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THE ROLE OF GOVERNMENT POLICY IN SUSTAINABLE MINING DEVELOPMENT



A DRAFT POLICY PAPER BASED ON CONFERENCE DISCUSSIONS

HELD DECEMBER 5-6, 2013

AT LAKEHEAD UNIVERSITY

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Hosted by

Centre of Excellence for Sustainable
Mining & Exploration (CESME)

March 2015

EXCEPTIONAL. UNCONVENTIONAL.

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Comments are welcomed.

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DIRECTOR'S MESSAGE

It is with great pleasure that I introduce this policy paper that stems from the CESME conference on the Role of Government Policy in Sustainable Mining Development. The conference would not have been possible without the generous support of our sponsors and the considerable efforts of all our speakers and facilitators who came from across Canada to participate in this meeting.

This document is the first major publication to be produced by CESME and summarizes the key concepts and ideas developed during the two-day conference. It is intended to act as a starting point for further discussions and as such interested parties are encouraged to provide feedback either directly to the authors or via the CESME website, where you can also find copies of the presentations and videos of some of our speakers. We look forward to hearing from you and furthering our discussions on the best way to achieve sustainable resource development in Northern Ontario.

Dr. Pete Hollings, *Director, Centre of Excellence for Sustainable Mining and Exploration*

INTRODUCTION



On December 5 and 6, 2013, the Centre of Excellence for Sustainable Mining and Exploration (CESME) held a conference at Lakehead University on the Role of Government Policy in Sustainable Mining Development (see Appendix I for the conference agenda). The conference was attended by 140 participants from government, academia, industry and local First Nation and Métis communities. Speakers at the conference came from a similarly diverse group and included Jason Aagenes (Cliffs Natural Resources), Mark Bowler (Métis Nation of Ontario), Laura Calmwind (Indigenous rights activist), John Cole (Shibogama First Nations Council), Sue Craig (consultant), Bahram Dadgostar (Faculty of Business Administration), Bill Gallagher (strategist, lawyer/author), Ramsey Hart (MiningWatch Canada), Ugo Lapointe (Coalition pour que le QueMeilleure MINE), Camillo Lento (Faculty of Business Administration), Steve Lindley (SNC Lavalin), Elsie MacDonald (Webequie First Nation), Eliezar McKay (Wunnumin Lake First Nation), Glenn Nolan (Noront), Karen Peterson (consultant in planning, development & impact assessment), and Bob Rae (negotiator, Matawa Tribal Council) (see Appendix III for speaker biographies). In addition a public lecture on the topic of “Creating Possibilities for Aboriginal Youth in Mining” was delivered by Laurie Sterritt (BC Aboriginal Mine Training Association & First Resources Impact Ventures Ltd).

The conference would not have been possible without support from eleven partners: the Thunder Bay Community Economic Development Commission and District Entrepreneur Centre, Cliffs Natural Resources, Nordmin Engineering Ltd, SNC Lavalin, Zenyatta Ventures Ltd., Stillwater Canada Ltd., WSP Group, Goldcorp Musselwhite Mine, Prospectors and Developers Association of Canada, Noront Resources Ltd. and Superior Survey Inc.

The purpose of the conference was to examine the past, present and future of public policy and how it promotes sustainable mining development, with a focus on policy development for the Ring of Fire and other major exploration projects in Northwestern Ontario. The purpose of this draft working paper is to expand the discussions begun at the conference and explore a range of policy approaches to sustainable mining that will help to improve the policy environment to support sustainable mining in Northern Ontario. The approach included case examples of mining and infrastructure projects from across Canada.

BACKGROUND

Northern Ontario's mining sector shows great potential, subject to market conditions, creating challenges about how best to undertake sustainable economic development, ensuring environmental protection and respecting constitutionally protected Aboriginal and Treaty rights. CESME was established in 2013 to help address these challenges by linking Lakehead University researchers with partners from First Nation, Métis and local communities, government, and industry. This collaborative approach recognizes that Canadian natural resource development requires sophisticated planning, collaboration, assessment, implementation, and remediation strategies that are calculated to minimize negative environmental, socio-economic, and cultural impacts. CESME uses the term "sustainable" to imply reconciliation of the three pillars of environmental protection, social equity, and economic demands (2005 World Summit on Social Development) that is now widely recognized by the mining industry.

There have been various predictions about the potential economic impact of mining development in Northern Ontario. Most recently, the Ontario Chamber of Commerce (Hjartarson et al. 2014) in their report, *Beneath the Surface*, estimated the first 10 years of development in the Ring of Fire would generate up to \$9.4 billion in Gross Domestic Product, up to \$6.2 billion for Ontario's mining industry and nearly \$2 billion in government revenue, as well as sustain up to 5,500 full-time jobs annually. In a message to the fourth annual Ontario Mining Forum in June 2014, Minister of Northern Development and Mines Michael Gravelle, emphasized the growth in the sector:

The province's mineral production was an impressive \$9.8 billion in 2013: more than 22 per cent of the nation's total mineral production value. The growth in our mining sector has been remarkable as capital

investment in mining projects across the province has soared from \$228 million in 2002 to \$1.2 billion in 2013. Today there are 42 mines operating in the province and we continue to be the nation's largest producer of non-fuel minerals.

Some of these predictions have been tempered by the withdrawal of Cliffs Natural Resources from the Ring of Fire (Younglai 2014). Dadgostar, Lento and Peterson in their conference presentation outlined the monetary and job losses as a result of Cliffs' withdrawal from the region. The decline in un-mined commodity values was estimated to be \$76.5 billion and the loss of jobs at 1,425. However, mining development continues apace, not only in the Ring of Fire but across Northwestern Ontario. The map below shows the various major exploration projects across the region as of 2014 (Figure 1).



Figure 1. Producing mines and major exploration projects in Northwestern Ontario (Dadgostar et al. 2014)

OTHER STUDIES ON MINING IN NORTHWESTERN ONTARIO

The CESME conference was one of a number of forums and studies that have been undertaken in Northern Ontario in the face of major mineral discoveries that point to future development. These gatherings include:

- Mining in Northwestern Ontario: Opportunities and Challenges (Dadgostar et al. 2012):
- Mining Readiness Strategy—Opportunities, Partnerships, Prosperity (Advantage Northwest 2013): an Integrated Regional Economic Development Plan commissioned by the City of Thunder Bay, the Thunder Bay Community Economic Development Commission (CEDC) and Fort William First Nation: estimated outcomes and needs resulting from ten potential projects across Northwestern Ontario, including the Ring of Fire, including economic impacts, supply chain opportunities, electricity infrastructure, transportation infrastructure, Ring of Fire road and rail infrastructure, mining in remote areas, infrastructure in Thunder Bay, particularly housing, health and social impacts in the region, need for education and training, workforce development, partnering and financing.
- Prospecting for Change: Barriers and Proposed Solutions for Northwestern Ontario Explorers, an Industry Round Table (Ontario Prospectors Association 2013): addresses barriers and solutions around plans and permits under Ontario's Mining Act, environmental assessment, Aboriginal consultation, impact benefit agreements, energy and transportation infrastructure, workforce and supply.
- The Environmental Commissioner's Annual Report for 2012/13 (ECO 2013): contains a section on "Looking before we leap: Making informed decisions for the Far North and the Ring of Fire." Calls for environmental monitoring and regional strategic environmental assessment.

Following the CESME conference, there have been other relevant studies published, including:

- Ontario Chamber of Commerce (Hjartarson et al. 2014), *Beneath the Surface*: addresses infrastructure, value added, Aboriginal community needs, labour market needs, environmental and regulatory safeguards, making Ring of Fire a national priority, creating awareness and tracking progress.
- Northern Policy Institute report on First Nations Education Renewal (Bennett and Anuik 2014): recommends "community school-based renewal" and a commentary on the Airport/Port Transportation Authority Model (Mulder 2014) arguing for a broader range of stakeholders, including the private sector, to be involved in an infrastructure authority for the Ring of Fire.
- Getting it Right in Ontario's Far North (Chetkiewicz & Lintner 2014): a Wildlife Conservation Society report focused on the need for a regional strategic environmental assessment in the Far North.
- Resource Development in Canada: A Case Study on the Ring of Fire prepared for the Library of Parliament (Chong 2014): addresses the role of the federal government, economic opportunities, challenges around ecosystem sensitivity, remoteness and lack of infrastructure, education and training and First Nation issues, including consultation, benefit sharing, readiness and capacity and the regional framework agreement with Matawa First Nations, as well as government initiatives in the Ring of Fire.
- Mowat Centre (2014), in partnership with the Northern Policy Institute, is developing a Federal Economic Agenda for Ontario based on consultations focused on their discussion paper: addresses need for strategic regional approaches and identifies the opportunity for improved training for Aboriginal people.

