



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

# **RESOURCE DEVELOPMENT IN NORTHERN CANADA**

## **Report of the Standing Committee on Natural Resources**

**Leon Benoit, M.P.  
Chair**

**NOVEMBER 2012**

**41st PARLIAMENT, 1st SESSION**

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# **THE STANDING COMMITTEE ON NATURAL RESOURCES**

has the honour to present its

## **FOURTH REPORT**

Pursuant to its mandate under Standing Order 108(2), the Committee has studied the resource development in Northern Canada and has agreed to report the following:



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# THE DEVELOPMENT OF NATURAL RESOURCES IN NORTHERN CANADA

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## INTRODUCTION

The development of natural resources in Canada's remote northern regions faces a number of social, economic, infrastructural, environmental and regulatory challenges. The growing world demand for energy, metals and minerals, petrochemicals, and diamonds offers promising opportunities for Canada's northern natural resources sector. In order to gain a better understanding of the various opportunities and challenges in the development of mineral and energy resources in Canada's North, the House of Commons Standing Committee on Natural Resources undertook a study on resource development in northern Canada.<sup>1</sup> The study includes five main components:

- 1) The state of geoscience with regard to resource development in northern Canada;
- 2) Mineral resource development;
- 3) Energy resource development;
- 4) Socio-economic issues surrounding resource development in northern Canada; and
- 5) The regulatory environment facing resource developers in northern Canada.

This report focuses on the geoscience, socio-economic issues, the regulatory challenges of mineral and energy resource development in northern Canada, as well as the case study on the Ring of Fire. Information on these topics is based on testimony from a wide range of witnesses from government, industry, Aboriginal groups, academia, and environmental organizations.

## GEOSCIENCE

### A. Overview

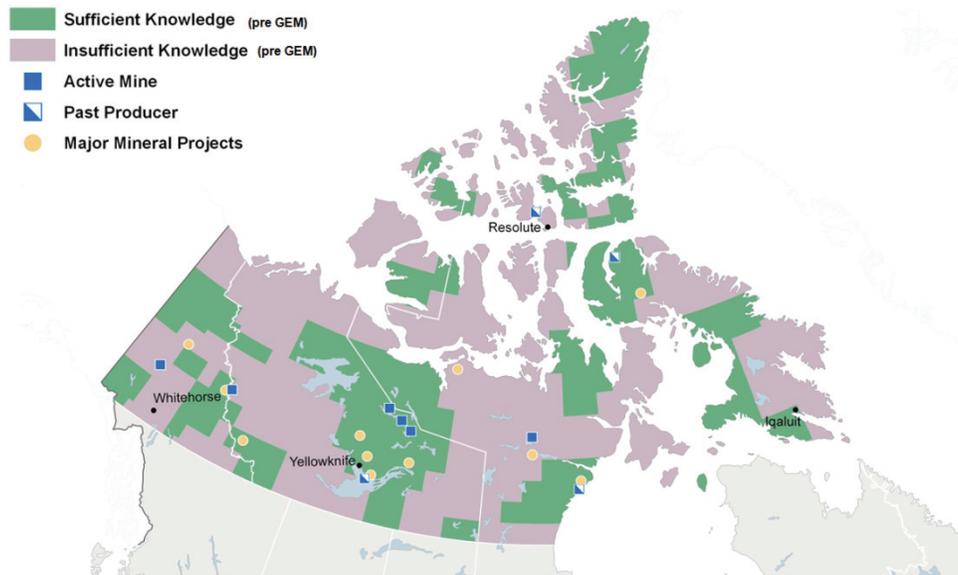
Geoscience, particularly geo-mapping, can be used to guide investment decisions and help governments and the private sector assess resource potential in northern Canada. As mentioned by James Ferguson, Chair and Acting President of the Geomatics Industry Association of Canada (GIAC), "Geomatics (also known as geospatial technology or geomatics engineering) is the discipline of gathering, storing, processing, and delivering

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<sup>1</sup> For the purpose of this study, the Committee agreed to consider primarily the territories north of the 60th parallel, along with the northern portion of the provinces.

geographic information, or spatially referenced information”.<sup>2</sup> According to Keith Morrison, Chief Executive Officer at Gedex Inc., low-cost, high-resolution, and high-quality geological information in northern Canada’s vast territory and remote environment is fundamental to reducing the investment risks and uncertainties associated with resource exploration and development in the north.<sup>3</sup> Approximately 60% of the Canadian territories’ lands lack sufficient geo-science knowledge, as Figure 1 demonstrates.<sup>4</sup>

**Figure 1: Geoscience Knowledge in the Canadian Territories**



Source: Natural Resources Canada (NRCan) document presented to the Committee.

According to Steve MacLean, President of the Canadian Space Agency (CSA), the increasing global demand for gold, precious rare earth minerals, petrochemicals, diamonds and water has led northern Canada to an “unprecedented boom in demand for prospecting, exploration, and exploitation.” Geoscience initiatives have helped produce accurate maps of resource activity in the north.<sup>5</sup> Moreover, he stated that globally “[...] the programs and activities of the Canadian space program support the Arctic and northern strategy; sovereignty and security and the safe navigation of ships in our icy waters; Canadian Forces deployments at home and abroad; fishing patrols and offshore pollution detection and interdiction activities; atmospheric and environmental monitoring related to precision weather forecasting and climate change; and the exploitation, development, and sustainable management of Canada’s natural resources, especially in the north.” He added that “robust, and redundant space-driven communications, weather, and navigation

2 James Ferguson, Chair and Acting President, Geomatics Industry Association of Canada, *Evidence*, October 24, 2011.  
 3 Keith Morrison, Chief Executive Officer, Gedex Inc., *Evidence*, October 26, 2011.  
 4 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.  
 5 Steve MacLean, President, Canadian Space Agency, *Evidence*, October 24, 2011.

services [are needed] to fully realize and capitalize [the North's] potential for sustainable development, now and in the future."<sup>6</sup>

James Ferguson (GIAC) pointed out that "users of geomatics are truly cross-sectoral. [They] come from sectors that include infrastructure and critical infrastructure; transportation — land, air, and sea; emergency management; public health and biosecurity; resource management; mining; petroleum resources; the environment; national defence and border security; utilities and telecommunications; forestry; fisheries; manufacturing; and trade and retail services."<sup>7</sup>

According to him, even though Canada was "an international leader in geomatics post-World War II and into the 1980s, its status and ability at the federal level has fallen behind much of the developed world." The GIAC is of the view that "the lack of a coherent, practical, and actionable national strategy and plan is at the core of this decline."<sup>8</sup> Although Canada is ahead of many countries, the state of "adequate geoscience knowledge" (mapping) remains more advanced in countries like Australia and Mexico.<sup>9</sup> David Scott, from the Geological Survey of Canada, Northern Canada Division at Natural Resources Canada (NRCan), stated that Canada is "somewhere in the middle" in terms of geoscience competitiveness among countries, pointing out that, "owing to the sheer size of Canada and the logistical difficulties of working in remote areas of the country, particularly in the north, [geomatics in Canada are] not quite where [they] need to be from a private sector investment perspective."<sup>10</sup> The work of NRCan south of 60 degrees has been largely completed, according to him. "The provinces work on the next generation of detail."<sup>11</sup> The federal government is focusing its geoscience efforts north of 60 degrees, through programs such as NRCan's Geo-mapping for Energy and Minerals (GEM).<sup>12</sup>

James Ferguson also indicated that, at the provincial level:

there are a number of examples of how government can partner with industry to ensure accessible data is available and to work together to prioritize the gaps in existing locations. In the field of geomatics, the following program is an example that is in place in Alberta: Spatial Data Warehouse Ltd. is an Alberta-registered, not-for-profit company created in 1996 to take over and fund digital mapping activities that were previously undertaken and funded by the Government of Alberta. It has proven to be one of the most successful P3 [public-private partnership] initiatives within the province of Alberta. Spatial Data Warehouse's objective is to provide for the long-term management,

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6 Ibid.

7 James Ferguson, Chair and Acting President, Geomatics Industry Association of Canada, *Evidence*, October 24, 2011.

8 Ibid.

9 David J. Scott, Director, Geological Survey of Canada, Northern Canada Division, Natural Resources Canada, *Evidence*, October 19, 2011.

10 Ibid.

11 Ibid.

12 Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

updating, storage and distribution, and associated funding of digital mapping data sets that collectively make up Alberta's digital mapping infrastructure.<sup>13</sup>

Since the late 1950s, Canadian geoscience has gone through major technological advances. As illustrated by Brian Gray of the Earth Sciences Sector, NRCan, “today we use modern tools to collect and distribute information beyond the typical bedrock geology mapping [and] [t]he modern mapping methods provide digital information distributed freely via the Internet. [...] The technology we're using: airborne geophysical surveys measure physical properties of the bedrock from the aircraft, such as a helicopter or a light fixed-wing aircraft; the aircraft flies back and forth over the land along parallel lines spaced about 400 metres apart, and the aircraft is about 150 metres off the ground. Down on the field level, we have field data collected by geologists using hand-held devices with pinpoint GPS accuracy.”<sup>14</sup> With measurements of the magnetic properties of rocks below the soil, it is now possible to get a more complete picture of the bedrock,<sup>15</sup> even when it is deeply buried. Gedex’s imaging technologies “are applied specifically to subsurface imaging, providing new data that can be used to interpret geology in terms of supporting petroleum, mining, and water exploration and development”.<sup>16</sup> The technology can provide data from the surface down to depths of about 10 kilometres, including sub-ice measurements, to interpret subsurface geology.<sup>17</sup>

## **B. Government Initiatives**

The Government of Canada has launched two programs in order to advance geoscience knowledge — particularly geo-mapping — across Canada:

- The Geo-mapping for Energy and Minerals Program (GEM) — a \$100-million investment over five years (2008-2013), including (according to the best available estimates): \$38.6 million in Nunavut; \$26.4 million in the Northwest Territories; \$15.6 million in Yukon; \$2.9 million in Quebec; \$2.3 million in Newfoundland and Labrador; \$1.7 million in British Columbia; \$1.2 million in Manitoba; and \$1 million in Saskatchewan.<sup>18</sup> Figure 2 presents an overview of GEM’s project areas in the Canadian territories.

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13 James Ferguson, Chair and Acting President, Geomatics Industry Association of Canada, *Evidence*, October 24, 2011.

14 Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

15 John Percival, Program Manager, Geomapping for Energy, Natural Resources Canada, *Evidence*, October 19, 2011.

16 Keith Morrison, Chief Executive Officer, Gedex Inc., *Evidence*, October 26, 2011.

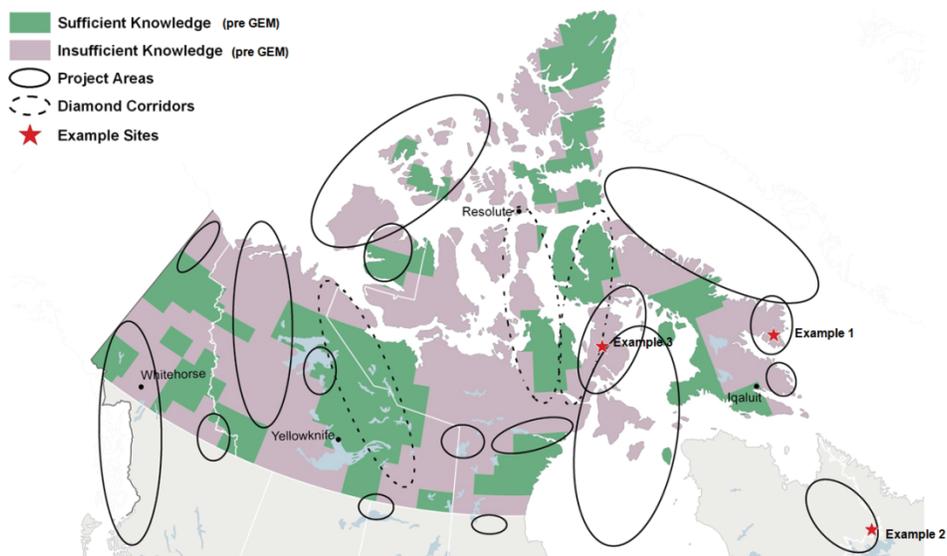
17 *Ibid.*

18 Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

- The Targeted Geoscience Initiative (TGI), which attempts to maximize the usage of existing tools and data bases.

The GEM program is the federal government’s “flagship program under the northern strategy to address those areas of Canada where the basic framework mapping is not adequate to support private sector investment.”<sup>19</sup> According to Brian Gray, approximately 75% of the GEM program targets areas north of 60 degrees, while 25% is devoted to the northern parts of British Columbia, Quebec, Newfoundland and Labrador, Saskatchewan, and Manitoba.<sup>20</sup> Moreover, NRCan administers other geoscience programs, including a climate change geoscience program focusing largely on the north, a groundwater geoscience program mapping groundwater aquifers across Canada (exclusively south of 60 degrees), and the “targeted geoscience initiative”, which targets areas mostly south of 60 degrees. Under the intergovernmental Geoscience Accord, initiated in 1996 and renewed every five years, NRCan works with the provinces and the private sector to develop new models and exploration techniques targeting deeply buried ore deposits.<sup>21</sup>

**Figure 2: GEM Project Areas**



Source: Natural Resources Canada (NRCan) document presented to the Committee.

19 David J. Scott, Director, Geological Survey of Canada Northern Canada Division, Natural Resources Canada, *Evidence*, October 19, 2011.

20 Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

21 David J. Scott, Director, Geological Survey of Canada, Northern Canada Division, Natural Resources Canada, *Evidence*, October 19, 2011.

The Canadian Northern Economic Development Agency (CanNor) has also invested \$10.7 million towards geo-science research, through the Strategic Investments in Northern Economic Development (SINED) program. A database of geo-science was developed through the program, and is currently used to assess resource potential in the north.<sup>22</sup>

### C. Challenges and Opportunities

Considering the geological diversity of northern Canada, current GEM projects could help identify a wide range of mineral and energy resources (Figure 2), including new gold and precious metals, diamond-bearing kimberlites, oil and natural gas reserves, uranium reserves, and various base metals (e.g. copper, zinc, nickel, iron, and lead).<sup>23</sup> Furthermore, according to Richard Moore, Chair of the Geosciences Committee in the Prospectors and Developers Association of Canada (PDAC), the information gathered from the GEM and TGI programs “increases the knowledge of Canada's natural resources; encourages mineral exploration and mine development; contributes to economic development, particularly in the north; attracts investment; and contributes to the professional development of geology students.”<sup>24</sup> Pamela Schwann, Executive Director of the Saskatchewan Mining Association, told the Committee that geosciences programs, particularly mapping skill programs and large-scale airborne geophysical programs, are especially helpful to the junior companies that may not have the resources to carry out their own geosciences research.<sup>25</sup> John Gingerich, President and Chief Executive Officer of Advanced Explorations Inc., stated that mapping programs are “the lifeblood of the exploration industry”.<sup>26</sup> According to James Ferguson, “a national geomatics strategy [beyond mapping] would also address the strategic importance of geomatics technology to a modern economy and society by helping facilitate the effective application of geomatics in [...] our key national policy issues, such as energy, sovereignty, environment, public safety, natural resources, health, and others.”<sup>27</sup>

According to Richard Moore, “the geoscience knowledge provided by federal, provincial, and territorial governments as a public good is widely acknowledged to be one of Canada's competitive advantages in attracting mineral exploration, [...] and is] essential for maintaining Canada's role as the leading destination for exploration investment.”<sup>28</sup>

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22 Mitch Bloom, Vice-President, Policy and Planning, Canadian Northern Economic Development Agency, *Evidence*, October 17, 2011.

