province.

- Record with regard to PAs is appalling. NL should have representative areas set aside. Protection of biodiversity in perpetuity is critical.
- Difficulty of establishing value of PAs; value of land goes beyond the economic value – importance to the human psyche.
- Where there is an overlap of mineral exploration and need for protected areas, these areas should be prioritized for resolution. (eg: Lab West)
- All PAs are not equal: The UN, through the International Union for the Conservation of Nature, has established different categories of protected areas that should be described in the Mineral Strategy. Only certain categories are considered “strong” enough to protect biodiversity in perpetuity.
- Different categories could be established based on level of activity permitted.
- Percentage targets may be a useful approach, but it is considered more important that representative ecosystems be included in any PAP.
- Creation of further PAs will further erode the availability of land, far more than it may appear.
- Public not only needs to be informed on the protected areas but also the mineral potential of an area. Mines Branch has responsibility to make sure that the data is up to date – “honest brokers”.
- PAs in Labrador represent unique challenges in Aboriginal lands
- Mining is of significant economic importance to rural NL; and in the opinion of industry participants cannot easily be replaced.
- Adopt a policy similar to DFO – no net loss. Development of minerals in an area that was protected would be balanced with the creation of a PA in a similar ecoregion
- PAs are not easily substituted because of their unique characteristics