DEVELOPMENTS SINCE THE CONFERENCE

Since the conference, several significant policy changes have occurred in the areas of provincial support for infrastructure and negotiations with First Nations. In March 2014, the Province and Matawa First Nations announced the signing of a regional framework agreement to ensure that “First Nations and Ontario can work together to advance Ring of Fire opportunities, including regional long-term environmental monitoring and enhanced participation in environmental assessment processes, resource revenue sharing, economic supports, regional and community infrastructure” (OMNDM 2014a). The following month, Ontario made a provisional commitment of \$1 billion to an all season transportation corridor if funds were matched by the federal government (Babbage 2014). The infrastructure approach is to be coordinated by the non-profit Ring of Fire Infrastructure Development Corporation that has the goal of working “to bring First Nations and the public and private sectors together to create partnerships and facilitate investment decisions in strategic transportation infrastructure” (OMNDM 2014b). The provincial Liberals were re-elected to office in June 2014, at which time the \$1 billion was promised with no strings. It remains to be seen how these two announcements will



be implemented. They do reflect a significant advancement in public policy for the Ring of Fire and address some of the themes addressed at the CESME conference. Ontario is applying to the Federal Building Canada Fund for \$1 billion. Federal Minister of Natural Resources Greg Rickford and Ontario's Minister of Northern Development and Mines Michael Gravelle met in early 2015 to seek common ground. FedNor continues to encourage economic development investment in Northern Ontario with a specific mandate to see the Ring of Fire developed.



CONFERENCE THEMES



Based on a review of the literature prior to the conference, themes were chosen that focused on decision making, infrastructure, Aboriginal and community engagement, environmental protection, workforce development, taxation and benefit sharing, and business development. Participants learned from the speakers and through subsequent discussions groups about:

- the past experiences of Voisey's Bay and the Musselwhite mine about the engagement of Aboriginal communities;
- how others in different jurisdictions (BC, Quebec, Newfoundland) are developing public policy;
- issues related to infrastructure, including rail, road and broadband, that will promote sustainable mining;
- best practices in Aboriginal and community engagement and decision making;
- issues related to environmental protection, particularly in the wetlands that house the Ring of Fire mineral deposits;
- issues related to workforce training and capacity building;
- the pros and cons of royalty generation in mining developments; and
- issues surrounding revenue sharing, particularly with Aboriginal communities, from mineral development.

Each conference theme will be addressed below, covering the range of issues for each theme that were addressed at the conference by speakers and in discussion groups. The conclusion will attempt a synthesis of these various themes rather than recommendations since the conference did not allow sufficient time to reach a consensus on any of the themes.

DECISION MAKING AND GOVERNANCE FOR ONTARIO AND ABORIGINAL COMMUNITIES

Decision making and governance for the Province of Ontario, the Government of Canada and Aboriginal communities goes beyond mere “engagement” (another theme addressed below). Rather, governance looks at how the three actors can jointly make natural resource development decisions that respect Aboriginal peoples’ constitutionally recognized Aboriginal and treaty rights and their aspirations for their homelands where development is occurring. This was, by far, the most discussed topic during the conference, with participants recognizing that effective governance and decision-making mechanisms was key to successful development in the Ring of Fire.

strategic regional approach to development in the Ring of Fire area (ECO 2014). Ramsey Hart of MiningWatch Canada also supported a strategic regional approach.

Rae pointed out that First Nations have been left out of development. The historic treaties were interpreted by governments as a tool to ensure they had control over the pace of development. However, First Nations have, from the time of treaty signing, insisted on control over their lands and a share of benefits from any development. This difference in interpretation continues to do this day and underlines the need to find common ground.

Rae recommended a sustainability approach in which the first consideration is the impacts on people, not just on the environment. To avoid the negative impacts of past development, particularly on First Nations, we need to develop policies that ensure shared prosperity. Policies should promote a new partnership on economic development, education and health care, elements that are all integrally connected. Policies should also consider the next seven generations, a cornerstone of sustainability. Glenn Nolan also recommended a socio-economic approach that would integrate employment and business opportunities; cultural well-being and maintenance of First Nations’ traditional economies, community, family, and individual well-being; net effects on local government; and sustainable development.

Bill Gallagher (2012), author of *Resource Rulers*, using a comparison with Voisey’s Bay, pointed to the urgent need for the province, with the involvement of the federal government, to work out arrangements for decision-making with First Nations, particularly around environmental assessment. Gallagher emphasized this point by quoting from the Supreme Court of Canada’s decision on Grassy Narrows (2014):

Ontario must respect those rights and manage changes to them in accordance with the honour of the Crown and s. 35 of the *Constitution Act, 1982*. Ontario cannot take up lands so as to deprive the First Nation signatories of a meaningful right to harvest in their traditional territories. Further, honourable management requires that Ontario, as the government with authority to take up in the Keewatin Lands, must consult with First Nations and accommodate their treaty rights whenever they are sufficiently impacted by the taking up. As noted above, Ontario accepts these constitutional obligations.



Figure 2. Ring of Fire, Northern Ontario. Image courtesy of MNDM, Ring of Fire Secretariat.

Speakers’ Notes

Bob Rae, negotiator for Matawa First Nations on the Ring of Fire, in the opening speech to the conference, emphasized how essential it was to address policy and frameworks for development in the Far North. He pointed to the analysis of the Environmental Commissioner of Ontario, who has criticized the province for its piecemeal approach and failure to pursue a

Elsie MacDonald, Band Councillor for Webequie First Nation, one of the communities in the Ring of Fire region, called for reconciliation. Reconciliation demands a new way of thinking by policy makers that will end the past practices of unilateral imposition of policies. Central to this change of thinking is a recognition of Indigenous jurisdiction and governance, including customary laws. MacDonald explained: “Under the ‘Manitou Aki Onakoneekaywin’, there are principles that have guided the First Nation society for hundreds of years. These principles translate how we view the land, resources and relationships.” It is these principles that have to be acknowledged in the policy process.

Discussion Group Notes

One of the major challenges for effective governance identified by participants was conflicting provincial and federal government jurisdiction, with the need to both clarify the roles of the two levels of government and for both governments to work more co-operatively with each other and Aboriginal communities. The absence of the federal government was noted. Participants expressed frustration with what was described as an inadequate government response, including a lack of respect and leadership, to planning in the Ring of Fire area. Some perceived that the lack of a government champion reflected a lack of commitment. On the other hand, it was also suggested that streamlining governmental processes was necessary, with the establishment of an “authority” being one way to do this. Also needed were timelines to help with forecasting and consistency within government across the silos of separate ministries and departments. It was suggested that rather than controlling development, government could act as a facilitator in bringing affected parties together to make decisions.

Participants also wanted to see the bigger picture issues addressed. That is, to consider mining development as more of a tool for achieving a vision of a healthy regional economy, as opposed to an end result. The bigger picture would involve the development of a regional plan or framework that deals

not only with infrastructure development, decision-making and environmental impacts for mining, but also with health, social services and education.

Effective governance means learning from experience and participants identified the need to identify best practices using successful projects

For Aboriginal governance, the Far North Act, 2010 and the Mining Act, 2009 were identified as not being enough for Aboriginal governments, but “too much” for industry. For example, the omission of prospecting from the duty to consult, excludes Aboriginal communities in the early stages of development.

There were several observations about how Aboriginal communities might improve the development process. Among these observations were:

- the need for better co-operation and communication among First Nations;
- the high turnover of Chiefs and Council leads to instability in the form of constant renegotiation with governments and industry and a failure to develop long-term strategic plans that are need by community economic development officers;
- the difficulty in reconciling short-term mining developments with the longer-term (seven generations) perspective of Aboriginal communities;
- poverty and isolation with no road access continue to be problems, problems that cannot be addressed by junior exploration companies; and
- the backlog of claim reviews may be attributed to the fact that every claim is reported to First Nations, rather than just the ones that show any real chance of becoming a mine.

INFRASTRUCTURE

Speakers' Notes

Rae said that Matawa communities want road, energy and broadband access. First Nations are not opposing development but challenging the way it is done. He encouraged a focus on what is in our control—physical infrastructure, training and a focus on people. Nolan recommended that both levels of government work with communities and the industry on policies to address northern road development, power development and high speed broadband connectivity.

Hart questioned whether the costs of infrastructure would outweigh the benefits of mining development in the Ring of Fire.

Nolan pointed to the challenge of the remoteness of the area with Aboriginal communities who have never seen this type of development in their territories. Given these circumstances, it is important for governments and industry to work closely with these communities to build awareness and develop trust. When it comes to infrastructure, both levels of government should work with communities to develop and plan access, ensuring a balance between industry and community needs.

In Noront's environmental assessment, the transportation corridor was evaluated and a recommendation for an east-west, rather than north-south, corridor was put forward on the basis that: construction costs would be lower overall; that the corridor will generally follow the alignment of existing winter roads thus minimizing further disturbance; there are fewer large water crossings (the north-south corridor would have to cross the Albany, Ogoki and Attawapiskat rivers; there are fewer potential impacts to the biophysical environment, most notably less impact on caribou habitat; and the corridor has support from and will provide benefits to a greater number of First Nations.



Sue Craig of Tintina Consultants spoke to the Northwest Transmission Line in Northwest British Columbia as an industry and “quality of life” enabler to connect up to eight First Nations and three new mining projects with electricity. Provincial money and supplementary federal funding through Canada's Economic Action Plan paid for the infrastructure development, along with industry support. The line is 344 km long into a very remote area, common threads with infrastructure issues in the Ring of Fire.

Discussion Group Notes

There was general agreement among speakers and participants that infrastructure planning and development—road, rail, energy and broadband—was a necessary component of development. The question most debated was who is responsible for such development—governments or the private sector? Participants pointed to the need for regional infrastructure planning that would provide an integrated approach that addresses both access to individual mining projects, but also the First Nation communities in the region.