23 Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

24 Richard Moore, Chair, Geosciences Committee, Prospectors and Developers Association of Canada, *Evidence*, October 24, 2011.

25 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

26 John Gingerich, President and Chief Executive Officer, Advanced Explorations Inc., *Evidence*, October 26, 2011.

27 James Ferguson, Chair and Acting President, Geomatics Industry Association of Canada, *Evidence*, October 24, 2011.

28 Richard Moore, Chair, Geosciences Committee, Prospectors and Developers Association of Canada, *Evidence*, October 24, 2011.

An analysis by the PDAC estimates that every dollar spent on geo-mapping by the Geological Survey of Canada (GSC) may generate roughly five dollars in exploration, and possibly \$125 in mining development (including downstream impacts, such as job creation), within a few years.<sup>29</sup> On the other hand, Brian Gray, from the Earth Sciences Sector of NRCan, told the Committee that northern Canada's remoteness and shortage in basic infrastructure (e.g., roads, boats, planes, hotels, etc.) would likely delay the return on investment of the GSC's geo-mapping initiatives.<sup>30</sup>

According to James Ferguson, Canada's geomatics business includes over 2,000 small, medium and large firms, providing close to 25,000 jobs across the country. The estimated annual gross revenue generated by geomatics firms exceeds \$2 billion, including approximately \$0.5 billion earned as export revenue. Furthermore, he stated that, according to a report prepared for the Canadian Council on Geomatics, employing geomatics more effectively could generate GDP gains of 0.6% to 1.2% (or approximately \$9.5 billion to \$18.9 billion annually). He added that, in another analysis funded by two private Canadian geomatics firms in 2010, Dr. Ian Lee, MBA director of the Carleton University Sprott School of Business, predicted GDP gains in the range of \$7.3 billion to \$14.4 billion.<sup>31</sup>

Steve MacLean of the CSA stated that, in the next decade, over 250 satellites will be launched by a number of countries, many capturing images of Canada. To maximize the benefits of these satellites, Canada's integrated space-ground infrastructure needs to be expanded in order to "ensure the development of [Canadian] space infrastructure and take advantage of the capture, archiving, processing, and dissemination of this complementary data [...]" He added that establishing common standards, particularly a common geo-reference for data storage, is necessary to allow for data usage by multiple entities.<sup>32</sup> According to John Gingerich, "the purpose of mapping has land use planning considerations [and that] [t]he problem is that people are making decisions on what land will be good for exploration or good for biodiversity without having the database."<sup>33</sup>

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29 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011; Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

30 Brian Gray, Assistant Deputy Minister, Earth Sciences Sector, Natural Resources Canada, *Evidence*, October 19, 2011.

31 James Ferguson, Chair and Acting President, Geomatics Industry Association of Canada, *Evidence*, October 24, 2011.

32 Steve MacLean, President, Canadian Space Agency, *Evidence*, October 24, 2011.

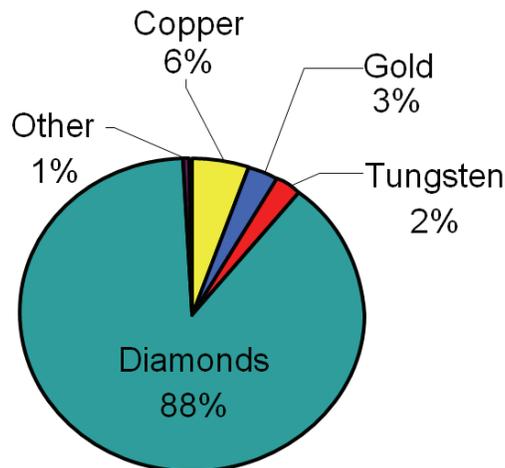
33 John Gingerich, President and Chief Executive Officer, Advanced Explorations Inc., *Evidence*, October 26, 2011.

## MINERAL RESOURCE DEVELOPMENT

### A. Overview

The growth of Canada's mining industry has been evident in recent years. Since 2004, Canada has attracted between 16% and 19% of the world's share of mineral exploration.<sup>34</sup> Between 2006 and 2010, northern mineral production increased by about 53%. Nunavut, Yukon and the Northwest Territories accounted for about 6.3% of the value of Canada's total mineral production in 2010, with diamond mining representing about 88% of all northern mineral production in terms of value.<sup>35</sup> Mineral exploration and deposit spending amounted to about \$498.1 million for the three Canadian territories the same year.<sup>36</sup> Figure 3 presents an overview of mineral production in northern Canada.

**Figure 3: Mineral Production in Northern Canada**



Source: Natural Resources Canada (NRCan) document presented to the Committee.

The mining sector is the main driver of economic activity in northern Canada, both north of 60 degrees and in the northern regions of many provinces. In 2010, Canada's mining industry provided approximately 308,000 direct jobs across Canada. Furthermore, according to some estimates, for every direct mining job, at least two indirect jobs are created in a wide range of sectors (e.g., financial, legal, construction, catering, etc.).<sup>37</sup> The following are examples of some of the impacts of mining in specific jurisdictions:

34 Richard Moore, Chair, Geosciences Committee, Prospectors and Developers Association of Canada, *Evidence*, October 24, 2011.

35 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

36 Ibid.

37 Ibid.

- In the Northwest Territories (NWT), diamond mines represent between 36% and 41% of the territory's gross domestic product (GDP) and provide about 8,000 direct and indirect jobs.<sup>38</sup>
- In Nunavut, mining activities in Meadowbank contributed to an 11% increase in the territory's GDP in 2010, according to Eberhard Scherkus, President and Chief Operating Officer of Agnico-Eagle Mines Limited.<sup>39</sup> The Meadowbank mine employs about 500 people.<sup>40</sup>
- In Saskatchewan, northern mine operations acquired \$279 million in goods and services in 2009 from northern businesses (or 62% of all goods and services purchased); and in 2010, mining companies purchased \$361 million's worth of goods and services from businesses based in the northern regions of the province.<sup>41</sup>
- In Quebec, while mining firms account for 1.4% of all firms in the province, the mining sector represents 5.1% of jobs, 10% of investments and 12% of exports.<sup>42</sup>

Exploration spending in the north, which has typically fluctuated over the years, is expected to increase due to the growing interest in northern resource development. According to Pierre Gratton, President and Chief Executive Officer of the Mining Association of Canada, "there is a race around the world for developing and finding new [mining] projects, and Canada is well positioned to benefit from that."<sup>43</sup> David Kilgour, councillor for the City of Greater Sudbury, also suggested that Canada needs a policy framework that would help the resource-rich areas of the country realize their full potential in terms of mineral resource development.<sup>44</sup>

The Mining Association of Canada has estimated "some \$137 billion in potential new investment in Canada over the next five to ten years in different projects or in project expansions across the country."<sup>45</sup> The new mining developments are expected to diversify Canada's mining commodity base beyond diamonds to include minerals such as gold, iron

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38 Ibid.

39 Eberhard Scherkus, President and Chief Operating Officer, Agnico-Eagle Mines Limited, *Evidence*, November 23, 2011.

40 Richard Moore, Chair, Geosciences Committee, Prospectors and Developers Association of Canada, *Evidence*, October 24, 2011.

41 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

42 Dan Tolgyesi, President and Chief Executive Officer, Québec Mining Association, *Evidence*, November 30, 2011.

43 Pierre Gratton, President and Chief Executive Officer, Mining Association of Canada, *Evidence*, November 2, 2011.

44 David Kilgour, Councillor, City of Greater Sudbury, *Evidence*, February 16, 2012.

45 Pierre Gratton, President and Chief Executive Officer, Mining Association of Canada, *Evidence*, November 2, 2011.

ore, zinc, lead and rare earth elements.<sup>46</sup> As of October 3, 2011, there were 48 mining projects undergoing environmental assessment in Canada, including 14 projects in the Canadian territories, representing “somewhere between \$7.5 billion to \$8.5 billion in investment.”<sup>47</sup> The approval of these projects could double the number of full-time jobs in the territories, according to NRCan.

## ENERGY RESOURCE DEVELOPMENT

### A. Overview

Petroleum resources on federal lands north of 60 degrees are regulated by the National Energy Board (NEB) in accordance with the *Canada Oil and Gas Operations Act* (COGOA) and the *Canada Petroleum Resources Act* (CPRA). The two statutes also give the Oil and Gas Branch of Aboriginal Affairs and Northern Development Canada (AANDC) the statutory authority to issue exploration, discovery and production rights in the Northwest Territories, Nunavut, and in offshore areas north of 60 degrees.<sup>48</sup>

According to Mimi Fortier, Director General at the Northern Oil and Gas Branch of AANDC, “only about one fifth of the Arctic Ocean margin has been explored. Conventional oil and gas resources from the north account for approximately 33% of Canada’s remaining conventionally recoverable resources of natural gas and 35% of the remaining recoverable light crude oil. Every year, the Northern Oil and Gas Branch submits an annual report on the administration of lands to Parliament...and is available on the department website.”<sup>49</sup>

While there is significant potential for conventional oil and gas resource development in the region, there is also evidence of “industry’s rapidly growing interest in Canada’s shale resources [from] 500 kilometres north of 60 to the central Mackenzie Valley.”<sup>50</sup> In 2011, the Oil and Gas Branch issued 11 new exploration licenses to petroleum companies for exploring shale formations; a work expenditure commitment totalling \$534 million. “New hydraulic fracturing technologies have the potential to make this vast reserve accessible, but this potential has to be proven by exploration before economics of shale development in this region can be evaluated.”<sup>51</sup> Further north, the Beaufort Sea and Mackenzie Delta region has significant potential for petroleum resource development, with more than 60 discoveries to date. Several companies have been

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46 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

47 Ibid.

48 Mimi Fortier, Director General, Northern Oil and Gas Branch, Aboriginal Affairs and Northern Development Canada, *Evidence* May 10, 2012.

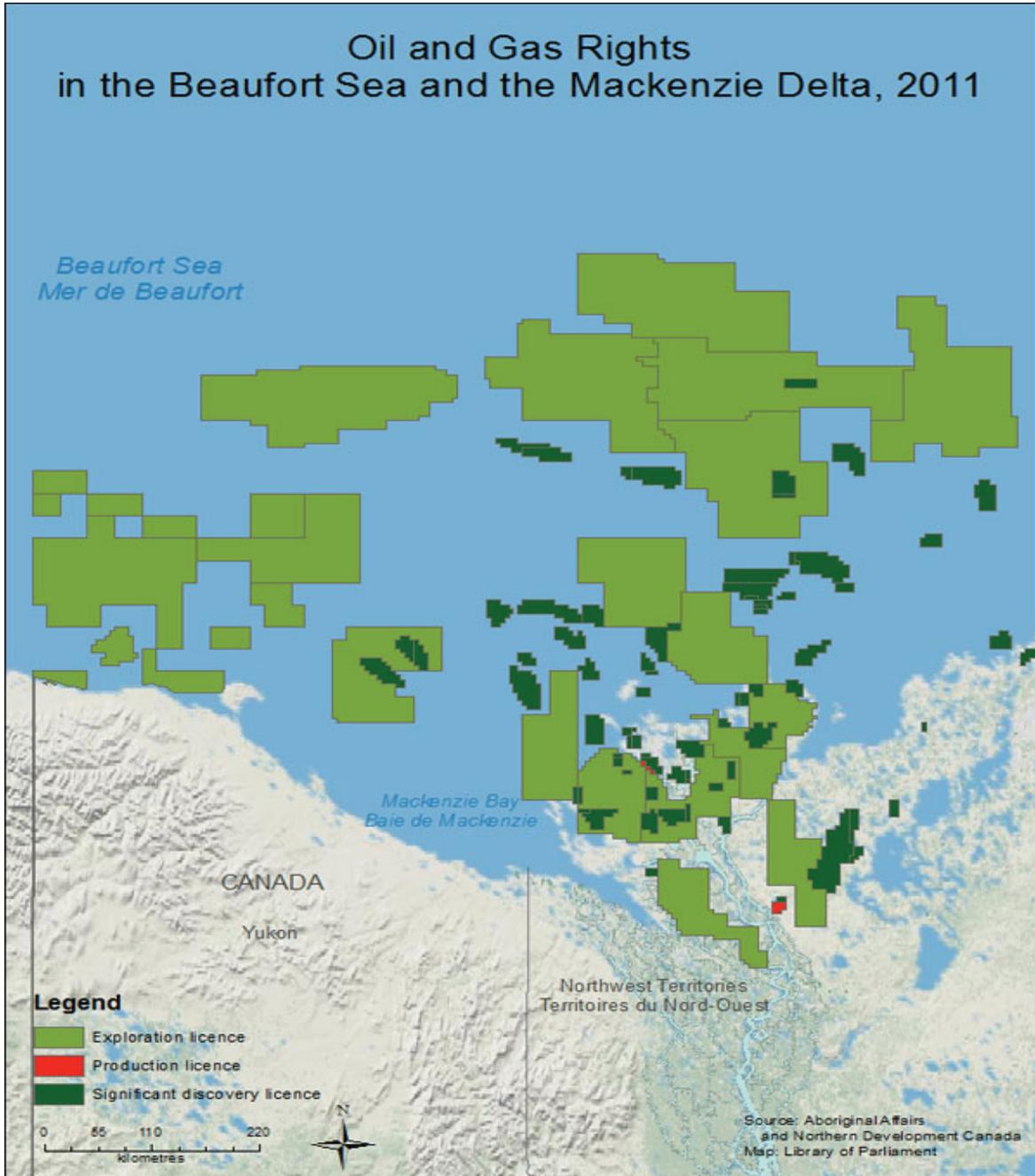
49 Ibid.

50 Ibid.

51 Ibid.

granted deep-water exploration licences in the Beaufort Sea since 2007 (Figure 4). Their cumulative work commitments account for almost \$2 billion.<sup>52</sup>

**Figure 4: Oil and Gas Rights in the Beaufort Sea and the Mackenzie Delta, 2011**



Source: Aboriginal Affairs and Northern Development Canada, Northern Oil and Gas Branch, *Oil & Gas Dispositions*, June 2012; adapted by the Library of Parliament.

52 Ibid.

## SOCIO-ECONOMIC ISSUES

### A. Aboriginal Consultation and Land Settlement

In a series of landmark decisions, the Supreme Court of Canada has articulated the Crown's duty to consult with Aboriginal groups regarding decisions that could have adverse effects on Aboriginal interests. Crown decision makers have an obligation to be informed of the implications of their actions on Aboriginal peoples, including three main considerations: Crown conduct, potential or established Aboriginal treaty rights, and potential for adverse impacts.<sup>53</sup> According to Michael Hudson, from the Department of Justice, there is a spectrum of possible Aboriginal claims, ranging from "relatively weak" (e.g., concerns regarding a specific species for hunting, which may require information sharing or general public outreach to Aboriginal communities) to "very strong" (e.g., a permit that could lead to destructive activity to Aboriginal lands, which may call for a more involved consultation process). Aboriginal groups do not have a veto on development decisions; however, there is "an expectation of accommodation measures that would be commensurate with the negative impact on the [Aboriginal] interest."<sup>54</sup>

Many resource companies have incorporated Aboriginal consultation provisions in their business model since the Supreme Court issued its "Duty to Consult" decisions six years ago.<sup>55</sup> However, according to him, the lack of specific rules (or a code) to regulate Aboriginal consultations often presents challenges to the consultation process. On the other hand, "the nature of the consultation duty and the fact that it is often very case specific doesn't lend itself well to a code." He added that the government has been "very successful in recent years in using the interim guidelines to lay out in a great deal of detail for both project proponents and Aboriginal peoples how information that each of them provide will be integrated into the decision-making within the government."<sup>56</sup>

Some mining companies expressed the need for more clarity regarding duty to consult provisions. According to Hughie Graham, President of the Northwest Territories Chamber of Commerce, "from industry's perspective, there is a critical need to resolve what the crown's duty is, and what industry's role is, especially given that the duty to consult and to accommodate are fundamentally obligations of the crown."<sup>57</sup> There have been references from several witnesses that some provinces, such as Quebec, because of its experience with Hydro Quebec on the James Bay project, and Saskatchewan, had better practices in place related to the duty to consult with Aboriginal communities. More clarity is also needed about what is considered to be meaningful engagement with Aboriginal communities. As stated by Karina Briño, President and Chief Executive Officer of the Mining Association of British Columbia, "what is the role of industry in terms of

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53 Michael Hudson, Deputy Assistant Deputy Attorney General, Justice Canada, *Evidence*, October 5, 2011.

54 *Ibid.*

55 *Ibid.*

56 *Ibid.*

57 Hughie Graham, President, Northwest Territories Chamber of Commerce, *Evidence*, June 12, 2012.

benefits going towards aboriginal communities...There needs to be clarity around that, in terms of when my responsibility stops versus the government's."<sup>58</sup>

Speaking of offshore oil and gas development in the Arctic, Martin Von Mirbach referred to the Beaufort Sea partnership as a good example of multi-stakeholder consultation and planning process. The Beaufort Sea partnership brought together Inuvialuit communities, industry, governments, academia, and regulators to develop an integrated ocean management plan for the Beaufort Sea.<sup>59</sup> He stated that "once it's done, it's more politically robust" because all of the stakeholders interests have been considered, and are included in the plan.<sup>60</sup>

In reference to energy resource development in northern Canada, Mimi Fortier told the Committee that "the Aboriginal groups are engaged from a very early point. For instance, there's a great deal of leadership among the Inuvialuit to make sure that the Aboriginal Inuvialuit are very informed. The industry often converses with the Inuvialuit far more than they do with governments. There is definitely Aboriginal planning that goes into reaching agreements with the companies in terms of training, opportunities for employment and business opportunities."<sup>61</sup>

Most of northern Canada includes modern land claim settlements with Aboriginal consultation provisions, particularly regarding environmental assessments.<sup>62</sup> However, unsettled land claims continue to present considerable challenges to both Aboriginal communities and investors, according to a number of witnesses.<sup>63</sup> Anil Arora, from the Minerals and Metals Sector of the NRCan, pointed out that "...outstanding land claims...contribute to uncertainty and investment risks. These risks, along with withdrawals of lands for conservation, have created some concerns by industry."<sup>64</sup> Mark Kolebaba, President and Chief Executive Officer of Diamonds North Resources Ltd., told the Committee, that "from our point of view as a company, we spend 95% of our budget in

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58 Karina Briño, President and Chief Executive Officer, Mining Association of British Columbia, *Evidence*, June 21, 2012.

59 Martin von Mirbach, Director, Canadian Arctic Program, World Wildlife Fund Canada, *Evidence*, May 15, 2012; Mimi Fortier, Director General, Northern Oil and Gas Branch, Aboriginal Affairs and Northern Development, *Evidence*, May 10, 2012.

60 Martin von Mirbach, Director, Canadian Arctic Program, World Wildlife Fund Canada, *Evidence*, May 15, 2012.

61 Mimi Fortier, Director General, Northern Oil and Gas Branch, Aboriginal Affairs and Northern Development, *Evidence*, May 10, 2012.

62 Michael Hudson, Deputy Assistant Deputy Attorney General, Justice Canada, *Evidence*, October 5, 2011.

63 Mark Kolebaba, President and Chief Executive Officer, Diamonds North Resources Ltd., *Evidence*, October 26, 2011; Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011; Ugo Lapointe, Cofounder, Coalition pour que le Québec ait meilleure mine, *Evidence*, October 31, 2011; Tom Hoefer, Executive Director, NWT and Nunavut Chamber of Mines, *Evidence*, November 23, 2011; Donald Bubar, President and Chief Executive Officer, Avalon Rare Metals Inc, *Evidence*, November 21, 2011.

64 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

Nunavut and about 5% in the NWT, which is based solely on the fact that the land is not settled. A huge amount of money is not put into the NWT for that reason.”<sup>65</sup>

Ugo Lapointe, from the *Coalition pour que le Québec ait meilleure mine*, indicated that some First Nations in Quebec, such as the Innu First Nation, are “still struggling with their traditional entitled rights, [which] should be settled [to create] a more stable climate both for communities and investors.”<sup>66</sup> Similarly, Glen Sibbeston, Chief Pilot at Trinity Helicopters, stated that if Canada is to take the best advantage of its resources, development interests need to be aligned with the interests of First Nations, by “completing the land claims in such a way that Aboriginal people prosper as their lands produce.”<sup>67</sup> Anil Arora noted that “there is work under way by the federal government related to land claims and land use planning that should improve the current situation.”<sup>68</sup>

Ginger Gibson MacDonald, an Adjunct Professor from Norman B. Keevil Institute of Mining Engineering at the University of British Columbia, told the Committee that resource development has to be in line with treaty obligations pertaining to the Aboriginal people and their right to pursue their way of life. She spoke about the need to protect water and animal habitats so that Aboriginal families can maintain their traditional livelihoods through hunting and fishing.<sup>69</sup>

## **B. Benefits to Northern Communities**

The mining industry offers a number of socio-economic benefits to northern communities. As noted by David Kilgour, from the City of Greater Sudbury, “it offers excellent employment opportunities for educated and skilled workers alike, and will provide important economic development opportunities for all of northern Canada.”<sup>70</sup> According to testimony from a number of witnesses, there has been progress with regard to Aboriginal employment in the northern mining industry.<sup>71</sup> Tom Hoefer, Executive Director of the NWT and Nunavut Chamber of Mines, told the Committee that “[m]ining is the largest employer of Aboriginal people in Canada [and that] [i]t’s also now the largest private sector employer of Aboriginal people in the north”.<sup>72</sup> According to Ronald Coombes, President of White Tiger Mining Corp, “exploration for minerals creates opportunities for high-paying jobs and

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65 Mark Kolebaba, President and Chief Executive Officer, Diamonds North Resources Ltd., *Evidence*, October 26, 2011.

66 Ugo Lapointe, Cofounder, *Coalition pour que le Québec ait meilleure mine*, *Evidence*, October 31, 2011.

67 Glen Sibbeston, Chief Pilot, Trinity Helicopters, *Evidence*, December 5, 2011.

68 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

69 Ginger Gibson MacDonald, Adjunct Professor, Norman B. Keevil Institute of Mining Engineering, University of British Columbia — as an individual, *Evidence*, June 19, 2012.

70 David Kilgour, Councillor, City of Greater Sudbury, *Evidence*, February 16, 2012.

71 Eberhard Scherkus, President and Chief Operating Officer, Agnico-Eagle Mines Limited, *Evidence*, November 23, 2011; Gary Merasty, Member, Saskatchewan Mining Association, *Evidence*, October 31, 2011; Clair Derome, President, Yukon Chamber of Mines, *Evidence*, December 7, 2011.

72 Tom Hoefer, Executive Director, NWT and Nunavut Chamber of Mines, *Evidence*, November 23, 2011.

other forms of indirect opportunity, such as environmental, food, fuel and supply contracts. These are just a few of the associated benefits available for all local community people. The policy throughout the mining industry is to retain qualified persons within the communities nearest to exploration projects. This, in most cases, means direct opportunities for First Nations communities.”<sup>73</sup> Hilary Jones, General Manager of the Mine Training Society, told the Committee that by 2019, Nunavut, Yukon and the NWT may have as many as 5,000, 2,500 and 2,000 mining jobs respectively. To put things in perspective, she also pointed out that “for every one job created in mining, three other jobs are created in mine services and services in general to support the miners’ families.”<sup>74</sup>

To illustrate the importance of mining activities in small northern communities, Peter Tapatai, a representative from Hamlet of Baker Lake, stated that the Nunavut Meadowbank gold mine will account for a significant portion of the territory’s GDP, and is already providing over 100 jobs as well as training and business opportunities.<sup>75</sup> The Honourable Peter Taptuna, Minister of Economic Development and Transportation at the Government of Nunavut, also indicated that “over the next decade, several thousand Nunavut residents will have the opportunity to gain employment in the mining industry, if they are prepared to take advantage of the opportunities.”<sup>76</sup> He added that “some of these developments [are] encouraging younger people in the smaller communities to stay in school. In the past, there was very little encouragement for some of these young folks to stay in school because nothing was happening at the end of the line.”<sup>77</sup>

Some witnesses pointed out that increases in exploration and development do not necessarily translate to local job impacts. According to Brennain Lloyd of Northwatch, “we saw a 22% increase in the value of mined commodities from 2005 to 2006, just a two-year span, a 45% increase in value of mineral potential, but only a 7% increase in the number of jobs. So for a community looking at employment benefits, we have to look very carefully at this trend of modernizing mining and that volume ratio of mine to jobs is shrinking.”<sup>78</sup> He added that the lack of local ownership and local decision-making can also be a problem for mining communities. “There is a sense in the community that when you have decisions being made on an economic basis by people who are further away, the decisions are less beneficial to the community.”<sup>79</sup> Additionally, Ramsey Hart, Co-manager of Canada Program with MiningWatch Canada, pointed out that northern mines are increasingly based on fly-in camps rather than the development of new mining towns.

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73 Ronald Coombes, President, White Tiger Mining Corp, *Evidence*, February 14, 2012

74 Hilary Jones, General Manager, Mine Training Society, *Evidence*, November 21, 2011.

75 Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

76 Peter Taptuna, Minister of Economic Development and Transportation, Government of Nunavut, *Evidence*, June 19, 2012.

77 Ibid.

78 Brennain Lloyd, Project Coordinator, Northwatch, *Evidence*, December 7, 2011.

79 Ibid.

He also stated that employment at the Meadowbank Mine in Nunavut has had a high turnover rate and that local hires often face a ceiling due to a lack of training.<sup>80</sup>

By contrast, some witnesses mentioned that in the Yukon and the NWT, economic impact and benefit agreements between industry and Aboriginal groups have been effective in ensuring that local communities benefit from development.<sup>81</sup> According to Hughie Graham, these agreements, which require that a certain percentage of employees be northern-Aboriginal, have been beneficial for Aboriginal business development. He stated that, “[...] 75 to 100 Aboriginal-owned businesses have been created through impact and benefit agreements in the last 16 years in Northwest Territories.”<sup>82</sup> Also commenting on those agreements, Ginger Gibson MacDonald said that:

One of the wonderful things about the mines having impact and benefit agreements is that there are dollars that are free to apply to things like education. For example, the Tlicho Nation has \$800,000 yearly that they allocate to scholarships for people who are pursuing their education in the south. Those people are then becoming lawyers, or all sorts of different careers are opening up to them. The possibility for them to start to be promoted if they choose to be in mining is certainly there. The impact and benefit agreements have been absolutely fundamental to aboriginal business in the north. Those agreements in themselves require the secure unbundling of contracts so that things aren't so big that you can't possibly bid on them. There's access to capital through government programs. The guarantee, through the agreements, of contracts such as site services have been fundamental to businesses of the north, and have grown them.<sup>83</sup>

On the subject of Aboriginal business development, Gordon Macdonald, Principal Advisor on Sustainable Development in Diavik Diamond Mines Inc., told the Committee that “we spend a lot of time trying to break up our procurement and our contracting to enable smaller contracts, to help develop Aboriginal businesses. They have been very successful. They're starting to work outside of our employment and in other mines and have even started to look internationally. I think that kind of business development with Aboriginal communities is probably the most long-lasting opportunity for them.”<sup>84</sup> Pierre Gratton noted that industry had “a significant and potentially transformative impact” in the north. For example, “there has been some \$4 billion in business procurement with Aboriginal businesses in the Northwest Territories.”<sup>85</sup>

Moreover, some witnesses mentioned the potential involvement of northern Aboriginal communities in mining projects through equity participation. Donald Bubar,

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80 Ramsey Hart, Co-manager, Canada Program, MiningWatch Canada, *Evidence*, November 2, 2011.

81 Hughie Graham, President, Northwest Territories Chamber of Commerce, *Evidence*, June 12, 2012; Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012.

82 Hughie Graham, President, Northwest Territories Chamber of Commerce, *Evidence*, June 12, 2012.

83 Ginger Gibson MacDonald, Adjunct Professor, Norman B. Keevil Institute of Mining Engineering, University of British Columbia — as an individual, *Evidence*, June 19, 2012.

84 Gordon Macdonald, Principal Advisor, Sustainable Development, Diavik Diamond Mines Inc., *Evidence*, June 21, 2012.

85 Pierre Gratton, President and Chief Executive Officer, Mining Association of Canada, *Evidence*, November 2, 2011.

President and Chief Executive Officer of Avalon Rare Metals, told the Committee that his company was “in the process of negotiating an equity participation arrangement with [their] aboriginal partners. Right now that is our objective, and that's what we think the future is for First Nations participation in the mineral economy in the north.”<sup>86</sup> Robin Goad, President of Fortune Minerals, added that “equity participation would certainly be one of the issues that would be under negotiation as part of an IBA.”<sup>87</sup> Wes Hanson, President and Chief Executive Officer of Noront Resources, pointed out that “[...] in order for the communities to earn an equity ownership position in these mineral companies, they have to start establishing businesses, whether those are hotels, power generation, or running a filtering and drying plant. They have to take advantage of the opportunities that are there for them now, generate cash flow, and invest it in the mining companies.”<sup>88</sup>

## **C. Labour Force Capacity**

### **1. Skilled Labour Shortage**

Several witnesses have identified skilled labour shortages as a significant challenge in mineral and energy resource development. Karina Briño stated that the “the latest statistics, at a national level, indicate that Canada will need about 112, 000 skilled workers for the mining sector alone.”<sup>89</sup> However, as pointed out by Francis Bradley, Vice-President of Policy Development at Canadian Electricity Association, this challenge is not unique to the resource development industry or the North. Many different industry sectors across North America (e.g. electricity and information technology sectors) are competing for the same skilled workers and equipment.<sup>90</sup>

According to Anil Arora, the problem is more pronounced in the north due to the region’s relatively low population and education levels.<sup>91</sup> Hilary Jones told the Committee that a lack of training is a key factor contributing to unemployment rates and labour shortages in northern communities. “The problem or challenge is that the people who are available for jobs do not have the skill sets to meet the requirements for employment in the mining industry. Let’s keep in mind that 78% of those jobs in the mine site are for skilled

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86 Donald Bubar, President and Chief Executive Officer, Avalon Rare Metals Inc., *Evidence*, November 21, 2011.