ABORIGINAL AND COMMUNITY ENGAGEMENT

Speakers' Notes

Gallagher used the example of Voisey's Bay to illustrate the urgency for the province to put in place effective policies, particularly a comprehensive consultation policy. With Voisey's Bay, it was only after serious progress had been made in negotiations with First Nations that federal funding for the project was allocated. Hampering negotiations, Gallagher stated, was the absence of Nishnawbe Aski Nation, what he called "the elephant in the room".

Stephen Lindley of SNC-Lavalin described the history of SNC's involvement with Indigenous communities around the world, outlining both the challenges and opportunities. Lindley asked why Aboriginal inclusion is good business for Corporate Canada, describing the incentives for inclusion:

- Aboriginal people are the fastest growing population in Canada with a 20% increase between 2001-2006;
- In the next 10 years approximately 400,000 Aboriginal people will enter the Canadian workforce;
- Over \$300 billion is estimated in major resource development potential in or near Aboriginal communities;
- Increased settlement of land claims will increase Aboriginal land holdings, Aboriginal control over resources, and increased funds available to Aboriginal communities to participate in projects; and
- Inclusion is part of company's Social License which helps to provide access to resources and financing certainty.

Canada	International
370m indigenous people worldwide (5%); represent 30% of the world's 900m poorest people (UN2010)	
Up to 70% of aboriginal Canadians will not graduate secondary school	Poor secondary school completion rates; in Guatemala over 50% of teens have not completed primary school
Aboriginal unemployment rates are close to double Canadian average and up to 80% in remote communities	Australian aboriginal unemployment rate in 2006 was three times higher than the national average
Canadian UN Human Development Index (HDI) ranks 8 th worldwide; aboriginal population ranks 32 nd	Australian HDI ranked 3 rd worldwide; Australian indigenous population ranked 123 rd
Unemployment and low income leads to crime; 19% of Canada's prison population is aboriginal (compared to 4% of total population); aboriginal incarceration rate rose 22% between 1996 and 2002 (declined 12% for total population)	40% of convictions in New Zealand are Maoris; 50% of prison population
Suicide rates among Inuit Canadian youth are among the highest in the world (11 times the national average)	60% of indigenous people worldwide suffer from Type 2 diabetes
Aboriginal houses are 90 times more likely to not have a piped water supply	Housing is most often not a "right"
Life expectancy up to 10 years less than average	Worldwide, life expectancy up to 20 years less than non-indigenous
Lack of treaties/violations of treaty rights; inability to sell land or resources on treaty/traditional land	Denial of indigenous rights; expropriation of lands; marginalization due to impacts of major resource projects; resettlement/relocation
Lack of recognition of traditional economies	Expropriation of forest lands, agricultural lands, etc. reduces the opportunity for traditional economy

Figure 3. Global Indigenous Challenge (Lindley 2013)



Discussion Group Notes

In spite of the fact that Ontario is developing relationships with First Nations through both the Ministry of Northern Development and Mines and the Ministry of Natural Resources and Forestry, participants perceived a lack of shared vision, a lack of understanding of each party's strengths and limitations that leads to a lack of trust and weak relationships, and the lack of a clear approach to consultation that spells out the responsibilities of the various parties—the various levels of governments and the private sector. Some discussion focused on Aboriginal participation in the labour market. This will be addressed in the Workforce Development section.

On principles for consultation, participants emphasized the need for Aboriginal communities to be involved from day one. It was pointed out that Aboriginal women are often ignored in consultation processes. As well, too many projects are three years in with money spent that are then cancelled by local First Nations and protests. Early involvement promotes local ownership of the process and speedier progress for projects. It was emphasized that the private sector should also be establishing contacts with First Nations early in the process. In a written submission, Citizens United for a Sustainable



Planet made the recommendation that “local communities, including First Nations, Métis or Inuit peoples, must agree that for projects to proceed benefits from mining outweigh the risks to local lands, waters, and social systems. And they must all have the right to either say no, or to participate in the control of projects they have endorsed.”

Participants expressed frustration about the time and money being taken up in fighting Aboriginal rights cases in the courts. Companies in particular see “litigation hell” for years and are worried about being able to justify continuing operations with their boards. An alternative to litigation, it was pointed out, is the need for rebuilding relationships.

ENVIRONMENTAL PROTECTION

Speakers' Notes

Rae pointed to the particularly environmental challenges of mining that have had such detrimental impacts on soil, water and air. How do you make mining physically sustainable, particularly in the Far North, the Nishnawbe Aski Nation territory covered by Treaty 9, with its vast area of water with four major river systems? Nolan also noted the challenge of mining in the large wetland area that is the James Bay Lowlands. Noront's decision has been to minimize the impact on surface waters by putting the mine underground. Hart also emphasized the importance of water in this region with the world's third largest wetland. The Attawapiskat and Albany are two very pristine rivers that have not been dammed. Hart used the examples of a major oil spill in the harbor at St. Iles and a coal slurry spill in Alberta in Athabasca River that have long-term implications for water management. Cumulative effects also need to be considered, not only mining activity, but the impacts of human settlement, including access to the area.

Rae and Hart pointed to the need to have effective environmental assessment (EA) that is done in a culturally sensitive way. Both Hart and Rae recommended a regional strategic EA approach. Hart thinks this process should be led by the Province, establishing key issues, baseline info and monitoring, followed by individual EAs. The regional strategic EA should look at infrastructure and alternatives, as well as water quality. Hart supports the goal of zero discharge from mines, as proposed by Noront. Hart pointed to the weakness in Ontario's EA system that exempts most mining stages from EA. Mining companies can and have volunteered to engage in provincial EAs, but the provincial EA should be mandatory.

Nolan described the consideration of alternatives and mitigation measures that have been explored in their EA process. Alternatives were considered in all phases of mine development, including transportation, construction and decommissioning. Alternatives were assessed according to technical feasibility, economic viability, biophysical environmental acceptability and socio-economic acceptability. Mitigation measures for unfavourable impacts being considered include: Aboriginal employment quotas; training opportunities to take advantage of employment; social programs in support of employees; proper design of water crossings to minimize impacts to aquatic ecosystems; a Fish Habitat Compensation



Plan; and dust suppression measures along roads. Noront Resources is the recipient of the 2015 Prospectors and Developers Association of Canada Environmental and Social Responsibility Award for demonstrating leadership and accomplishment in protecting the natural environment and establishing good community relations regarding the Eagles Nest Copper Project (Ring of Fire).

Hart also pointed out that the current policy framework is about how much pollution is acceptable rather than pollution prevention. This is a particular concern with new substances like xanthate that can contaminate aquatic ecosystems. Hart advocates addressing our lack of knowledge about and inability to measure xanthates.

An additional concern raised by Hart was mine closures. He recommended more transparency about the money posted by mining companies for decommissioning. He questioned whether the amounts being deposited were sufficient for long-term protection, pointing to a dolomite magnesium facility outside Ottawa. In that case, the company left a bond that was only enough to protect water for 4-5 years. Lapointe illustrated the same concerns with examples from Quebec, raising the question, "who is monitoring on the ground?" in the face of numerous spills since 2008.

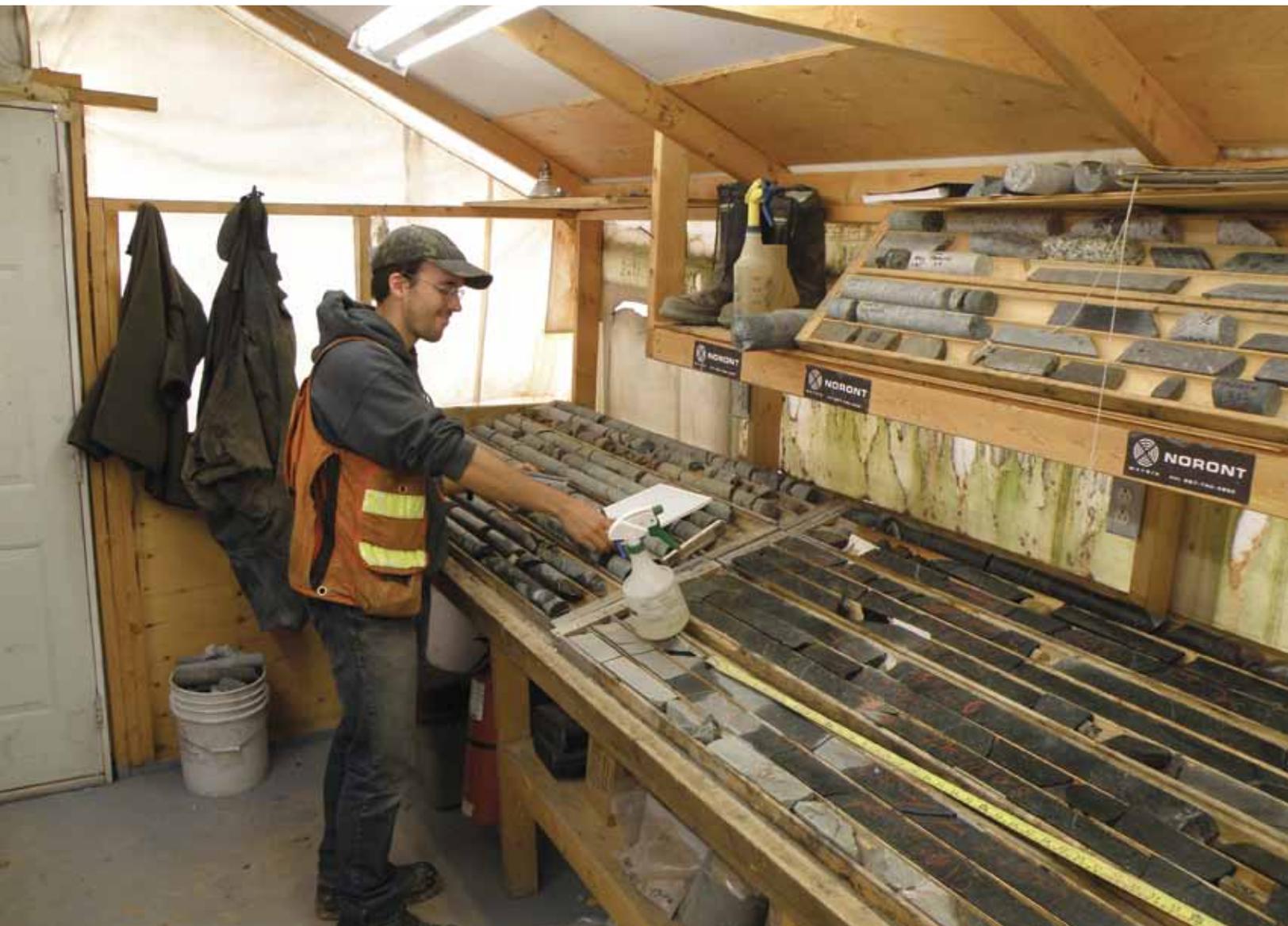
Lapointe, based on his experiences in Quebec, called for strategic policies supporting "lower impact mining" and reinforcement of environmental protection through laws, monitoring and enforcement. Nolan also emphasized the importance of monitoring, recommending the creation of a "Northern Environmental Monitoring Policy" with First Nation participation.