87 Robin Goad, President, Fortune Minerals Ltd., *Evidence*, November 21, 2011.

88 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Evidence*, February 16, 2012.

89 Karina Briño, President and Chief Executive Officer, Mining Association of British Columbia, *Evidence*, June 21, 2012. This figure was projected for 2021 by the Mining Industry Human Resources Council in the *Canadian Mining Industry Employment and Hiring Forecasts 2011*.

90 Francis Bradley, Vice-President, Policy Development, Canadian Electricity Association, *Evidence*, June 5, 2012.

91 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

and semi-skilled workers. Fewer than 5% are for those individuals who would qualify as labourers.”<sup>92</sup>

Speaking of the labour shortages in Yukon communities, Sandy Babcock, President of the Yukon Chamber of Commerce, noted that “the temporary foreign workers program has been extremely successful and beneficial to our business community, particularly in the capital city of Whitehorse.”<sup>93</sup> Karina Briño agreed that the foreign workers program is helping industry in meeting the immediate demand for labour; however, more support from the federal and provincial governments is needed for Aboriginal training and capacity building.<sup>94</sup>

Gil McGowan, President of the Alberta Federation of Labour, cautioned that the temporary foreign workers program perpetuates the labour shortage problem into the future. Currently, there are about 65,000 temporary foreign workers in the province of Alberta, and there are about 20,000 working in the oil sands and in construction. According to him, “employers are choosing temporary foreign workers over apprentice training, and in the process” they are not training the next generation of Canadian tradespeople. In other words, by not training “the next generation of tradespeople, we are locking ourselves into a future of skilled labour shortages.”<sup>95</sup> Ugo Lapointe of the Quebec Mining Association also commented on an increasing reliance on international workers. He suggested that “maybe we need to consider waiting to extract some of the deposits and bring in the benefits in the longer term for the regions and the province.”<sup>96</sup>

## 2. Training and Capacity Building

A number of witnesses underlined the importance of developing human resources in Canada’s North. Considering the relatively high costs associated with attracting labour from the southern parts of Canada, Mitch Bloom, from the Canadian Northern Economic Development Agency, highlighted the economic advantages of maximizing local expertise through training.<sup>97</sup> According to Hilary Jones, “there is a compelling business case for continued human resource investment by the federal government in northern people, not the least of which is the healthy and growing return on investments for resource royalties.”<sup>98</sup> There are three mine training organizations (MTOs) in the north: the NWT’s Mine Training Society, the Yukon Miner Training Association and the Kivalliq Mine Training Society, which she hopes will soon become the Nunavut Mine Training Society.

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92 Hilary Jones, General Manager, Mine Training Society, *Evidence*, November 21, 2011.

93 Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012.

94 Karina Briño, President and Chief Executive Officer, Mining Association of British Columbia, *Evidence*, June 21, 2012.

95 Gil McGowan, President, Alberta Federation of Labour, *Evidence*, May 10, 2012

96 Ugo Lapointe, Cofounder, Coalition pour que le Québec ait meilleure mine, *Evidence*, October 31, 2011.

97 Mitch Bloom, Vice-President, Policy and Planning, Canadian Northern Economic Development Agency, *Evidence*, October 17, 2011.

98 Hilary Jones, General Manager, Mine Training Society, *Evidence*, November 21, 2011.

She noted that the mine training societies have been working to ensure that local Aboriginal populations are able to take advantage of the economic and employment opportunities within the mining sector. Furthermore, she pointed out that about 25% of the Mine Training Society's trainees are Aboriginal women, which is higher than the 5% national average of women in the mining sector.<sup>99</sup>

According to Karina Briño, the mining sector in British Columbia has undertaken a number of initiatives to address the workforce shortages, and to increase Aboriginal training in mining. The British Columbia's School of Exploration and Mining offers environmental monitoring training to Aboriginal youth, allowing them to develop transferable skills. There is also the British Columbia's Aboriginal Mine Training Association program, designed to prepare future workers for a given mine.<sup>100</sup> According to the Honourable Peter Taptuna, Minister of Economic Development and Transportation at the Government of Nunavut, "the three territories have cooperated on the northern minerals workforce development strategy [...] we hope that the federal government will continue to lead in providing the needed funding to develop our human resources and prepare for new employment."<sup>101</sup>

On the subject of training, MiningWatch Canada's Ramsey Hart told the Committee that the training deficit in the north remains a major challenge that needs to be overcome.<sup>102</sup> John Gingerich, President and Chief Executive Officer of Advanced Explorations Inc., stated that "much more training has to be done [in order to] bring more [...] indigenous peoples, the Inuit, into the workforce so that there is more participation in the wealth generation that comes from mining."<sup>103</sup> A few witnesses commented on the end of federal funding for the Aboriginal Skills Employment Program (ASEP). According to Pamela Schwann, "programs such as the Aboriginal Skills Employment Program (ASEP) have been very beneficial in the past, as has the national sector council's Mining Industry Human Resources Council; [however], both of these programs are being wound down, or [their] funding has been significantly reduced."<sup>104</sup> Pierre Gratton reiterated her praise of ASEP, stating that it has been "the most successful Aboriginal-focused training initiative in the country."<sup>105</sup> Hilary Jones stated that the rate of participation in mining by the local population would decline if the program-funded training society no longer existed.<sup>106</sup>

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99 Ibid.

100 Karina Briño, President and Chief Executive Officer, Mining Association of British Columbia, *Evidence*, June 21, 2012.

101 Peter Taptuna, Minister of Economic Development and Transportation, Government of Nunavut, *Evidence*, June 19, 2012.

102 Ramsey Hart, Co-manager, Canada Program, MiningWatch Canada, *Evidence*, November 2, 2011.

103 John Gingerich, President and Chief Executive Officer, Advanced Explorations Inc., *Evidence*, October 26, 2011.

104 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

105 Pierre Gratton, President and Chief Executive Officer, Mining Association of Canada, *Evidence*, November 2, 2011.

106 Hilary Jones, General Manager, Mine Training Society, *Evidence*, November 21, 2011.

Peter Tapatai emphasized the importance of an early start in training and development of the region's workforce to ensure that the Inuit can fully participate in the new economy.<sup>107</sup> For him, "training is not only important for the resource industry," but also for the city and business workers. He explained that "high-paying mine jobs make it difficult for hamlets and local business to keep staff."<sup>108</sup> Ginger Gibson MacDonald agreed that Aboriginal workers "need to be rewarded with education in the areas they want to be educated in, not just haul-truck drivers...they need to be...the journeymen in their communities after the mines are gone."<sup>109</sup>

Speaking of the Yukon, Claire Derome, President of the Yukon Chamber of Mines, highlighted the importance of fostering research institutions in northern Canada. "Bringing faculties and researchers to the North offers the opportunity to have higher education in very specialized and specific programs. It offers people the opportunity to work in the industry — not only in mining, but in all aspects of the industry in the Yukon — and to benefit from further specialization and from moving up in the labour force from being an operator to the management level."<sup>110</sup> It also provides an opportunity for the youth to pursue higher education without leaving the North, thereby building professional capacity. According to Sandy Babcock, "... [creating a university in the North] would be extremely helpful in keeping our children here in the territory."<sup>111</sup>

Youth education has been raised as an important issue by several witnesses. Children should be informed of job opportunities that exist in the region through career counselling before they reach the college level.<sup>112</sup> Gordon Macdonald pointed out that while mine training societies and apprenticeship programs proved to be successful, stay-in-school programs, designed to help kids graduate with at least a grade 10 education, are critical for Aboriginal employment and capacity building.<sup>113</sup>

Speaking of the Hamlet of Rankin Inlet, Pujjut Kusugak told the Committee that there is a 75% dropout rate and the community sees only about 30 to 40 graduates a year.<sup>114</sup> He added that the education system style is culturally different and that "[...] there was a lot of observation taught and hands-on education. For my parents' and Mr. Tapatai's generation, that was the mode of education. Now it's turning into a very southern style, where you're sitting in a classroom. It's very structured. It's almost a conflicting style of

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107 Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

108 Ibid.

109 Ginger Gibson MacDonald, Adjunct Professor, Norman B. Keevil Institute of Mining Engineering, University of British Columbia — as an individual, *Evidence*, June 19, 2012.

110 Claire Derome, President, Yukon Chamber of Mines, *Evidence*, December 7, 2011.

111 Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012; Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

112 Hughie Graham, President, Northwest Territories Chamber of Commerce, *Evidence*, June 12, 2012.

113 Gordon Macdonald, Principal Advisor, Sustainable Development, Diavik Diamond Mines Inc., *Evidence*, June 21, 2012

114 Pujjuut Kusugak, Mayor, Hamlet of Rankin Inlet, *Evidence*, June 7, 2012.

education, which really does contribute to the difficulty and stresses at home and just on the students themselves.” Similarly, Peter Tapatai told the Committee that “[...] Inuit are capable of working very well with their hands, and maybe more vocational-type classes can be put into schools [...] There is a big difference in percentage in people who will take academic...probably a bigger portion will be doing vocational [...] But there is no money allocated for those things. I think those things are very valuable. Academics seem to be pushed in schools. As Pujjuut Kusugak said, we're not all going to be doctors and lawyers; some are going towards a vocational end, and we should have home-grown vocational right in the high schools.”

There are also other social issues that affect community capacity building and development. Ginger Gibson MacDonald raised this particular point when she spoke about very high levels of unemployment among Aboriginal people. She told the Committee that there are numerous barriers to employment that need to be addressed. “Criminal records and pardons are a big barrier in the north. People don't know they have access to pardons or are simply unable to get rid of the past, barriers of addictions, social traumas that are in place. We haven't tackled the issues associated with families well enough”.<sup>115</sup>

## **C. Infrastructure**

### **1. Physical Infrastructure**

Resource development in northern Canada faces major challenges with regard to infrastructure. According to Tara Christie, Senior Advisor at Newmont Mining Corporation, infrastructure issues in the north are wide-ranging, including aging and inefficient community power plants, limited broadband, short, unpaved airstrips, and underdeveloped services at industrial sites.<sup>116</sup> Glen Sibbeston told the Committee that many communities are not served by all-season roads, as most roads end shortly north of 60 degrees. “The Yukon has the best developed road network, the Northwest Territories less so, and Nunavut does not enjoy the benefit of a single highway.”<sup>117</sup> Peter Tapatai confirmed that a lack of transport infrastructure in Nunavut raises the cost of a mine. Compared to the Yukon where start-up costs are around \$200 million, mines in Nunavut cost between \$1.5 billion and \$1.6 billion because companies need to build supporting infrastructure, including roads, rail and ports.<sup>118</sup>

According to Glen Sibbeston, in approximate terms, transportation costs exceed \$1000 per tonne to move goods to and from locations within 100 kilometres of a highway, and may reach \$5,000 per tonne to move goods to sites 300 kilometres from a highway. Furthermore, for destinations served by large runways, goods can be moved for about

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115 Ginger Gibson MacDonald, Adjunct Professor, Norman B. Keevil Institute of Mining Engineering, University of British Columbia – as an individual, *Evidence*, June 19, 2012.

116 Tara Christie, Senior Advisor, External and Government Affairs, Hope Bay Mining Ltd, Newmont Mining Corporation, *Evidence*, November 23, 2011.

117 Glen Sibbeston, Chief Pilot, Trinity Helicopters, *Evidence*, December 5, 2011.

118 Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

\$2 per kilometre, compared to \$10 per kilometre in cases where smaller bush planes are necessary, and \$20 per kilometre in more rugged destinations where a helicopter would be required to transfer goods.<sup>119</sup> Lack of transportation infrastructure and the harsh climate conditions of the north present additional challenges to moving equipment that is needed for development.<sup>120</sup>

In general, resource development in northern Canada faces a cost disadvantage compared to other regions in the country due to the north's rugged environment and infrastructure shortage. According to Pamela Schwann, the inadequacy of infrastructure in northern regions "affects the competitiveness of the mining sector, [as well as] the ability of northerners to effectively participate in employment and economic development opportunities related to mining."<sup>121</sup> Honourable Peter Taptuna agreed by saying that "the lack of infrastructure in Nunavut affects the viability of mining projects and can needlessly delay projects. This applies to different parts of a mine's life cycle."<sup>122</sup>

MiningWatch Canada's Ramsey Hart offered a cautionary tale on infrastructure investment, citing Ontario's Ring of Fire, where there is massive mineral potential in an area that has very little infrastructure. He told the Committee that the Mattawa and Muskkegowuk First Nations are supportive of development but recognize the impact of infrastructure such as roads and hydro may have on their culture and environment.<sup>123</sup>

Peter Jenkins, Mayor of the City of Dawson, told the Committee that "the Government of Canada has an important role to play in developing strategic transportation infrastructure in the north."<sup>124</sup> He noted that the Alaska-Canada rail link would effectively move northern resources from various development sites to tidewater export positions. While the rail-link would cost about \$11 billion, it would lead to an additional economic output in GDP of \$170 billion and create 25,000 new jobs. He also suggested that the government consider extending the Dempster Highway, and developing a deepwater port at King Point on Yukon's north shore in the Beaufort Sea.<sup>125</sup> Sandy Babcock agreed that port access in the north would offer significant benefits to the resource extraction industry.<sup>126</sup>

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119 Glen Sibbeston, Chief Pilot, Trinity Helicopters, *Evidence*, December 5, 2011.

120 Francis Bradley, Vice-President, Policy Development, Canadian Electricity Association, *Evidence*, June 5, 2012.

121 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

122 Peter Taptuna, Minister of Economic Development and Transportation, Government of Nunavut, *Evidence*, June 19, 2012.

123 Ramsey Hart, Co-manager, Canada Program, MiningWatch Canada, *Evidence*, November 2, 2011.

124 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012.