Discussion Group Notes

Participants discussed the meaning of “sustainability”, particularly in relationship to mining, and suggested there needs to be a clear definition for the mining sector. Balancing economic growth, improved social conditions such as health and education, and protection of the environment were commonly associated with “sustainability”. At the broader level, many pointed to the need for studying cumulative environmental impacts, rather than focusing on the impacts from a single project.

Specifically, participants were concerned about the long-term legacy of mining, that is, waste disposal and spills. Some suggested that meaningful consequences must be

in place, such as moratoriums on mining until effects have been mitigated. The CUSP written submission pointed out that “most plans for toxic waste are for less than 100 years, while some waste, such as arsenic and nuclear waste, require much longer periods.” CUSP also suggested that mining companies’ records need to be monitored for “criminal activity and flagrant breach of environmental laws” with the worst offenders not being granted permits or “subject to increased scrutiny and conditions by Canadian regulators.” In terms of the preservation of natural capital, CUSP suggested looking to the heritage fund model in place in Norway, with a “heritage premium” being levied on oil and gas profits to pay for unforeseen environmental effects and reclamation and for public social programs.



WORKFORCE DEVELOPMENT

Speakers' Notes

Lindley addressed some of the challenges and opportunities in Aboriginal workforce development. Unemployment rates in Aboriginal communities are far higher than non-Aboriginal Canada and Grade 12 graduation rates are far below the provincial and national averages. However, there is a growing skilled labour shortage in Canada, which means there is an enormous opportunity to train a local/regional labour force. Partnerships between the private and public sector, including education institutions, are growing. For example, Kiikenomaga Kikenjigewen Employment and Training Services (KKETS), Noront Resources Ltd. and Confederation College of Applied Arts and Technology in 2013 partnered to create *The Ring of Fire Aboriginal Training Alliance* (RoFATA) partnership.

Internationally, Lindley described a program that is being adapted for Aboriginal communities in Canada—the Local Resource Development Initiative (LRDI)—that has been successfully applied in South Africa, Mozambique, Afghanistan, Madagascar, Panama, Peru and Canada. The program targets community expectations of the positive socio-economic impacts of mega-projects by focusing on local and regional economic benefits. Hiring local during the construction phase reduces costs and optimizes long-term

synergies between the project, local labour, local contractors and local communities.

The LRDI counts among its successes: the registration of 25,000 work-seekers; more than 6000 trained; a placement rate above 90% for trainees; projects developed with more than 80% local labour; a significant contribution to the acceptance of mega-projects in difficult environments.

Nolan of Noront spoke about the job opportunities from the Eagle's Nest mine in the Ring of Fire. It has been forecasted that there will be 700 direct jobs during construction and 300 direct jobs during mine operations. Indirect jobs will be 3-4 times this amount. Nolan also pointed out that the Ring of Fire is more than just one or two operations, with most of the region still unexplored and undeveloped. We have no idea yet of the potential for the region and it may take many years, maybe generations, to fully realize that potential.

Nolan outlined the challenges associated with workforce development, including the work cycle, incorporating women into the workforce and providing additional training and support services to workers. He pointed out that 80% of jobs in mining are trainable and that Noront is working with the Ring of Fire Aboriginal Training Alliance (ROFATA), as

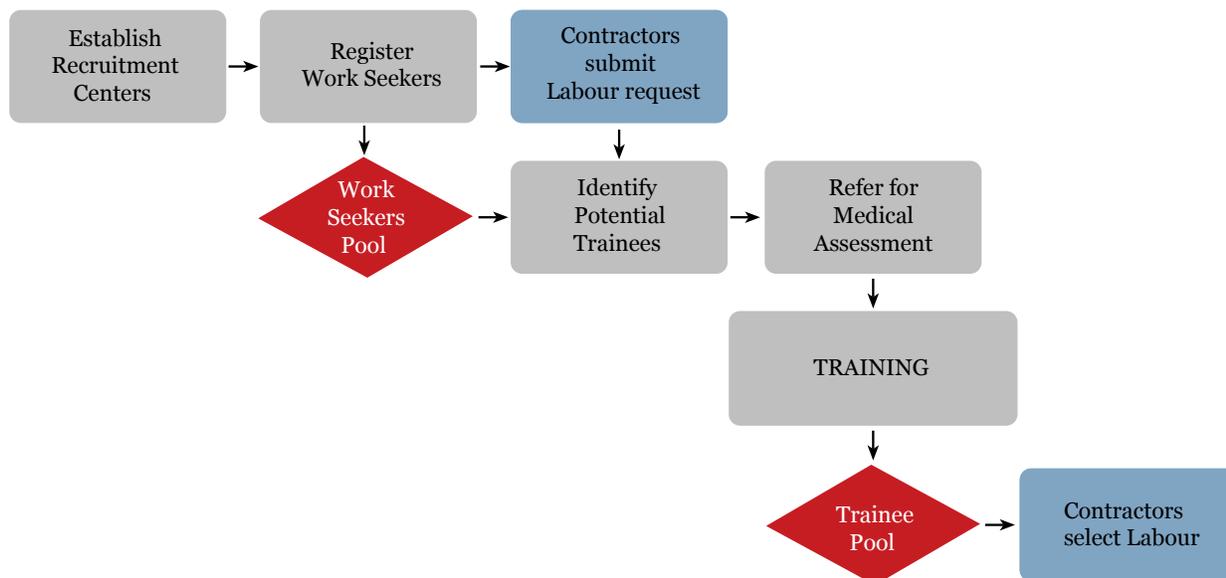


Figure 4. Local Resource Development Initiative (SNC-Lavalin)

well as providing on-site training with contractors. Nolan recommended the development of a “Northern Training Policy” to facilitate a skilled workforce to support the multigenerational mining opportunities.

Laurie Sterritt described the British Columbia Aboriginal Mine Training Association (BC AMTA), a non-profit charitable organization, governed by a cross-section of First Nations, industry, government and community representatives. BC AMTA's mission is “to be the best team in Canada empowering First Nations to create economic health for themselves and their communities through skills training, education and career opportunities. The partnership works through a candidate-focused approach to removing barriers to education and sustainable employment. The program has seen great success since its formation in 2009. As of 2013, the program had more than 2,200 registered candidates from more than 150 First Nations, over 600 candidates employed, and over \$100,000 per employed candidate to the provincial GDP. The retention rate is 93%, with 63% of candidates entering the program unemployed. Women make up 30% of those registered and 43% are under the age of 35. Sterritt attributes their success to the commitment of the people involved, the candidate-driven approach that provides program coaches in each region and a business approach that pays attention to governance structures and timely and flexible responses to both corporate and community interests. Finally, the program provides accredited courses that are relevant to individual, community and market needs.

Discussion Group Notes

Generally, people pointed to the lack of capacity, inadequate funding, and insufficient training/education of Far North Aboriginal communities. Part of this is a lack of awareness of job and training opportunities. On the other hand, some questioned the need for subsidies for training provided by government. CUSP pointed out that “the cost to federal taxpayers for employment subsidies to the metal mining industry has increased to \$383 million a year. At the same time the industry is delivering fewer jobs. Such subsidies should be rare, and should require enforceable job guarantees.”



Others raised the role of industry in providing education and training. It was suggested that in the field of education, government should be responsible for basic education and school and training facilities, but industry could play a role in specialized training. Some pointed out the need for long-term thinking instead of short-term, single election cycle and annual budget considerations. For example, diversified education would ensure that workers who may be involved in the mining sector over a relatively short term were able on mine closure to move to other fields. Again, a holistic approach was raised where social impacts, as well as the simple provision of jobs, be addressed. CUSP stated: “Our long term survival on this planet always requires continuous transitioning to new jobs from obsolete positions. Training for mining employment should be matched by training in cleaner technologies, energy efficiency, alternate energy and zero waste.”

The role of the university in providing comprehensive training was also pointed out. In particular, it was noted that geology education lacks a social component.

For Aboriginal communities, where high school graduation levels are so much lower than the general population, discussion centered around the Grade 12 requirement for employment. Some consider this requirement part of “systemic discrimination”. Instead companies could work with local populations and find ways to raise education levels. Some of the other considerations specific to Aboriginal communities were the challenges of participating in a wage labour economy if they have not previously done this. Beyond jobs, people need to learn how to manage money. They need to have driver's licences. As well, providing equal opportunities to women needs to be addressed.

TAXATION AND BENEFIT-SHARING

Speakers' Notes

Bob Rae emphasized how important it is to understand the nature of the mineral discoveries in the Far North and to acknowledge that development is inevitable. However, he noted the how, the timing, and the pace of that development is subject to external conditions, in particular market conditions. Hart also raised this issue, describing a report done by MiningWatch Canada in 2011 that raised questions about the economic viability of development of the Ring of Fire (Kuyek 2011). Although MiningWatch is not opposed to public investment, there needs to be a guaranteed return. For the Ring of Fire there are tremendous economic risks, including the costs of \$1 billion to build road access.

Both Hart and LaPointe (Figure 5) discussed Ontario's low royalties. Hart referred to the Chen and Mintz (2013) report and LaPointe to the Toms and McIlveen (2013) report, which found Ontario second last in Canada in the amount of royalties levied. (Ontario offers a mining tax exemption of up to \$10 million of profit for the first three years and up to ten years for remote mines). Hart recommended that subsidies be removed, using the DeBeers Victor Mine as an example, with a report in 2010

showing nothing paid on royalties or taxes because they are not showing a profit for tax purposes. LaPointe recommended sharing benefits with communities, society, and future generations through such things as royalties and collective ownership. Resource Revenue Sharing (RRS) is an important theme of the second phase of the Framework Agreement between Ontario and Matawa First Nations.

Discussion Group Notes

Participants were very concerned that the economic benefits from mining flow back to local communities, both Aboriginal communities and municipalities. As well as ensuring a shared prosperity, the distribution of benefits was addressed. Local communities do not share benefits equally. In fact, one town may have the main tax benefit while another gets pollution from upstream activities. Benefit distribution needs to be addressed also because of the short-term life cycles of most mines and the boom-and-bust cycles of this commodity sector. Similar to the suggestion of heritage funds to mitigate long-term environmental effects, these funds could be used to even out the booms and busts. For example, they could be used to prevent dangerous housing bubbles or crashes during such cycles.

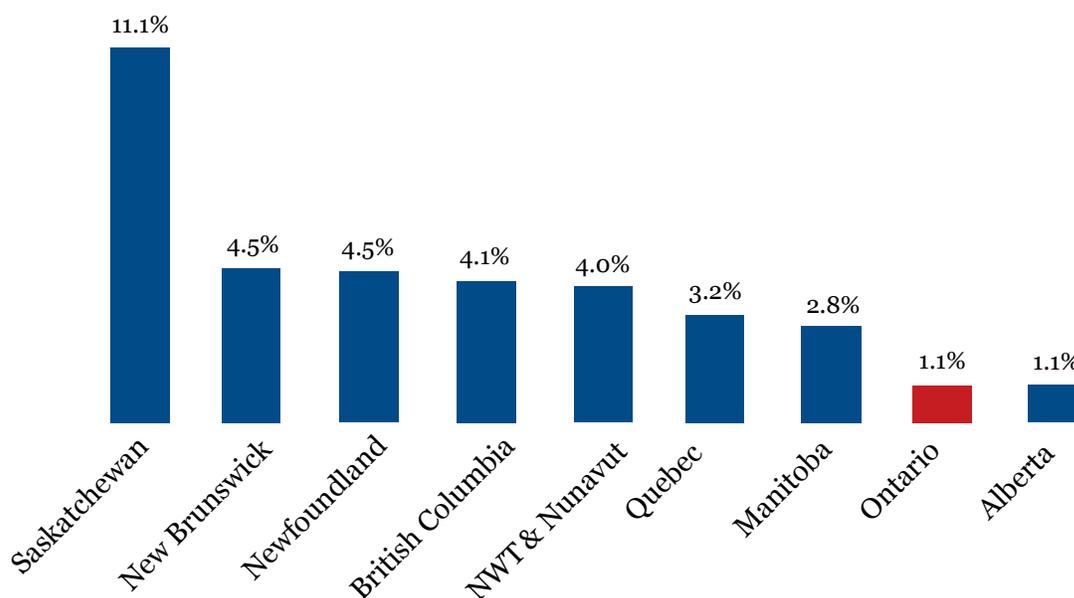


Figure 5. Royalties charged by the Provinces and Territories of Canada from 2002 to 2011. Source Toms and McIlveen (2013)



BUSINESS DEVELOPMENT

Speakers' Notes

Nolan recommended the development of a “Northern Business Preference Policy” to ensure local businesses are able to maximize their opportunities and ensure they can compete regionally.

Part of the Local Resource Development Initiative described by Lindley is a Small-Medium Enterprise (SME) Development Project that: facilitated more than \$900 million in local procurement; generated hundreds of contracts to local SMEs; provided more than 50,000 hours of SME training and mentorship; and contributed to the development of health business practices.

Lindley pointed to the lack of Aboriginal ownership and control in business as a missing piece and provided some direction on how Aboriginal businesses could gain equity, including:

- Public financing/funding (FIT, Aboriginal Loan Guarantee Program);
- Private-public participation (P3);
- “Avoided cost” financing; and
- Modest initial equity position for FN (potentially derived from impact-benefit and compensation payments), with “graduated share purchase” provisions to increase Aboriginal equity over time.



Lindley pointed to one Canadian success story in Aboriginal ownership and control—Omushkego Ishkotayo in Ontario (Five Nations Energy Inc.). The company is 100% owned by the five First Nations of Mushkegowuk Tribal Council. Between 2001-2003 270 km of 2X115 kV high voltage transmission lines were installed from Moosonee to Attawapiskat First Nation on the James Bay coast. Fiber optic cable was added later.

Discussion Group Notes

Some participants pointed to the need to be more realistic about Ring of Fire mining opportunities, especially given recent market corrections, specifically the drop in ferrochrome and chromite prices that led to Cliffs Natural Resources withdrawing from its project. For business development to occur, there needs to be a realistic assessment of potential development.

Participants focused on secondary support services for the sector. Development should be looked at holistically; mining is not in a silo separate from support services or other industries. Opportunities need to be advertised.

CONCLUSION



The diversity of speakers and participants at the CESME conference on the Role of Government Policy in Sustainable Mining and Development was a testament to the role that Lakehead University can play in being an honest broker among stakeholders with widely divergent views. In spite of this wide range of views, there were also some common conclusions.

For decision making and governance for Aboriginal communities and Ontario, it was clear that regional sustainable development frameworks that facilitate Aboriginal peoples' participation in decision making are sorely needed.

On infrastructure in the Ring of Fire, there was agreement that both levels of government need to develop plans that balance the needs of industry with those of local Aboriginal communities. But it is also necessary to have a realistic picture of potential development projects and what they might contribute to the northern economy over time. Public investments in infrastructure need to be guaranteed by private sector investment and development in individual projects.

The need for an effective consultation process to address Aboriginal and treaty rights in the face of development is necessary both for the Crown to fulfill its legal obligations, as defined by the Supreme Court of Canada, and to provide certainty for proponents of development projects. As well as consultation, effective local community involvement can lead to lower costs by hiring local and provide companies with a social licence that ensures greater public acceptance of large-scale projects.

When it came to environmental protection, there were calls for a regional strategic approach to environmental assessment, the establishment of an Aboriginal monitoring program to oversee long-term environmental impacts, and particular attention to the sensitive James Bay Lowlands wetland complex to avoid contamination of this aquatic ecosystem.

Effective training programs were top of mind under workforce development with some successful programs, like BC's Aboriginal Mine Training Association, the Ring of Fire Aboriginal Training Alliance and SNC-Lavalin's Local Resource Development Initiative to provide some direction. Mining is the highest paying industrial sector and with workforce gaps predicted in the next decade, the opportunity is ripe to develop a larger Aboriginal workforce.

While there was some skepticism about whether and how much economic potential exists in the Ring of Fire, it was widely believed that this development is inevitable, even if it takes much longer for the potential to be realized than was originally thought. Given this inevitability, finding a balance between company profits and local community

benefits will be a challenge. While there was no consensus on how to address these issues, conference participants identified the need to re-examine the tax system to ensure royalties are sufficient to provide local benefits. Resource revenue sharing was identified as a way of guaranteeing that Aboriginal communities will not continue to be excluded from the benefits of natural resource development.

Various recommendations were put forward to ensure that northern businesses are competitive in regional development, from a Northern business preference policy to programs

that support small-medium enterprises. Key in business development is finding ways to ensure that Aboriginal people are able to raise the equity to become owners of businesses.

While governments, particularly the Province of Ontario, may feel under siege with so many critical and varying points of view, this conference demonstrated that there is much wisdom in a broad public debate that can inform the development of effective public policy in the Ring of Fire arena and the mining sector in Northern Ontario broadly.