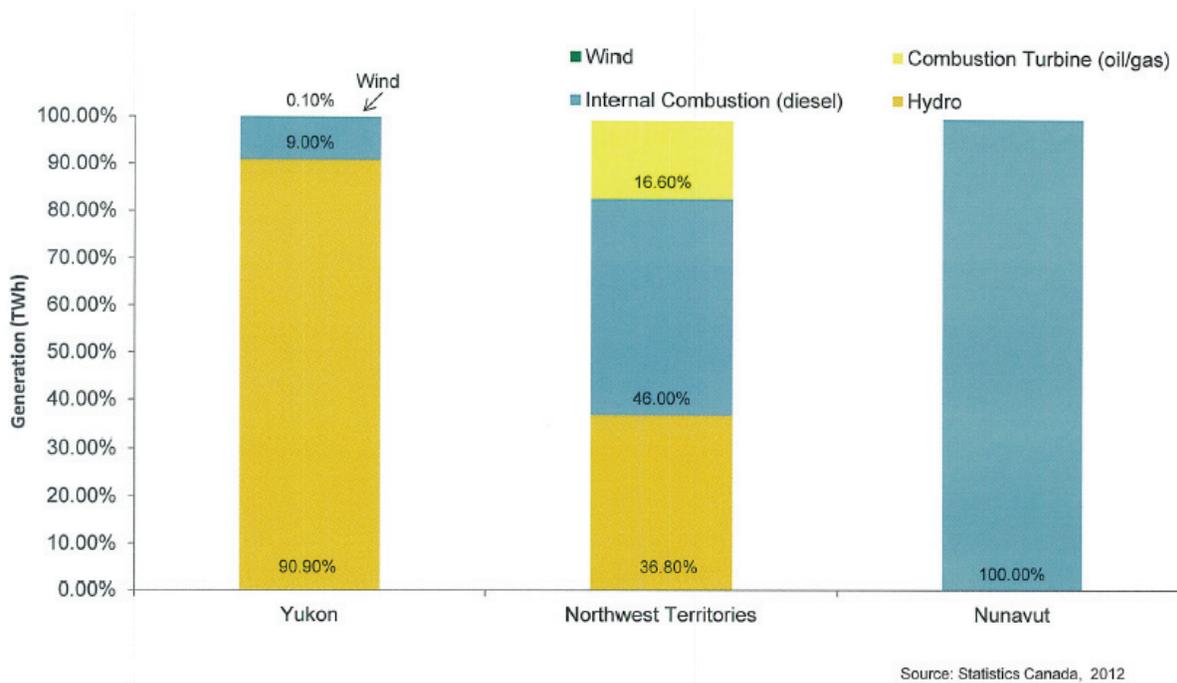
125 Ibid.

126 Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012.

## 2. Energy Infrastructure

The availability of energy resources required for mining operations is another major challenge to resource development in northern Canada, according to some witnesses. Peter Jenkins told the Committee that “the development of affordable energy is the biggest single impediment to developing the north’s economy.”<sup>127</sup> Figure 5, provided by Francis Bradley, Vice-President of Policy Development in the Canadian Electricity Association, shows that in 2011, hydro accounted for the majority of power generation in the Yukon and a significant portion in the Northwest Territories. Meanwhile, Nunavut’s power is derived almost exclusively from diesel.<sup>128</sup>

**Figure 5: Electricity Generation in Northern Canada, 2011**



Source: Canadian Electricity Association, Brief presented to the Committee, June 5, 2012.

Despite the recent investments in energy infrastructure, the Yukon is nearing the upper limits of its hydro capacity partly because of the conversion from fossil fuels to electric heating. According to Peter Jenkins, “Yukon’s total current capacity is 129.6 megawatts, with 76.7 megawatts being generated from hydro facilities.” To put things in perspective, the Casino mine alone would require 100 megawatts, and the Selwyn and Mactung mines on the eastern border would require an additional 33 to 45 megawatts.<sup>129</sup> Peter Jenkins also told the Committee that there are a number of

127 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012.

128 Francis Bradley, Vice President, Policy Development, Canadian Electricity Association, *Evidence*, June 5, 2012.

129 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012.

potential hydro sites that could be developed to provide affordable energy to the mining industry; however, more investment from different levels of government and the private sector is needed.<sup>130</sup>

Peter Mackey, President and Chief Executive Officer of Qulliq Energy Corporation, explained that “electricity generation in the north has traditionally relied on diesel generation,” however due to the increasing costs of fossil fuels, “diesel generation in the long term will not be economical or sustainable.”<sup>131</sup> According to Robin Goad, President of Fortune Minerals Limited, the cost of diesel-powered generation in the Northwest Territories is between \$0.20 and \$0.30/kWh: five times the cost of electricity in the south.<sup>132</sup> Unlike southern regions, fuel oil and diesel must be shipped by truck or boat to mining sites, where generators are used to produce electricity. This has resulted in Nunavut having the highest power rates in Canada.<sup>133</sup> Because of the high costs of fossil fuels, mining companies have been considering alternative energy sources, such as wind power, in order to generate the electricity required for mining operations.<sup>134</sup> For example, the Diavik diamond mine in the Northwest Territories is in the process of building a 9.2 megawatt wind farm to mitigate the rising cost of fuel.<sup>135</sup>

The Government of Northwest Territories is also making substantial investments in biomass, geothermal solar and wind.<sup>136</sup> The Minister of Environment and Natural Resources of the Northwest Territories Government, Michael Miltenberger, told the Committee that “we see these [technologies] as critical developments that are going to allow us to in fact have a sustainable cost of living in the north...”<sup>137</sup> However, Peter Mackey cautioned that the distance involved and the environmental conditions in which these technologies need to be installed add to their overall cost, making them economically less attractive.<sup>138</sup> Nonetheless, Brennain Lloyd noted that there is untapped potential of co-generation technologies to capture energy from waste heat. She also suggested that there is a role for the federal government, in consultation and cooperation with other levels of government, to work on issues such as energy distribution networks.<sup>139</sup>

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130 Ibid.

131 Peter Mackey, President and Chief Executive Officer, Qulliq Energy Corporation, *Evidence*, June 5, 2012.

132 Robin Goad, President of Fortune Minerals Limited, *Evidence*, November 21, 2011

133 Peter Mackey, President and Chief Executive Officer, Qulliq Energy Corporation, *Evidence*, June 5, 2012.

134 Dan Tolgyesi, President and Chief Executive Officer, Québec Mining Association, *Evidence*, November 30, 2011.

135 Robin Goad, President of Fortune Minerals Limited, *Evidence*, November 21, 2011

136 Michael Miltenberger, Minister of Environment and Natural Resources, Government of the Northwest Territories, *Evidence*, June 19, 2012.

137 Ibid.

138 Peter Mackey, President and Chief Executive Officer, Qulliq Energy Corporation, *Evidence*, June 5, 2012.

139 Brennain Lloyd, Project Coordinator, Northwatch, *Evidence*, December 7, 2011.

While Francis Bradley agreed that energy generation from renewable sources is important, he noted that they are “not well suited to support major resource development projects that require larger and more dependable capacity.”<sup>140</sup> To meet this capacity, “a new and expanded electricity infrastructure will be required.”<sup>141</sup> He also added that “the barriers to this infrastructure renewal are magnified for projects in the north, particularly in terms of cost, and most importantly social license, [especially from aboriginal communities].”<sup>142</sup>

With respect to other potential energy sources, some witnesses presented on the recent development trends in nuclear power. In particular, there has been increasing global activity in the development of small modular reactors (SMR) technology. As noted by Michael Binder, President and Chief Executive Officer of the Canadian Nuclear Safety Commission, the U.S. Department of Energy has allocated \$450 million to the Nuclear Regulatory Commission to support the licensing of American-made reactors, and to prove that the technology is viable.<sup>143</sup> According to Christofer Mowry, President of Babcock and Wilcox mPower Inc., Babcock and Wilcox Ltd., small reactors are 15% the size of a standard, large 1,000-megawatt plant, giving them an advantage in terms of siting flexibility.<sup>144</sup> He also added that “SMRs directly address the key challenges associated with the construction of large nuclear plants, including financial risks, cost and time uncertainty, production bottlenecks, and expensive power grid upgrades.” He told the Committee that SMRs can help various regions across Canada eliminate coal-powered generation, and at the same time allow them to meet the expected growth in energy demand.<sup>145</sup> Similarly, Peter Jenkins indicated that nuclear power presents an opportunity to meet growing demand for energy, and provides an alternative to fossil fuels.<sup>146</sup>

However, as pointed out by Christofer Mowry, there are two key challenges to the deployment of SMR technology: the current nuclear liability regime; and the process for conducting environmental assessments for nuclear.<sup>147</sup> To align Canada with international standards, he recommended prompt ratification of the Convention on Supplementary Compensation for Nuclear Damage, known as the CSC. This would “attract international contractors for power reactor life extension and new build projects.” It would also “drive further Canadian nuclear exports, [...] helping to preserve Canadian nuclear jobs and

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140 Francis Bradley, Vice-President, Policy Development, Canadian Electricity Association, *Evidence*, June 5, 2012.

141 *Ibid.*

142 *Ibid.*

143 Michael Binder, President and Chief Executive Officer, Canadian Nuclear Safety Commission, *Evidence*, May 15, 2012.

144 Christofer Mowry, President, Babcock and Wilcox mPower Inc., Babcock and Wilcox Ltd, *Evidence*, May 15, 2012.

145 *Ibid.*

146 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012.

147 Christofer Mowry, President, Babcock and Wilcox mPower Inc., Babcock and Wilcox Ltd, *Evidence*, May 15, 2012.

infrastructure.” In terms of the environmental assessment for nuclear projects, he said that “while we are fully supportive of a robust and throughout environmental assessment, it’s imperative that the process be predictable and provide value.”<sup>148</sup>

On the subject of the environmental and human safety of nuclear energy, including small nuclear reactors, Michael Binder told the Committee that the Canadian Nuclear Safety Commission is responsible for ensuring that licensed nuclear projects are safe for the environment and the public. “Our regime includes annual inspections and reporting on compliances. Licensees also have to provide financial guarantees up front, which ensure that they have the required financial resources to properly clean up the site when they terminate their mining operations.”<sup>149</sup> He also explained that after the nuclear accident in Fukushima, Japan, the nuclear industry worldwide is working to enhance safety measures and disaster mitigation strategies in order to be adequately prepared for a hypothetical “doomsday scenario.”<sup>150</sup> Christofer Mowry added that “today’s North America reactors operate at a remarkable level of safety, making the U.S. and Canada global leaders in nuclear safety and security [...] SMR design features result in a reactor that will be two to three orders of magnitude safer than the current U.S. Nuclear Regulatory Commission requirements mandate.”<sup>151</sup>

### 3. Community Infrastructure & Capacity

Several witnesses have expressed concerns regarding community capacity and aging infrastructure. Growth in the resource development sector is adding significant pressure on northern communities’ services and infrastructure including airports, communications, power generation and health care.<sup>152</sup> According to Sandy Babcock, “the resource sector places heavy demands on transportation and energy infrastructure, broadband width, and labour markets.”<sup>153</sup> Melissa Blake, Mayor of Regional Municipality of Wood Buffalo, stated that the capacity of her municipality has not kept pace with the fast development of the oil sands and as a result, faces increasing challenges in “access to land, transportation, and labour supply.”<sup>154</sup> She added that “while [the municipality] appreciates the recent budget announcements for expedited processing for temporary workers, it would be an immense asset if we not only had customs at our airport but also if there were immigration officials directly in Fort McMurray for visa processing and other related issues. This is not only of benefit to our labour force, but it helps with our goal to

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148 Ibid.

149 Michael Binder, President and Chief Executive Officer, Canadian Nuclear Safety Commission, *Evidence*, May 15, 2012.

150 Ibid.

151 Christofer Mowry, President, Babcock and Wilcox mPower Inc., Babcock and Wilcox Ltd, *Evidence*, May 15, 2012.

152 Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012.

153 Ibid.

154 Melissa Blake, Mayor, Regional Municipality of Wood Buffalo, *Evidence*, June 5, 2012.

create a welcoming and inclusive community.”<sup>155</sup> She also expressed concern regarding the discontinued federal funding for the operations of Fort Chipewyan Airport.<sup>156</sup>

Several witnesses stated that assistance from the federal government is needed to help replace aging infrastructure, and build new infrastructure so that northern communities can meet increasing demand for services driven by industry growth.<sup>157</sup> As pointed out by Peter Mackey, “the greatest challenge we have is operating with limited funds in the face of a growing population, a growing economy, and an aging infrastructure.”<sup>158</sup> Ginger Gibson MacDonald told the Committee that “workers need housing that’s reliable, adequate, affordable, and healthy...housing is tightly linked to health status...” Homes with mould and mildew lead to “chronic respiratory infections and debilitating health outcomes.”<sup>159</sup> Pujjuut Kusugak, Mayor of Rankin Inlet Hamlet, stressed the importance of dealing with the housing shortage:

Homes are desperately needed. I'm sure that everybody here is aware of that. This causes overcrowded housing, which causes many health and well-being issues. This then stresses the health care system. We need more doctors. We have a hospital in Rankin and in Iqaluit, but again, there's a shortage of doctors and nurses.<sup>160</sup>

#### **D. Environmental Considerations and Sustainable Development**

The Canadian Environmental Assessment Agency (CEAA) is not usually involved in mining projects in the Canadian territories. According to Helen Cutts, from the CEAA, environmental assessment regimes north of 60 degrees depend on “particular arrangements through comprehensive [land] claims.” In the Northwest Territories, Yukon and Nunavut, individual boards are typically established according to these land claims, and CEAA has “virtually no involvement”. However, in some cases, typically when trans-boundary considerations are involved, a project may be referred to the federal Minister of the Environment.<sup>161</sup> Similarly, Patsy Thompson, Director General of Environmental and Radiation Protection Assessment at the CNSC, mentioned that the role of CNSC in regulating nuclear projects in the territories would be to support the territorial boards by providing scientific and technical support for all aspects of the environmental assessment,

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155 Ibid.

156 Ibid.

157 Melissa Blake, Mayor, Regional Municipality of Wood Buffalo, *Evidence*, June 5, 2012; Peter Mackey, President and Chief Executive Officer, Qulliq Energy Corporation, *Evidence*, June 5, 2012; Pujjuut Kusugak, Mayor, Hamlet of Rankin Inlet, *Evidence*, June 7, 2012; Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

158 Peter Mackey, President and Chief Executive Officer, Qulliq Energy Corporation, *Evidence*, June 5, 2012.

159 Ginger Gibson MacDonald, Adjunct Professor, Norman B. Keevil Institute of Mining Engineering, University of British Columbia — as an individual, *Evidence*, June 19, 2012.