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APPENDIX I: CONFERENCE PROGRAM

THE ROLE OF GOVERNMENT POLICY IN SUSTAINABLE MINING DEVELOPMENT

December 5 & 6, 2013  UC1017 Lakehead University  Thunder Bay, Ontario
Moderator, Dr. Peggy Smith, Faculty of Natural Resources Management, Lakehead University

Thursday, December 5

- 8:00-8:30 Continental Breakfast & Registration
- 8:00-9:00 Welcome, Opening and Introductions
Opening Prayer/Ceremony: *Gerry Martin, Elder*
Dr. Pete Hollings, CESME Director, Dept. of Geology, Lakehead University
Chief Georjann Morrisseau, Fort William First Nation
Tammy Laws on behalf of Minister Michael Gravelle
Lakehead University President Dr. Brian Stevenson
- 9:00-9:30 Reconciliation and Partnership between Canada and First Nations
Bob Rae, Negotiator for Matawa First Nations

LEARNING FROM PAST EXPERIENCES

- 9:30-10:00 Ring of Fire: A Voisey's Bay Replay
Bill Gallagher, Strategist, Lawyer & Author
- 10:00-10:20 Musselwhite Mine: The First Nations' Experience
John Cole, Financial Adviser, Shibogama First Nations Council; Eliezar McKay, Mishamikiwiish Akiw Otabitamaageg and Musselwhite Coordinator
- 10:20-10:40 Refreshment Break (Regional Centre Lounge)
- 10:40-11:00 The Métis Nation of Ontario's Approach to Consultation and Accommodation
Mark Bowler, Director of Lands, Resources & Consultations
- 11:00-Noon Group Discussions about the Past (RC 1001, 1002, 1003)
- Noon-1:00 Lunch (provided): The Outpost

EXPLORING THE PRESENT

- 1:00-1:30 The Northwest Transmission Line — A Collaborative Approach in NW B.C.
Sue Craig, Tintina Consultants
- 1:30-2:15 QUEBEC PANEL
Toward Sustainable Mining: Success and Challenges of Quebec Policies
Ugo Lapointe, Coalition pur que le Québec ait Meilleure Mine (Better Mining Coalition)
Cree Mining Policy and Development
Jack Blacksmith, President, Cree Mineral Exploration Board

- 2:15-2:30 Refreshment Break (Regional Centre Lounge)
- 2:35-3:15 INTERNATIONAL PERSPECTIVES ON ABORIGINAL ENGAGEMENT
- Successful Partnerships – Finding a Balance Between People, Projects and Profits – Insights from Canada and Abroad
Stephen Lindley, SNC Lavalin
- How Indigenous Rights Should Inform Government Policy
Laura Calmwind, Indigenous Rights Activist
- 3:15-4:15 Group Discussions about the Present (RC 1001, 1002, 1003)
- 4:15-4:30 Wrap Up of the Day
- 4:30-7:00 Dinner Break (on your own)
- 7:00-8:30 Creating Possibilities for Aboriginal Youth in Mining — Open Community Meeting in UC 1017
Laurie Sterritt, CEO, BC Aboriginal Mine Training Assoc. & First Resources Impact Ventures Ltd.

Friday, December 6

- 8:30-9:00 Continental Breakfast & Registration

POLICY FOR A BETTER FUTURE

- 9:00-10:00 RING OF FIRE PANEL
Developing the Eagle's Nest Mine in Challenging Times
Glenn Nolan, Noront
- A First Nation Community Perspective on Policy Needs for the Ring of Fire
Elsie MacDonald, Webequie First Nation
- Could First Nations and Ontario Get Burned by the Ring of Fire? Economic and Environmental Risks with Policy Recommendations
Ramsey Hart, MiningWatch Canada
- Cliffs Chromite Project Overview
Jason Aegenes, Director of Environmental Affairs, Cliffs Natural Resources
- 10:00-10:35 Mining in Northwestern Ontario: Challenges and Opportunities
Dr. Bahram Dadgostar & Dr. Camillo Lento, Faculty of Business Administration, Lakehead University;
Dr. Karen Peterson, Karen A. Peterson & Associates
- 10:35-11:00 Refreshment Break (Regional Centre Lounge)
- 11:00-Noon Group Discussions to Formulate Policy Recommendations (RC 1001, 1002, 1003)
- Noon-12:30 Wrap Up: Taking Policy Recommendations Forward
- 12:30 Lunch (provided): The Outpost



APPENDIX II: CONFERENCE ORGANIZING COMMITTEE BIOGRAPHIES

Pete Hollings

Dr. Hollings completed his Ph.D. at the University of Saskatchewan in 1998 where he investigated the geochemistry of the 2.7-3.0 Ga Uchi Subprovince from Red Lake to Pickle Lake. During a two-year NSERC funded postdoctoral fellowship at CODES Dr. Hollings participated in a multidisciplinary research project investigating the genesis of giant copper-porphyry deposits in Chile. As a faculty member at Lakehead University since 2001, Dr. Hollings is continuing his research into the relationship between igneous petrogenesis and mineralisation in Northwestern Ontario, the Philippines and South America. Hollings is currently the Director of the Centre of Excellence for Sustainable Mining and Exploration and Chair of the Department of Geology.

Peggy Smith

Dr. M.A. (Peggy) Smith is an Associate Professor in Lakehead University's Faculty of Natural Resources Management and a Registered Professional Forester. She teaches Policy and Legislation in Natural Resources, Environmental Assessment, and Aboriginal Peoples and Natural Resources. Her research interests focus on the social impacts of natural resources management, including Indigenous peoples' involvement, community forestry, public participation, northern development, and forest certification. She considers herself privileged to be a part of the growing number of people of Indigenous ancestry (Cree) who are working in the field of natural resources management, conservation and development. Peggy is a founding member of the Centre of Excellence for Sustainable Mining and Exploration (CESME) where she focuses on First Nation, Métis and Local Community Involvement.

John Mason

John Mason is a Registered Professional Geoscientist in the Province of Ontario and holds an Honour's Bachelor of Science degree in geology from Lakehead University. He is a member of the Canadian Institute of Mining and Metallurgy, the Ontario Prospectors Association, the Northwestern Ontario Prospectors Association and the Prospectors and Developers Association of Canada. John has published extensively with the Ontario Geological Survey. In a thirty-six year career with the OGS he focused on precious, base metals and industrial mineral deposits and mineral exploration techniques, in Northern Ontario. In mid-2011, John joined the Thunder Bay Community Economic Development Commission as Project Manager, Mining Services, with a mandate to grow the exploration and mining sector in Thunder Bay and region as well to more fully to capitalize on the service and supply businesses that feed into the mineral sector. On June 1st John Mason was awarded an Honourary Doctorate in Science from Lakehead University.

Lynn Palmer

Lynn is a PhD candidate in the Faculty of Natural Resources Management, Lakehead University. Her research focuses on forest policy to enable community-based forest management in Northern Ontario. Lynn holds B.Sc. and M.Sc. Forestry degrees from Lakehead University. She has over twenty years of experience working in the forest and natural resources management fields, primarily in Northwestern Ontario's boreal forests. Lynn has done research, technology transfer, teaching at the college and university levels and has worked with several Canadian and international ENGOs on the sustainability of forest ecosystems and forest-dependent communities. She helped spearhead the Northern Ontario Sustainable Communities Partnership that advocates for community forests. Lynn spends as much time as possible in the wilds canoeing, kayaking, backpacking and cross-country skiing.

APPENDIX III: SPEAKER BIOGRAPHIES

Bob Rae

Bob Rae works as a mediator and arbitrator in Toronto. He has a particular interest in conflict resolution, First Nation and Aboriginal issues, and governance in both the public and private sectors. He speaks and consults widely on issues of public policy at home and abroad. Since April 2013, Mr. Rae has been acting as an advisor to the Matawa Tribal Council, and since June 2013, he has been acting as the Chairman of the First Nations Limited Partnership in British Columbia. He is a Senior Distinguished Fellow at the School of Public Policy and Governance at the University of Toronto, and is also a Senior Fellow at Massey College. Bob Rae served as Ontario's 21st Premier from 1990 to 1995, and was elected eleven times to federal and provincial parliaments between 1978 and 2013. From 1982 to 1996 Bob Rae was leader of the Ontario New Democratic Party and from 2011 to 2013, he served as the Interim Leader of the Liberal Party of Canada at a time of significant restructuring. He resigned from the Parliament of Canada on July 31, 2013. In 2011, Mr. Rae was named by his colleagues as "Parliamentarian of the Year." He is an Officer of the Order of Canada, a Queen's Counsel, a Privy Councillor, and a Member of the Order of Ontario. Mr. Rae studied History, Politics and Law at the University of Toronto and Balliol College, Oxford University, where he was a Rhodes Scholar. He has been a practising lawyer since 1980, and from 1996 to 2006 was a Partner at Goodmans LLP in Toronto. Mr. Rae is the past president and founding Chairman of the Forum of Federations (where he remains a Fellow) and served as Chairman of the Institute of Research on Public Policy (IRPP). He was chair of the Toronto Symphony Orchestra and has been the Chairman Emeritus of the Royal Conservatory of Music, as well as National Spokesperson of the Leukemia & Lymphoma Society of Canada. He was the Chief Negotiator of the Canadian Red Cross Society in its restructuring, and also served as a member of the Canada Transportation Act Review and the Security and Intelligence Review Committee for Canada. He has served on the boards of a number of public companies and charities. He was Chancellor of Wilfrid Laurier University from 2002 to 2007. Mr. Rae's books "From Protest to Power," "The Three Questions," "Canada in the Balance," and "Exporting Democracy" are published by McClelland & Stewart. As a student, he co-authored a report on governance at the University entitled "Towards Community in University Government." In 2005 he wrote a provincial report "Ontario, a Leader in Learning", and a federal report on the 1985 Air India bombing "Lessons to be Learned." He has received numerous honorary degrees and awards from universities, colleges, governments, and organisations in Canada and abroad. He is married to Arlene Perly Rae, and they have three daughters. Mr. Rae lives in Toronto.