160 Pujjuut Kusugak, Mayor, Hamlet of Rankin Inlet, *Evidence*, June 7, 2012.

161 Helen Cutts, Vice-President, Policy Development Sector, Canadian Environmental Assessment Agency, *Evidence*, October 5, 2011.

and coordinating the scientific support with other federal government agencies like Environment Canada and Fisheries and Oceans Canada (DFO).<sup>162</sup>

A number of witnesses have expressed environmental concerns regarding mining activities in northern Canada. According to Ugo Lapointe, “one of the concerns rightly expressed by the population concerns the long-term management of mine tailings”.<sup>163</sup> In the case of metal mines, contaminants or toxic elements (e.g., heavy metals) are often released, presenting risks such as acidification or acid mining drainage. In the case of uranium mines, radioactive releases (e.g., thorium and radium) present additional challenges to managing mine tailings.<sup>164</sup> Brennain Lloyd, Project Coordinator with Northwatch, stated that “the disturbance from mineral exploration can be quite extreme, with a complete removal of vegetation and a total loss of ecological function at the site level.”<sup>165</sup> Large, low-grade, open mines are often in close proximity to existing communities, particularly in northern Quebec. The impacts of these mines on the natural environment, including the noise and dust they produce, can be a nuisance to local inhabitants.<sup>166</sup>

With respect to such issues, Anil Arora of NRCan told the Committee that NRCan “[reviews] technical documentation and [provides] scientific and technical expertise in the areas of minerals and metals sciences, including expertise related to things such as acid rock drainage, waste management, mine effluent, and metal leaching.” He added that NRCan’s goal is to “ensure responsible development that reduces environmental impacts and maximizes benefits to communities and all Canadians.”<sup>167</sup> Pamela Schwann, from the Saskatchewan Mining Association, stated that, when considering the impacts of mining, “we also have to put things into a global context, in that there is a need for resources on a global basis, and Canadian mining companies operating in Canada under quite stringent environmental regulations operate responsibly.” According to her, it is preferable “to have the resources developed in Canada rather than elsewhere.”<sup>168</sup> Similarly, David Kilgour noted that “today’s Canadian mining industry has changed dramatically from the practices of the past and operates in a manner that is sensitive to the environment and to its local host communities.”<sup>169</sup> Jody Kuzenko, General Manager of Base Metals, North Atlantic Region, Vale, told the Committee that “environmental responsibility is a competitive

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162 Patsy Thompson, Director General, Directorate of Environmental and Radiation Protection Assessment, Canadian Nuclear Safety Commission, *Evidence*, May 15, 2012.

163 Ugo Lapointe, Cofounder, Coalition pour que le Québec ait meilleure mine, *Evidence*, October 31, 2011.

164 Ibid.

165 Brennain Lloyd, Project Coordinator, Northwatch, *Evidence*, December 7, 2011.

166 Ugo Lapointe, Cofounder, Coalition pour que le Québec ait meilleure mine, *Evidence*, October 31, 2011.

167 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

168 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

169 David Kilgour, Councillor, City of Greater Sudbury, *Evidence*, February 16, 2012.

advantage, and in this day and age, as we're developing the next generation of miners, it is critically important to recruitment and retention."<sup>170</sup>

According to Brennain Lloyd, contemporary discussions of sustainable development include "not just impacts on the environment; but [are] often cast in the context of community sustainability," including local aspects such as food, energy, and other aspects of socioeconomic stability.<sup>171</sup> In Quebec, the Quebec Mining Association recently signed an agreement with the Bureau de normalisation du Québec to measure the mining sector's progress in "incorporating sustainable development principles into the daily operations of [member] companies [of the Association]."<sup>172</sup> MiningWatch Canada's Ramsey Hart stated that "most communities we work with [...] are looking at mining with optimism and welcoming arms for the economic opportunities it can advance. However, no one wants mining to be forced on them or, as Chief Gagnon said [...] to be shoved down their throats. So it's important that we have processes in place to engage communities, to ensure adequate review of proposed projects, and to effectively have participation in the review of projects".<sup>173</sup> Eberhard Scherkus also stated that, in Nunavut, "we've had great community support from the councils, the peoples, and the businesses; the communities are unified in their support of resource development".<sup>174</sup> The Honourable Michael Miltenberger stated that "as we go forward we are very concerned about the balance of resource development and environment. We are open for business. We want to do it in a sustainable way."<sup>175</sup>

According to some witnesses, a national energy strategy is critically important to the sustainable development of the north. Peter Jenkins stated that "it must develop a national energy strategy in cooperation with the provinces and territories that will support federal investment in environmentally, socially, and economically sustainable infrastructure."<sup>176</sup> Martin von Mirbach, Director of the Canadian Arctic Program at the World Wildlife Fund, also asserted that "we have an opportunity in Canada to develop a truly visionary Canadian energy strategy, charting a course for Canada that is aligned with the country's climate change commitments [...] Opening up new frontiers for oil and gas development without a long-term energy plan that tackles CO2 emissions risks pushing us further from our national goals and international responsibilities."<sup>177</sup>

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170 Jody Kuzenko General Manager, Sustainability, Base Metals, North Atlantic Region, Vale, *Evidence*, June 21, 2012.

171 Brennain Lloyd, Project Coordinator, Northwatch, *Evidence*, December 7, 2011.

172 Dan Tolgyesi, President and Chief Executive Officer, Québec Mining Association, *Evidence*, November 30, 2011.

173 Ramsey Hart, Co-manager, Canada Program, MiningWatch Canada, *Evidence*, November 2, 2011.

174 Eberhard Scherkus, President and Chief Operating Officer, Agnico-Eagle Mines Limited, *Evidence*, November 23, 2011.

175 Michael Miltenberger, Minister of Environment and Natural Resources, Government of the Northwest Territories, *Evidence*, June 19, 2012.

176 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012.

177 Martin von Mirbach, Director, Canadian Arctic Program, World Wildlife Fund, *Evidence*, May 15, 2012

On the subject of offshore oil development, Martin von Mirbach noted that “there is currently insufficient knowledge and inadequate technology and infrastructure to safely carry out drilling in Canadian Arctic [...] there’s no oil spill response capacity to address a sizeable well blowout or large scale spill in Arctic waters.” The lack of infrastructure is a big challenge in addressing an oil spill in the Arctic. The presence of ice adds significant complexity to containing the spill, making it very difficult to clean up an oil spill. More time, research and large-scale planning is needed to address these gaps and to ensure sustainable development in the Arctic.<sup>178</sup> Martin von Mirbach also proposed cumulative environmental assessments in the region to set overall thresholds and identify areas where it is appropriate to carry out activity and areas where it is not. He also said that the NEB should be responsible for modelling the trajectory of possible oil spills.<sup>179</sup>

Mimi Fortier told the Committee that “a great deal of research on ice-infested waters and ice-covered waters has gone on over decades.” Furthermore, “the National Energy Board expanded an existing study to conduct a public review of offshore drilling requirements.” In its recent report, the Board confirmed that its regulatory regime “can address matters related to safety of northerners, workers, and the environment.”<sup>180</sup>

## THE “RING OF FIRE”: A CASE STUDY

As part of its study on the development of natural resources in northern Canada, the Committee devoted two meetings to hearing witnesses specifically on the development of a whole new region of northern Ontario known as the “Ring of Fire”. Located in a remote and under-developed area, the Ring of Fire represents a singular and challenging case in itself. The Ring of Fire area stands in the James Bay Lowlands of northern Ontario, approximately 1,000 kilometres northwest of Toronto (Figure 6). Mineral exploration in the area began in 2002 and initially led to the discovery of copper and zinc deposits. In 2008, a large chromite deposit was found. Chromite is used primarily to make an alloy, ferrochrome, a component of stainless steel. Although the chromite discoveries in the Ring of Fire may someday rank amongst the largest in the world, the chromite market is presently tight, most of it currently being consumed in Asia.<sup>181</sup>

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178 Ibid.

179 Ibid.

180 Mimi Fortier, Director General, Northern Oil and Gas Branch, Aboriginal Affairs and Northern Development Canada, *Evidence* May 10, 2012.

181 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Evidence*, February 16, 2012.

## A. Developing The Ring of Fire deposits

After the acquisition of Freewest Resources and Spider Resources in 2010, Cliffs Natural Resources “began studying the proposed chromite project in the Ring of Fire”.<sup>182</sup> Cliffs’ project has four components:

- a mine that would produce over 4 million tonnes per year of chromite ore;
- a processing plant located at the mine site to produce a concentrate product for direct sale or for conversion to ferrochrome;
- an all-season road to transport the concentrate to the CN rail line at Nakina; and
- a ferrochrome production facility located in Canada to refine approximately 60% of the concentrated chromite ore into ferrochrome, which is used in the production of stainless steel.

The company envisages exporting approximately 40% of its on-site production, arguing that being “able to sell into the global market for chromite concentrate is key to being able to build a mine”.<sup>183</sup> In fact, the development of the Ring of Fire area will depend to a great extent on global market conditions, knowing that the market for chromite and ferrochrome is extremely volatile and closely related to the Chinese demand.<sup>184</sup> According to William Boor, Cliffs’ overall project represents a potential investment of approximately \$3.5 billion, the creation of over 1,100 permanent jobs, an equal number of construction jobs, and 2,000 to 3,000 indirect jobs.<sup>185</sup>

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182 William Boor, Senior Vice-President, Global Ferroalloys, Cliffs Natural Resources Inc., *Evidence*, February 14, 2012.

183 *Ibid.*

184 *Ibid.*

185 *Ibid.*

**Figure 6 — Location of the Ring of Fire**



Source: Ontario Business Report, *Ring of Fire lights up Northern Ontario's mining industry*, [http://ontariobusinessreport.com/en/economic/articles/economic\\_article\\_27.asp](http://ontariobusinessreport.com/en/economic/articles/economic_article_27.asp).

The achievement of Cliffs Natural Resources' project is also key to further developing the Ring of Fire. As pointed out by Ronald Coombes, Cliffs "has a deposit with the economic size to support initial infrastructure costs, which will allow other smaller mines to be economical".<sup>186</sup> This would likely be the case of projects being undertaken by Noront and White Tiger to develop their nickel and iron deposits in a few years from now, once the Ring of Fire is more accessible and has the proper infrastructure to do so. Noront's approach would be to mine its Eagle's Nest nickel ore first, which would offer a greater return on investment, and then look at supplying the North American market from its Blackbird chromite deposit, it being "a better fit for the company's size".<sup>187</sup> White Tiger Mining Corporation owns the Norton Lake property where it is contemplating the development of its nickel, copper, cobalt, and PGM (Platinum Group Metals) deposit once the proposed north-south road corridor is approved.<sup>188</sup> Many other opportunities could evolve from the future construction of the road along the proposed corridor.

186 Ronald Coombes, President, White Tiger Mining Corporation, *Evidence*, February 14, 2012.

187 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Evidence*, February 16, 2012.

188 Ronald Coombes, President, White Tiger Mining Corporation, *Evidence*, February 14, 2012.

## **B. The Ring of Fire: unprecedented challenges for unprecedented opportunities**

While recognizing the immense mining potential buried underground in the Ring of Fire, all witnesses heard by the Committee stressed that this mining potential could hardly materialize without overcoming unprecedented challenges. These challenges are quite similar to those identified for resource development north of 60, but they are magnified in all aspects when transposed in the context of northern Ontario's Ring of Fire. They include: ecosystem sensitivity; remoteness and lack of infrastructure; consultation with First Nations; and, education and training.<sup>189</sup>

### **1. Ecosystem Sensitivity**

The Ring of Fire is located in the James Bay Lowlands, a large wetland area. The region is poorly drained, dominated by marsh, string bogs and muskeg, and is dissected by slow-flowing rivers draining into Hudson's Bay and James Bay.<sup>190</sup> Mine exploration and development, as well as building the required infrastructure in such a fragile and pristine environment will require comprehensive planning and consultation with First Nations. New infrastructure will have to be carefully planned in order to minimize the impacts on fish, wildlife, and plants on which local communities rely. In fact, "new roads and infrastructure corridors, including a proposed slurry pipeline, will fragment the habitat of migratory animals — caribou, moose, etc. — and disrupt their travel routes. [...] Fuel and chemicals required by the mines present major environmental concerns [and] waste rock and tailings from the mines have the potential to release harmful chemicals to the environment and will remain on the land long after the mines are closed."<sup>191</sup> First Nations communities expect these important issues to be fully addressed through a thorough and comprehensive environmental assessment process.<sup>192</sup>

### **2. Remoteness and Lack of Infrastructure**

The population of the Ring of Fire region includes small, isolated First Nations communities established along the suture line between the lowlands and the drier Canadian Shield, and the Hudson Bay and James Bay coast. The remote location of the Ring of Fire explains why exploration costs are "at least ten times than the costs in Sudbury" and why it "is not attractive to many professionals".<sup>193</sup> Moreover, the total absence of infrastructure represents the first and foremost impediment to resource development in the area.

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189 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Resource Development in The North: Mining – Ring Of Fire*, Brief presented to the Committee, February 16, 2012.

190 Ibid.

191 Raymond Ferris, Coordinator, Ring of Fire, Matawa First Nations, *Evidence*, February 14, 2012.

192 Raymond Ferris, Coordinator, Ring of Fire, Matawa First Nations; Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

193 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Resource Development in The North: Mining — Ring Of Fire*, Brief presented to the Committee, February 16, 2012.

Witnesses from the mining sector appearing before the Committee stressed that transportation infrastructure remains a priority if the region is ever to develop. Many corridor openings have been proposed:

- an all-season north-south road to transport the concentrate to the CN rail line at Nakina (Cliffs Natural Resources);
- a potential north-south railway corridor from KWG Resources' mineral claim south to the Canadian National railroad near Nakina; and
- an east-west all-weather corridor from Noront Resources Eagle's Nest nickel deposit site to Pickle Lake.

Cliffs' north-south all-season road "would be the catalyst for this Ontario infrastructure", serving "to open up the Ring of Fire to further investment by other mining companies". "In addition to opening up the region, the all-weather road would provide connection opportunities for remote First Nations communities". The construction costs have been estimated at \$500 million and it is believed that "the choice of the route will be a major determiner of global cost competitiveness for the entire region".<sup>194</sup>

On the energy side, the needs are also tremendous. For instance, Cliffs Natural Resources would need 300 megawatts to operate its mine and concentrator at its site, and another 300 megawatts for the ferrochrome processing plant that could be built near Capreol, north of Sudbury. With respect to the ferrochrome facility, the City of Greater Sudbury spoke of its smelting and refining capacity for the Ring of Fire mining region.<sup>195</sup> Noront Resources' smaller project would necessitate approximately 25 megawatts for the concentrator and mine at its Eagle's Nest site.<sup>196</sup> This amount of energy could be provided by a diesel generating station built close to the community of Webequie, through a power line from that point.<sup>197</sup>

A major problem with opening up a territory that has virtually no infrastructure remains to determine who should bear the costs for building the new roads and supplying the energy needed for developing the Ring of Fire area. According to some witnesses, the mining industry would consider entering into public-private partnerships,<sup>198</sup> as long as governments recognize that such infrastructure would clearly benefit local communities. For example, it has been suggested that the current proposed routes offer "an opportunity to extend line power to the communities as well as upgrading the telecommunications

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194 William Boor, Senior Vice-President, Global Ferroalloys, Cliffs Natural Resources Inc., *Evidence*, February 14, 2012.

195 David Kilgour, Councillor, City of Greater Sudbury, *Evidence*, February 16, 2012.

196 Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

197 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Evidence*, February 16, 2012.

198 William Boor, Senior Vice-President, Global Ferroalloys, Cliffs Natural Resources Inc., *Evidence*, February 14, 2012.

capacity”.<sup>199</sup> While all new infrastructure will offer business opportunities for First Nations,<sup>200</sup> some First Nations representatives believe that the construction of transmission corridors and mining facilities have the potential to justify electrification in their communities.<sup>201</sup> David Kilgour told the Committee that the federal government must participate in partnership with other levels of government and the private sector in the strategic infrastructure investments required to take full advantage of existing and emerging opportunities. He added that these infrastructure investments should enhance community and economic development, in addition to simply meeting the goals of resource development.<sup>202</sup>

### 3. Consultation with First Nations

Most witnesses heard by the Committee, both from the industry and First Nations, expressed their concerns with respect to the consultation and participation of the latter. Although the “Ring of Fire development will provide a key test on existing provincial policy”,<sup>203</sup> the federal duty to consult has also been raised. Some mining companies testified they were unclear on obligations related to the legal duty to consult provisions and asked for clarity from all levels of government. Ronald Coombes stated that “the industry needs the Government of Canada to provide clarity and direction to the current uncertainty in the resource industry. What is meant or required as “duty to consult” with First Nations?”<sup>204</sup> He recognized the industry’s duty to engage in socio-economic participation agreements, but stressed that it could hardly be done at the exploration stage when a project has no economic value. He rather suggested that First Nations should focus on discussion and negotiation with the Government of Canada.

Many people from the nine member communities of Matawa First Nations located in and around the Ring of Fire, most of which are signatories to Treaty 9, “have been demanding a process that will enable our people to fully understand what these projects mean to them”.<sup>205</sup> Although the Government of Canada opted for a “comprehensive review” of the projects being undertaken by Cliffs and Noront, they believe that only “a joint review panel environmental assessment [can] bring together the First Nations and the provincial and federal governments in an efficient process that will enable our community members to fully participate in the environmental assessment process”.<sup>206</sup> Matawa First Nations’ Chiefs are of the view that only a “joint review panel EA”:

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199 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Resource Development in The North: Mining — Ring Of Fire*, Brief presented to the Committee, February 16, 2012.

200 Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

201 Raymond Ferris, Coordinator, Ring of Fire, Matawa First Nations, *Evidence*, February 14, 2012.

202 David Kilgour, Councillor, City of Greater Sudbury, *Evidence*, February 16, 2012.

203 Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

204 Ronald Coombes, President, White Tiger Mining Corporation, *Evidence*, February 14, 2012.

205 Raymond Ferris, Coordinator, Ring of Fire, Matawa First Nations, *Evidence*, February 14, 2012.

206 Ibid.

will, among other things, allow sufficient time and flexibility in the process to enable our communities to fully understand the scope of the proposed developments; recognize community processes and procedures, for example, in seeking guidance from elders, using oral forms in addition to written ones, providing for oral translation and traditional knowledge, and providing opportunities for discussion of issues with both the regulators and the proponents; ensure a full review of all impacts, including the complex environmental and treaty/aboriginal rights impacts associated with the projects, and to thoroughly consider the full range of potential mitigation and accommodation measures. [...] We feel that it's incumbent upon the government, because they're the ones that have the duty to consult, to accommodate some of the first nations' needs...<sup>207</sup>

Chief Moonias added that “development has to occur in a way that Marten Falls First Nation can accept, and this means having a final say in whether and how it happens. We share a responsibility with Canada under our treaty to make sure that development in the Ring of Fire is sustainable and environmentally sound.”<sup>208</sup> First Nations are calling for the establishment of positive working relationships with mining companies to promote additional benefits in terms of employment, the use of traditional ecological knowledge, education, skills training, including financial compensation. They are looking for “a coordinating mechanism at the political level, hopefully, to engage the Ontario cabinet members and federal representatives, including First Nations’ leadership”.<sup>209</sup>

Ronald Coombes told the Committee that consultation with First Nations is very important since the development of new mines is planned in their communities. “[T]hey certainly have the right to know what's happening or what's going to happen and what future ramifications there are.”<sup>210</sup> William Boor said that, since early 2010, Cliffs Natural Resources has been communicating, consulting, providing capacity funding, and working directly with the affected First Nations communities in the Ring of Fire, adding that Cliffs is committed to seeing First Nations participate in, and benefit from, the projects.<sup>211</sup> For Ian Brodie-Brown, since the “resources assets” are in First Nations’ territories, there is a need for “establishing a way for First Nations to be involved in the ownership of the companies”.<sup>212</sup>

Raymond Ferris, Coordinator, Ring of Fire, for Matawa First Nations communities also said: “We are pro development, as long as we are protecting our resources and traditional lands for the benefit of future generations... The Ring of Fire creates a tremendous opportunity whereby the mining corporations can also support investment for community infrastructure in First Nations through partnership agreements and/or impact benefit agreements. Such investment precedents have already been established with

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207 Ibid.

208 Elijah Moonias, Chief, Marten Falls First Nation, *Evidence*, February 16, 2012.

209 Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

210 Ronald Coombes, President, White Tiger Mining Corporation, *Evidence*, February 14, 2012.

211 William Boor, Senior Vice-President, Global Ferroalloys, Cliffs Natural Resources Inc., *Evidence*, February 14, 2012.

212 Ian Brodie-Brown, President and Chief Executive Officer, AurCrest Gold Inc., *Evidence*, February 16, 2012.

aboriginal organizations and communities in the Northwest Territories and Nunavut”.<sup>213</sup> According to those communities, problems surface when consultation and partnerships are ignored. Nishnawbe Aski Nation Deputy Grand Chief Les Louttit cited the example of the De Beers Victor Mine in Attawapiskat First Nation negotiating an Impact Benefit Agreement (IBA) that “set the bar very low in terms of benefits, especially financial benefits, and only after that agreement did they negotiate with three other First Nations on the James Bay Coast.” Chief Louttit said he would reject that kind of agreement with Ring of Fire mining companies.<sup>214</sup>

#### 4. Education and Training

The development of the Ring of Fire mineral potential may result in huge economic impacts for Ontario, and particularly for surrounding First Nations communities. It should “provide unique opportunities for First Nations to plan for sustainable economic development in several broad areas: workforce training, land use planning, service and manufacturing industries, business partnerships, and equity participation, including regional and community infrastructure development”.<sup>215</sup> He added that “With the proper education and training, our growing First Nation population of youth will be northern Ontario's future workforce”.<sup>216</sup>

One of the main challenges with the training and employment of Aboriginal people in the Ring of Fire area is that many of the new jobs are highly technical, while the education level of the people is not very high.<sup>217</sup> According to Wes Hanson, developing Noront Eagle Nest's site would require “60% unskilled labour, 20% skilled labour, and 20% professional.” The company is encouraging local communities to stay in school and get their grade 12 education, and has developed a post-secondary bursary program to encourage Aboriginal youth to look at post-secondary education in such fields as geology, engineering and environmental sciences. Through the course of the mine development, the needs will be for trades, such as electricians, carpenters, plumbers, and then for skilled underground labour in mining process and in heavy equipment operation.<sup>218</sup>

For the mining companies already involved in the Ring of Fire, there is a clear need for engaging with communities early in the discussion to identify the specific training plans and programs that can be developed in the area.<sup>219</sup> It was mentioned that the training facility built by De Beer's Victor Mine in Attawapiskat as part of the IBA negotiations is

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213 Raymond Ferris, Coordinator, Ring of Fire, Matawa First Nations, *Evidence*, February 14, 2012.

214 Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

215 Ibid.

216 Ibid.

217 Raymond Ferris, Coordinator, Ring of Fire, Matawa First Nations, *Evidence*, February 14, 2012.

218 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Evidence*, February 16, 2012.

219 William Boor, Senior Vice-President, Global Ferroalloys, Cliffs Natural Resources Inc., *Evidence*, February 14, 2012.

currently closed and could serve as a potential site for initial training of Aboriginal people.<sup>220</sup>

Mining companies acknowledged the need for training to be taken seriously, to begin early, and for it to be long-term. As pointed out by Wes Hanson, “training is absolutely critical. Perhaps one of the shortfalls of industry is that we don’t take training seriously enough or don’t consider it soon enough in the equation. If you’re looking at the timeline for Noront to be in production by 2016, which isn’t all that dissimilar from what the Cliffs project has proposed, it gives us a good four to five years to establish training programs.”<sup>221</sup> Ian Brodie Brown has spoken favourably of supporting training at First Nations drilling schools. He said that “Lac Seul would like to open a drilling school. We would like to see people from Ring of Fire trained at a First Nations drilling school.”<sup>222</sup>

## REGULATORY CHALLENGES

### A. Overview

Each Canadian territory has its own regulatory framework that oversees and manages resource development in the North.<sup>223</sup> Janet King, Assistant Deputy Minister at the Northern Affairs Organization, told the Committee that “the northern regulatory regimes were created to ensure responsible resource development in a remote region while providing for environmental protection. These principles are embodied in the various comprehensive land claim agreements across the north, and in turn are reflected in the enabling pieces of legislation and regulations that underpin the regulatory regimes in all three territories.”<sup>224</sup> According to Ramsey Hart, the main institutions responsible for regulating northern resource development include the federal Canadian Environmental Assessment Agency, the Nunavut Impact Review Board, the Mackenzie Valley Environmental Impact Review Board in the Northwest Territories, and the Yukon Environmental and Socio-economic Assessment Board. He noted that “they can all use some fine tuning, and they all need more resources to do their jobs effectively.”<sup>225</sup>

Anil Aurora told the Committee that the regulatory environment in northern Canada is often cited as “one of the biggest challenges” to investors, particularly foreign investors.<sup>226</sup> According to John Gingerich, the permitting processes in northern Canada “are not aligned with the logic of the exploration processes [...]” The industry’s operating

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220 Les Louttit, Deputy Grand Chief, Nishnawbe Aski Nation, *Evidence*, February 14, 2012.

221 Wes Hanson, President and Chief Executive Officer, Noront Resources, *Evidence*, February 16, 2012.

222 Ian Brodie-Brown, President and Chief Executive Officer, AurCrest Gold Inc., *Evidence*, February 16, 2012.

223 Janet King, Assistant Deputy Minister, Northern Affairs Organization, Aboriginal Affairs and Northern Development Canada, *Evidence*, October 17, 2011.

224 Ibid.

225 Ramsey Hart, Co-manager, Canada Program, MiningWatch Canada, *Evidence*, November 2, 2011.

226 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

season is four months long, while permits often take over four months to be granted, thereby adding to the cost of the overall project.<sup>227</sup>

Mark Kolebaba reiterated John Gingerich's concerns, stating that missing an exploration season results in a setback of one year, which reduces the credibility of project developers to their investors. He said to the Committee that: "we need to streamline the regulatory process. We have a short season in the Arctic. All the companies understand the need for a regulatory process. We need it streamlined so that we don't miss seasons. Every time we miss a work season, it's a setback of a year. It means a year longer that mineral surveys aren't finished. We also lose credibility with our investors. The investment dollar, because it can't wait forever, goes to southern projects or to companies working in southern parts of the world. Streamlining would make it more productive."<sup>228</sup> Similarly, Chris Hanks, Vice-President, Environmental Affairs, with Hope Bay Mining Ltd. said that "in order to facilitate exploration and development in the Arctic, it is essential to have a regulatory framework that is protective of the environment, provides local benefits, and can happen in a time that allows companies to make timely economic decisions."<sup>229</sup> Speaking of the overall regulatory process, William Boor said that "one of the main things I'd like to dispel is the concept that longer equals more rigorous or more thorough. The comprehensive review can address the things that I've heard".<sup>230</sup>

However, Ginger Gibson MacDonald cautioned that there are examples where the industry is responsible for slowing down the regulatory process. She told the Committee that "many companies, [especially junior mining companies], are using the public regulatory system to raise funds on the stock market. They boost their stocks by issuing press releases about the various stages of the regulatory process they are in. They enter the process too early, to push forward even though they're not ready to describe their project accurately, because they're not far enough along in their own planning [...] The regulatory system in authority in the north has been shown in audits, in peer views, and in internal reviews to be functional and strong. Agency boards and tribunals are put in place there for a good reason. In their absence, there's usually a lawsuit."<sup>231</sup>

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227 John Gingerich, President and Chief Executive Officer, Advanced Explorations Inc., *Evidence*, October 26, 2011.

228 Mark Kolebaba, President and Chief Executive Officer, Diamonds North Resources Ltd., *Evidence*, October 26, 2011.

229 Chris Hanks, Vice-President, Environmental Affairs, Hope Bay Mining Ltd., Newmont Mining Corporation, *Evidence*, November 23, 2011.

230 William Boor, Senior Vice-President, Global Ferroalloys, Cliffs Natural Resources Inc., *Evidence*, February 14, 2012.

231 Ginger Gibson MacDonald, Adjunct Professor, Norman B. Keevil Institute of Mining Engineering, University of British Columbia – as an individual, *Evidence*, June 19, 2012.

## B. Regulatory process in Nunavut and the Northwest Territories

According to Janet King, “Nunavut has a single land claim agreement between the Inuit of Nunavut and Canada signed in 1993.” Nunavut’s regulatory regime for project development is based on this agreement, and it consists of five boards that deal with land use planning, environmental assessment, water rights issuance, surface rights disputes and wildlife management.<sup>232</sup> According to the Honourable Peter Taptuna, “[t]he Nunavut Impact Review Board is legislated under the Nunavut land claims agreement, and for the most part it’s been a small organization since 1999. The expansion and growth in exploration activity has grown in tremendous proportions, and the application process has been slowed down because of the lack of resources within these regulatory bodies, including the Nunavut Planning Commission and the Nunavut Water Board.”<sup>233</sup> Larry Connell, Vice-President of the NWT and Nunavut Chamber of Mines, mentioned that at a meeting in Rankin Inlet, “the Kivalliq Inuit Association spoke to the Nunavut Impact Review Board, and even they said that this process needs to be streamlined, that there are too many repetitious steps in the middle, and that we can make it more efficient”<sup>234</sup>.

Similarly, Peter Tapatai pointed out that, “...the [regulatory] process is far too long and too complicated [...] once projects enter the regulatory phase, they slow down significantly.” According to him, “there are various challenges, including not enough board members, board members with little experience, and simply too many parties reviewing every project.”<sup>235</sup> In response to the issue of limited institutional capacity in Nunavut, Inuit Tapiriit Kanatami’s (ITK) Senior Policy Advisor, John Merritt, told the Committee that the two things that ITK would support “would be to strengthen the boards that are already in place, which, with more resources, could process things faster, and try to get the legislation on the books that will amplify the Nunavut Land Claims Agreement without violating it”<sup>236</sup>. Furthermore, the Honourable Peter Taptuna encouraged the Committee “to support the introduction into Parliament and passing of the *Nunavut Planning and Project Assessment Act*.”<sup>237</sup> As noted by Janet King, this Act is “Canada’s final outstanding commitment in the Nunavut land claim agreement.”<sup>238</sup>

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232 Janet King, Assistant Deputy Minister, Northern Affairs Organization, Aboriginal Affairs and Northern Development Canada, *Evidence*, October 17, 2011.