Bill Gallagher, LL.B.

Bill is an experienced strategist in the dynamic area of Native, government, and corporate relations and is an authority on the rise of Native empowerment in the Canadian resources sector. Bill has recently published his much anticipated book, *Resource Rulers: Fortune and Folly on Canada's Road to Resources* (January 2013), wherein he analyzes how and why Natives have amassed the most significant winning streak in Canadian legal history, replete with cause-and-effect linkages and lessons learned in terms of project strategies and consequences. Having defused native logging tensions in New Brunswick's 'war in the woods' and oil patch eco-terrorism in Alberta, and helped to guide Inco's Voisey's Bay impact benefits agreements to successful conclusion (the most complex resource dispute in Canada), his career as a *strategist* builds on previous career successes as a corporate lawyer in Calgary, an energy regulator in Ottawa and offshore petroleum boards, devolution negotiator in the Territories, and a treaty negotiator on the Prairies (numbers 1 to 5). He has advanced many major projects for 'blue chip' clients in all regions of the country from mine development, transmission lines, forest management, to integrated resource outcomes. He is a frequent conference presenter on the "rise of native empowerment".

John Cole

John has been Financial Advisor with Shibogama First Nations Council for the past 9 years. He works with Shibogama First Nation communities to provide advisory and support services in the areas of financial/business management and administration as well as economic and business development. He also provides advisory and support services to First Nation economic development staff as well as to some of the community-based businesses linked to the Musselwhite Mine. John holds Business and Economics degrees from Lakehead University.

Eliezar Mckay

Eliezar has been MAO (*Mishamikiwiish Akiw* Otabitamaageg) Musselwhite Coordinator since May 2009. MAO includes Chiefs from Kingfisher Lake First Nation, Wunnumin Lake First Nation and Shibogama First Nations Council. Eliezar is responsible for a variety of activities including: monitoring and implementation of the Musselwhite Mine Agreement, environmental monitoring, coordinating meetings with the signatories, monitoring mining activities, reviewing environmental, production, accident and working reports, working with other First Nations, providing reports to the Chiefs and Councils, working with various committees, and acting as a liaison officer between the Musselwhite Mine and First Nations. He was not directly involved during the negotiating process between the First Nations and Musselwhite Mine, but he did participate in some of their meetings. Before becoming the Musselwhite Coordinator, Eliezar worked as an Economic Development Officer for Pipestone Economic Development Council for eight years. He has served five terms in Wunnumin Lake First Nation Council as an Acting Chief, Deputy Chief, Head Councillor and Council levels. He has also served on various boards for over 15 years. Eliezar currently serves as a chair for First Nations Hold Co. that has a mandate to build and construct a hydro gridline to 18 First Nations communities and the Musselwhite Mine.

Mark Bowler

Mark is Director of Lands, Resources and Consultations for the Métis Nation of Ontario. He began as a practitioner in British Columbia with both Treaty and Non-Treaty First Nations. As a biologist in First Nation communities, part of his role was explaining and understanding the perspectives of both development proponents and the community. In different roles with industry organizations in Canada and overseas, his task was communicating to gain and maintain social license. Now as Director of Lands, Resources and Consultations with the Métis Nation of Ontario, Mark works to apply a systematic, province-wide approach. Mark has a B.Sc. in Biology from the University of British Columbia and a Masters in Aquaculture from Simon Fraser University. He also has experience in South America and the South Pacific.

Sue Craig

Sue is a professional geoscientist who attended grade and high school in Thunder Bay. She returned to Thunder Bay to complete her M.Sc. in Geology at Lakehead in 1991, as well as a teaching degree in 2001. Sue has over 20 years experience in projects ranging from exploration through to production and closure in the mining industry. Sue's expertise includes liaising on technical, environmental, and socio-economic issues regarding industry developments. Sue first worked in northwest BC in the early 1990s, and returned in 2004 where, as Land and Environmental Manager at NovaGold, she was responsible for the environmental assessment of the Galore Creek Project. Sue was part of a team that won an award from AMEBC for excellence in social and environmental responsibility on the Galore Creek Project. Sue was also part of the team which explored, permitted and developed the Brewery Creek heap leach gold mine in the Yukon in the 1990s. Throughout her career, Sue has taken an active interest in the associations and groups within the mining industry in BC and Yukon. Some of her key roles have included Chair of the Yukon Mineral Advisory Board, Chair of Vancouver Mineral Exploration Group, Director of Yukon Chamber of Mines, and Chair of Mineral Exploration Roundup Conference. Sue is currently on the advisory board of companies exploring in northwest BC and Yukon, and is providing advice on a major mine project in north central BC.

Ugo Lapointe

Ugo graduated with an Honours Bachelor of Science in Geological Engineering from Queen's University and has fifteen years of diverse experience in the Quebec and Canadian mining sectors. He is co-founder and spokesperson for the coalition Québec meilleure mine (Better Mining Coalition) that was founded in 2008 to promote improvements in the sector's social, environmental, and economic practices. Today, the coalition brings together thirty organizations representing more than 250,000 individuals across Quebec. Originally from the Abitibi mining region, Ugo has published a number of research and advocacy papers and reports and is a frequent presenter at conferences on issues of mineral development in Quebec. Ugo has worked as a consultant for the provincial government, non-government organizations, research centres, communities, Aboriginal organizations, and responsible investment firms.

Jack Blacksmith

Mr. Blacksmith is currently the President of the Cree Mineral Exploration Board, a position he has held for 7 years. Under his presidency, the Cree Mineral Exploration Board has steadily grown as a regional entity for the benefit of the Cree to access opportunities and knowledge in the mineral resources in Eeyou Istchee. Mr. Blacksmith has extensive experience in management as Chairman of the Cree Regional Authority's Board of Compensation, an entity created under the James Bay & Northern Quebec Agreement (1975) to receive, administer, use and invest the compensation from the JBNQA. By virtue of his Chairmanship, Mr. Blacksmith administrated as Chairman/President of the Cree Regional Economic Enterprises (CREECO), CREECO acts as a holding Company for the Cree Construction and Development Company, Air Creebec and Valpiro. And has held various functions including being the Director of Operations for the First Nation of Waswanipi, Special Projects for the Grand Council of the Cree and Director General of the Mishtuk Corporation, a forestry company wholly by the Cree First of Waswanipi. Jack is currently residing in Ouje-Bougoumou, Quebec. He is the proud grandfather of Taneesha, Mishpun, Colin and Devin.

Stephen Lindley

Stephen is corporate Vice President responsible for Aboriginal & Northern Affairs for SNC-Lavalin Inc. He has over 30 years of experience in the environmental planning and community relations business and has been with SNC-Lavalin for over 25 years. Steve is responsible for developing and maintaining corporate relations and partnerships with Aboriginal organizations and businesses throughout Canada. He also conducts business development and marketing and provides project support to all Divisions of the Company. Stephen is currently a member of the Board of Directors of the Aboriginal Human Resource Council, the Canadian Council for Aboriginal Business, and three Aboriginal-owned joint venture companies, including Innu/SNC-Lavalin in Labrador. Until 2013 Steve was also Director of the Impact Assessment and Community Engagement group for the SNC-Lavalin Environment Division in Central Canada where he was responsible for leading a multidisciplinary team of engineers, scientists and planners in environmental assessment, environmental approvals, environmental management planning, environmental design and construction supervision.

Laura Calmwind

Of the Kitchenuhmaykoosib Inninuwug, located in what is known as the Treaty #9 territory, Laura is currently employed as the regional youth co-ordinator with the Chiefs in Ontario. Laura works closely with the Ontario First Nations Young Peoples Council, a regional youth council mandated to serve as the official youth voice for the Ontario First Nations at all levels of government. Laura is closely connected to her culture and traditions and is a fluent speaker of her Indigenous language, Anishnabamowin. Laura enjoys spending time with Elders and traditional knowledge practitioners and is an avid participant in cultural ceremonies and events. Laura is also a long-time Indigenous rights activist. She is committed to the promotion and protection of all sacred living things.

Glenn Nolan

Glenn began his professional involvement in the mining industry in the late 70's, conducting a variety of geophysical surveys throughout Canada and focusing his work in the far north. Throughout his career, he has worked for major companies and as a contractor on many diverse and a various projects. He worked proactively with local Aboriginal communities, building capacity and trust, and ensuring local support. Today, Glenn is considered one of the leading experts in building relations between Indigenous communities and exploration companies in Canada and Latin America. He continues to advise many companies on best practices for building positive working relationships with Indigenous communities. He is committed to continuing greater dialogue between communities and the mineral industry here at home and internationally. Currently Glenn is the Vice President, Aboriginal Affairs, for Noront Resources that is developing the Eagle's Nest Mine project in the Ring of Fire and a board member of a junior diamond explorer with active properties in Canada and Africa. He is also the president of the Prospectors and Developers Association of Canada, the first Aboriginal person to be elected to the position.

Ramsey Hart

Ramsey Hart joined MiningWatch Canada as the Canada Program Coordinator in 2008. In this role Ramsey works across the country with communities affected by existing and proposed mining projects, reviews environmental assessments, advocates for legal reform and provides critical analysis to the media, concerned citizens and political decision makers. Prior to his move to Ottawa to work with MiningWatch, Ramsey was living on a small farm in New Brunswick working on contracts for a variety of environmental NGOs, the federal government and Mount Allison University. Ramsey received his M.Sc. in Watershed Ecosystems from Trent University and did his Bachelors in Environment and Resource Studies at the University of Waterloo. He has been an activist since he was in high school and has worked on a variety of issues and projects, from international mining, to Indigenous solidarity and a community bicycle recycling program. When not working or volunteering his time for environmental and social justice causes, he can usually be found in his garden or on the water in a canoe.

Elsie MacDonald

Elsie MacDonald is a Webequie First Nation Band Member and was raised in Webequie, Ontario. Elsie's political career started in 1994 when she was elected Band Councillor for the Webequie First Nation. To date, she has served six consecutive terms as Band Councillor, one term as Chief, and has recently been re-elected for her 7th term on Council. Her list of accomplishments include; the creation of the Webequie Education Authority and the First Nation Health Management Structure; obtaining funding for a First Nation Administration Office Complex and a 26-unit subdivision; the creation of the Lands & Resources Policy; spearheading the Traditional Ecological Knowledge Mapping project, which led to a Land Use Planning Project; establishing a Memorandum of Cooperation agreement with the Province of Ontario; and last, but definitely not least, spearheading negotiations that lead to the successful creation of the Webequie reserve (Webequie First Nation operated for many years as a First Nation without reserve status). Elsie obtained a Master's Certificate in Project Management from the University of Winnipeg in 2006. She is the founding President of Web-Equay Mamow-No-Kii-Win (Webequie Women Working Together) and continues to move women's issues to the front in both her community and her political career. She was one of the Inaugural Board of Directors of Women In Mining – Thunder Bay and Northwestern Ontario. Elsie also serves as the President of the KKETS organization which provides employment & training services to the Matawa communities. Recently Elsie has been very active in resource development and obtained a significant amount of funding for an in-depth community consultation process on resource development and land use planning. She has actively supported her Council in finding solutions for the recent prescription drug abuse epidemic. Elsie currently holds the finance portfolio and is spearheading development of a Strategic Governance Plan for her community, while solving community financial constraints with the assistance of a co-manager.

Jason Aagenes

James is the Director of Environmental Affairs at Cliffs Natural Resources. He holds B.Sc. degrees in Chemistry and Environmental Studies and is nearing completion of an M.Sc. degree in Environmental Engineering. Mr. Aagenes is responsible for the environmental assessment and permitting of the Cliffs' Chromite Project, in addition to directing environmental activities for Cliffs' Global Exploration Group. Prior to his work on the Chromite Project, James led the environmental department at Cliffs' United Taconite facility in northern Minnesota and was the Director of Environmental Affairs, Minnesota and Canadian Operations. Before joining Cliffs Natural Resources in 2006, Mr. Aagenes was responsible for Eastern US environmental compliance at Northwest Airlines in Minneapolis, Minnesota, responsible for environmental management at the Company's Detroit and Memphis hub and maintenance stations. Prior to joining Northwest Airlines, Mr. Aagenes led environmental efforts at the Cliffs'-managed LTV Steel Mining Company in Northern Minnesota focusing on managing mine site closure and rehabilitation. Mr. Aagenes has also consulted in Northern Minnesota on mine wastewater management and internationally in Europe and Australia on environmental auditing.

Laurie Sterritt

Laurie Sterritt joined the BC Aboriginal Mine Training Association (BC AMTA) as its founding Executive Director in 2009. She came to BC AMTA from a senior role at Vancity Credit Union, and has also worked as an executive recruiter and as a project and special event manager. To date, BC AMTA has trained and placed 650+ Aboriginal men and women in exploration, mining and mine development careers. Laurie is also the founding CEO of First Resources Impact Ventures (FIRST RESOURCES). An innovative social enterprise and subsidiary company of BC AMTA, FIRST RESOURCES creates unique business opportunities that will ensure long-term positive impacts for First Nations. Laurie earned her Bachelor of Commerce degree at UBC and was certified as a Professional Fund Raiser by the University of Indiana. She is recognized as an industry-leader and presents as a panelist, speaker and keynote at conferences across Canada. She is committed to improving the economic health of Canada's Aboriginal population by systematically reducing or removing barriers to employment and entrepreneurship across the natural resources sectors. She joined the Board of British Columbia Institute of Technology in 2011 and now sits on the Executive Committee as the first Vice Chair. She is also a volunteer member of the BC HR Task Force on Exploration, Mining, Stone, Sand & Gravel. Her commitment to community service has also included the Minerva Foundation for BC Women *Combining Our Strengths Council*. Away from work Laurie enjoys reading, yoga and healthy living—and trying to keep up with her husband and three active children. She is a member of the Kispiox Band of the Gitksan Nation and grew up in Campbell River, BC.

Camillo Lento

Dr. Lento is an Associate Professor of Accounting in the Faculty of Business Administration at Lakehead University. He earned a Ph.D. degree in accounting from the University of Southern Queensland, Queensland, Australia. Camillo also holds M.Sc. and HBComm. degrees and is a Chartered Professional Accountant (Canada), a Chartered Accountant (Canada), and a Certified Fraud Examiner. He has prepared economic development reports for a variety of organizations. Recently, Camillo was a co-author in two significant and influential reports entitled: *Mining in Northwestern Ontario: Opportunities and Challenges (2012)* and *Poised for Development, Ready for Growth (2013)*. He has also authored several book chapters, journal articles, and practitioner magazine articles. In addition to being a contributing editor for Canadian MoneySaver magazine, his commentary has been featured in the Globe and Mail: Report on Business, Money Sense Magazine, and Canada Business. Outside of academia, Camillo has worked in a variety of positions in accounting, auditing, and asset valuation with Grant Thornton LLP. Recently, Camillo's achievements were recognized by his profession as he was the recipient of the 2013 Institute of Chartered Accountants of Ontario's Award of Distinction.

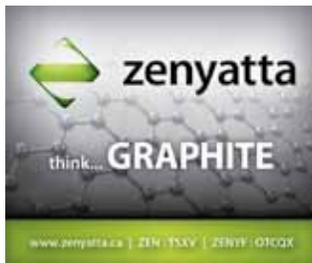
Bahram Dadgostar

Dr. Dadgostar is a full professor and Dean of the Faculty of Business Administration at Lakehead University. He was the co-chair of the task force for research and graduate education, and a member of the strategic plan steering committee at Lakehead University. He is the Chair of the Board for the Federation of Canadian Business School Deans and a member of the Board of the Thunder Bay Chamber of Commerce. Bahram has prepared economic development reports for a variety of organizations. Recently, Bahram was a co-author in two significant and influential reports entitled: *Mining in Northwestern Ontario: Opportunities and Challenges (2012)* and *Poised for Development, Ready for Growth (2013)*. In addition, Bahram has prepared economic development reports for organizations such as Thunder Bay Ventures, Thunder Bay Telephone, Port of Thunder Bay and Transport Canada, Ministry of Northern Development and Mines, Thunder Bay Police Association and Thunder Bay National Training Center. His research and teaching career reflects an avid interest in diverse areas including economic theory, international finance, options and futures, corporate finance, research methods, quantitative methods and econometrics. He has published in internationally respected professional journals such as the Journal of Travel Research, Economic Affairs, Journal of Economics, Singapore Journal of Economics and the Journal of Hospitality and Leisure Marketing, The Journal of Applied Business Research, and The Journal of Current Research in Global Business.

Karen Peterson

Dr. Peterson is a planner and educator. She has worked extensively in the area of planning for regional and community development with a particular emphasis on Aboriginal and northern communities. Her focus is on stakeholder collaboration, community engagement and impact assessment. Karen completed her doctorate degree in Planning at the University of Calgary's Faculty of Environmental Design where she developed a planning framework for the meaningful consultation of Aboriginal peoples within land management practices and grievance resolution processes. Karen's research and professional practice includes community and socio-economic development, community based research, strategic and land use planning, socio-economic assessment as well as capacity building at both the community and corporate level for meaningful consultation and the incorporation of traditional knowledge within land management practices. She has facilitated multi-stakeholder processes and strategic planning sessions; conducted traditional land use studies, socio-economic and community-based research; prepared land use plans and watershed management documents; developed and managed projects; and integrated risk management into corporate business plans. Karen combines academic and practical knowledge regarding how communities and organizations operate and how institutional frameworks, cultural diversity and social interaction affect the outcomes of initiatives. Her clients include Political Territorial Organizations, First Nations, Métis organizations, social service agencies, environmental groups, educational institutions, municipal organizations and corporate industry. Prior positions included Director of Interdisciplinary Studies, Centre for Indigenous Environmental Resources (CIER), Winnipeg; Senior Advisor to the Vice President, Aboriginal and Northern Affairs Branch, Ontario Hydro; Integrated Risk Management, City Manager's Office, City of Calgary and Sessional Course Instructor at the Banff School of Management, Aboriginal Leadership Programs.

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