233 Peter Taptuna, Minister of Economic Development and Transportation, Government of Nunavut, *Evidence*, June 19, 2012.

234 Larry Connell, Vice-President, NWT and Nunavut Chamber of Mines, *Evidence*, November 23, 2011.

235 Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

236 John Merritt, Senior Policy Advisor, Inuit Tapiriit Kanatami, *Evidence*, November 23, 2011.

237 Peter Taptuna, Minister of Economic Development and Transportation, Government of Nunavut, *Evidence*, June 19, 2012.

238 Janet King, Assistant Deputy Minister, Northern Affairs Organization, Aboriginal Affairs and Northern Development Canada, *Evidence*, October 17, 2011.

The Northwest Territories currently has four land claim agreements. However, a significant portion of the territory's land remains unsettled, and is involved in ongoing negotiations. Differences in the status of the territory's land claims affect the nature of NWT's regulatory regime.<sup>239</sup> Anil Arora told the Committee that "there are some 13 boards that get involved in various elements from surface rights to land use planning, water, land use and other aspects," which complicates the regulatory process.<sup>240</sup> Janet King also said that "over the years concerns have been raised by various stakeholders regarding the functioning of the regulatory regime in the NWT."<sup>241</sup> According to the Honourable Michael Miltenberger, the Northwest Territories government sees "regulatory reform as being tied to devolution." He noted that Nunavut and the Northwest Territories are the only two jurisdictions in the country that do not have control over land, water, and resource development. He pointed out that a devolution agreement would address many of the problems in the existing regulatory process. "You just have to look to the Yukon and how things improved over there in terms of timeliness and responsiveness and an ability for a quick, thorough turnaround on decisions. We anticipate the same type of benefit once devolution is signed."<sup>242</sup>

On Inuit territory, John Cheechoo, Director of Inuit Tapiriit Kanatami (ITK), told the Committee that "the treaties have created new, more coherent regulatory machinery for the management of lands, waters, wildlife, and for the review of development project proposals. Appointments to joint resource management boards are made both by senior governments and by representative Inuit organizations. [...] No approach to resource exploration development in the Arctic will be successful unless Inuit are full partners and draw direct and substantial benefits".<sup>243</sup>

With respect to projects assessment and consultation, John Cheechoo added that "it would be reasonable if the proper Inuit representatives, organizations, and communities were consulted fully, as per their agreements that have been signed off. If they've reached that particular threshold, there's no reason why there should be a repetitive sort of process after that. [...] So there's a lot of complexity around those issues on rights and implementing the agreements. It depends on who you talk to. If you're talking to Inuit with a land claim wrapped around that activity and land area, then you're talking about a process that's in place. But if it were a lot more streamlined, it would still reflect and respect those land claim agreements. I don't see any problem with it being done that way".<sup>244</sup> Chris Hanks cautioned, however, that "there are some unintended consequences to the Nunavut Land Claim Agreement. One of them is that a position of double-bonding has

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239 Ibid.

240 Anil Arora, Assistant Deputy Minister, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

241 Janet King, Assistant Deputy Minister, Northern Affairs Organization, Aboriginal Affairs and Northern Development Canada, *Evidence*, October 17, 2011.

242 Michael Miltenberger, Minister of Environment and Natural Resources, Government of the Northwest Territories, *Evidence*, June 19, 2012.

243 John Cheechoo, Director, Inuit Tapiriit Kanatami, *Evidence*, November 23, 2011.

244 Ibid.

occurred with the reclamation securities that are held over land and water between regional Inuit organizations and AANDC.”<sup>245</sup>

Janet King told the Committee that the AANDC is investing \$25 million over three years to establish an action plan to improve northern regulatory regimes.<sup>246</sup> Furthermore, the Northern Project Management Office (NPMO) was created with the purpose of guiding project developers through the regulatory system in the Canadian territories. Similar to the Major Projects Management Office (MPMO) south of 60 degrees, “the intent of [the NPMO] is to look at having a one-stop shop for industry coming in, and a better sense of how to navigate all of the regulatory boards and the types of permits required.”<sup>247</sup> One of the challenges facing the NPMO is the short working season in northern Canada. According to Ginny Flood, from the Minerals and Metals Sector of NRCan, “the timing of decision-making will be key for a lot of the industry.”<sup>248</sup>

### C. Regulatory Process in the Yukon

In the Yukon, the management and administration of lands and resources was transferred to the Government of Yukon in 2003 as a result of the Yukon Northern Affairs Program Devolution Transfer Agreement. The *Yukon Environmental and Socio-Economic Assessment Act* (YESAA) was passed to regulate the transferred responsibilities.<sup>249</sup>

Several witnesses referred to YESAA as a good model for improving other regulatory processes. Peter Jenkins told the Committee that “YESAA up to this point in time has been the most progressive assessment and permitting process in Canada, with its fixed timelines providing certainty for investors.”<sup>250</sup> Sandy Babcock reiterated this point by saying that “with the *Yukon Environmental and Socio-economic Assessment Act*, we feel we have that regulatory certainty. There are timelines entrenched in the regulations whereby not only the review committee has to respond to project applications but the proponents as well. That really has been instrumental in the Yukon moving forward with its resource development in the area of mining, but it also encompasses all other land-based activities. They also go through the process. It really has been instrumental in our success here. I can't stress strongly enough that the timelines being entrenched in the regulations were critical.”<sup>251</sup> Peter Jenkins did note, however, that there are still some problems with YESAA, including one that concerns interpretations of adequacy of information. He said

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245 Chris Hanks, Vice-President, Environmental Affairs, Hope Bay Mining Ltd., Newmont Mining Corporation, *Evidence*, November 23, 2011.

246 Janet King, Assistant Deputy Minister, Northern Affairs Organization, Aboriginal Affairs and Northern Development Canada, *Evidence*, October 17, 2011.

247 Ginny Flood, Director General, Minerals and Metals Sector, Natural Resources Canada, *Evidence*, October 3, 2011.

248 Ibid.

249 Janet King, Assistant Deputy Minister, Northern Affairs Organization, Aboriginal Affairs and Northern Development Canada, *Evidence*, October 17, 2011.

250 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012.

251 Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012.

that “there appear to be some different interpretations as to when enough information has been submitted on a project to assess the project and the decision body being able to make its decision.” He also suggested amendments to YESAA in light of the recent amendments made to CEAA.<sup>252</sup>

#### **D. Federal Regulatory Process**

Speaking of the federal regulatory process, Pamela Schwann told the Committee that “the federal environmental assessment process suffers from systemic delays and a lack of coordination between federal departments,” as noted by the Commissioner of the Environment and Sustainable Development.<sup>253</sup> Furthermore, Tara Christie pointed out that the regulatory regime is usually carried out as successive processes, where, for example, regulators would wait until assessors have done their work in order to begin working. She stated that introducing more concurrent processes would improve the efficiency of the regulatory regime.<sup>254</sup>

Karina Briño pointed out that there is “tremendous duplication” between the federal and provincial regulatory processes and that the mining industry in British Columbia is calling for the harmonization of the two.<sup>255</sup> She told the Committee that the mining industry is primarily interested in timelines and clarity in the regulatory process.<sup>256</sup> Similarly, Eberhard Scherkus explained that the duplication and repetition of public hearings present an administrative challenge to project developers. Multiple hearings often result in stakeholders having to ask the same questions multiple times to different organizations.<sup>257</sup> Ronald Coombes said, “I don’t think the duplication of review helps either party. As far as regulatory purposes go, I think there should be more of a collaboration between the First Nations and the companies with regard to the EA process. I see that as important.”<sup>258</sup> Furthermore, Pamela Schwann stated that “the lack of integration of the duty to consult policy between federal and provincial agencies on the same project causes capacity issues for both industry and First Nations and Métis communities.”<sup>259</sup>

According to Francis Bradley, “the primary impediment to electricity infrastructure renewal in Canada is increasing legislative and regulatory complexity, in which there are two components: the long and duplicative regulatory process for new projects; and the inefficient regulatory requirements for the facilities in place [...] This process duplication

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252 Peter Jenkins, Mayor, City of Dawson, *Evidence*, June 7, 2012

253 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

254 Tara Christie, Senior Advisor, External and Government Affairs, Hope Bay Mining Ltd, Newmont Mining Corporation, *Evidence*, November 23, 2011.

255 Karina Briño, President and Chief Executive Officer, Mining Association of British Columbia, *Evidence*, June 21, 2012.

256 Ibid.

257 Eberhard Scherkus, President and Chief Operating Officer, Agnico-Eagle Mines Limited, *Evidence*, November 23, 2011.

258 Ronald Coombes, President, White Tiger Mining Corp, *Evidence*, February 14, 2012

259 Pamela Schwann, Executive Director, Saskatchewan Mining Association, *Evidence*, October 31, 2011.

results in no additional environmental protection”<sup>260</sup> He noted that “some improvements have been made in reducing inefficiency and delays by the Major Projects Management Office. However, “real change requires a legislative and regulatory overhaul.”<sup>261</sup>

John Gingerich also raised a point about the regulatory framework presenting some issues for shipping: “every ship is looked at as an incremental issue on an environmental basis, where that just becomes a bottleneck and fails to address [...] a larger vision.” He pointed out that increased development in the north will also result in increased shipping. He suggested that the government come up with a national strategy on shipping permits in northern Canada.<sup>262</sup>

Jody Kuzenko stated that Vale wants “a regulatory environment that promotes, rather than hinders responsible and sustainable development. We support your efforts to streamline the regulatory review process and adopt a one-window approach.” She told the Committee that she agrees with the following points: “a world class regulator is one that acts on facts and scientific evidence, not the politics of the day, and takes a risk-based approach to regulation. Second, it is aligned with systems in other jurisdictions — internationally and provincially. Third, it allows for periodic reviews of its regulations to ensure that regulations on the books are relevant. Fourth, it views regulatory instruments as instruments of last resort, only for when education, awareness, and other efforts don’t work. Last, it’s a regulator that seeks to minimize administrative burden....”<sup>263</sup>

With regard to environmental assessment of resource development projects, Brennain Lloyd of Northwatch told the Committee: “we need an integrated approach, a planning approach and an environmental assessment...that looks at all of the projects over time, and looks at all the consequences of these projects.”<sup>264</sup> Ramsey Hart also said that MiningWatch Canada hopes that Canada “will pursue a strong and rigorous environmental and socio-economic review process for extractive projects”.<sup>265</sup>

According to Martin von Mirbach, the regulatory review process for offshore oil and gas activity would be less costly and time consuming if it took place in the context of previously completed regional marine spatial plan. It is also important to strengthen the circumarctic governance regime for offshore development through initiatives to create internationally binding rules on offshore Arctic oil development.<sup>266</sup>

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260 Francis Bradley, Vice-President, Policy Development, Canadian Electricity Association, *Evidence*, June 6, 2012.

261 Ibid.

262 John Gingerich, President and Chief Executive Officer, Advanced Explorations Inc., *Evidence*, October 26, 2011.

263 Jody Kuzenko, General Manager, Sustainability, Base Metals, North Atlantic Region, Vale, *Evidence*, June 21, 2012.

264 Brennain Lloyd, Project Coordinator, Northwatch, *Evidence*, December 7, 2011.

265 Ramsey Hart, Co-manager, Canada Program, MiningWatch Canada, *Evidence*, November 2, 2011.

266 Martin von Mirbach, Director, Canadian Arctic Program, World Wildlife Fund, *Evidence*, May 15, 2012.

The Honourable Michael Miltenberger expressed his concern about changes made to the *Fisheries Act*. He said that “in the north we are working hard to make sure that we maintain our ability to be as thorough as we have to be to provide reassurance and comfort to all parties [...] environmental assessment is absolutely critical to good projects moving forward.”<sup>267</sup> Peter Tapatai told the Committee that, “while our regulatory process is too long, it is important to make sure that projects are developed properly and responsibly. We Inuit care about our land, and we want to see a balance between development and protection of the environment.”<sup>268</sup>

## E. Fiscal Constraint

Several witnesses mentioned the territorial borrowing limit as a significant obstacle to funding capital projects in the north. According to Peter Mackey, the Government of Nunavut’s ability to borrow to fund its infrastructure needs is limited by its “debt cap” of \$400 million.<sup>269</sup> The Honourable Michael Miltenberger also noted that the Government of Northwest Territories has to operate within a fiscal constraint that is determined by the borrowing limit of \$800 million.<sup>270</sup> Hughie Graham told the Committee that “the ability for the Government of Canada to increase the territorial borrowing limit when necessary is certainly critical to investing in major infrastructure projects in the Northwest Territories.”<sup>271</sup> Similarly, Eberhard Scherkus pointed out that hamlets in northern Canada do not have sufficient taxation powers, which affects the municipal revenues from mining projects. According to him, improving municipal taxation powers would “help build capacity and increase local accountability.”<sup>272</sup> Kirk McKinnon, President and Chief Executive Officer at MacDonald Mines Exploration Ltd., also pointed out that doubling flow-through opportunity for a specific period of time can help stimulate investment in resource development.<sup>273</sup>

With regard to resource revenue sharing agreements, Sandy Babcock told the Committee that the Yukon currently has a cap of \$3 million, and that it needs to receive a greater share of its resource royalties. She recommended that the Government of Canada negotiates a resource revenue sharing agreement with the Yukon that would provide the territory with adequate financial capacity to address some of the demands and pressures related to resource development.<sup>274</sup> She explained that “it [resource revenue sharing

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267 Michael Miltenberger, Minister of Environment and Natural Resources, Government of the Northwest Territories, *Evidence*, June 19, 2012

268 Peter Tapatai, Representative, Hamlet of Baker Lake, *Evidence*, June 7, 2012.

269 Peter Mackey, President and Chief Executive Officer, Qulliq Energy Corporation, *Evidence*, June 5, 2012.

270 Michael Miltenberger, Minister of Environment and Natural Resources, Government of the Northwest Territories, *Evidence*, June 19, 2012.

271 Hughie Graham, President, Northwest Territories Chamber of Commerce, *Evidence*, June 12, 2012.

272 Eberhard Scherkus, President and Chief Operating Officer, Agnico-Eagle Mines Limited, *Evidence*, November 23, 2011.

273 Kirk McKinnon, President and Chief Executive Officer, MacDonald Mines Exploration Ltd., *Evidence*, February 16, 2012.

274 In August 2012, a new resource revenue-sharing agreement was signed between the Yukon and the federal governments.

agreement] would make more monies available to maintain the infrastructure,” which is experiencing increased pressure because of resource development activities and the influx of people in the territory.<sup>275</sup> Hughie Graham also noted that northern organizations like the Mine Training Society depend on the funding that comes from the resource revenue sharing agreements. However, this funding is not “backstopped by the Government of Canada...So when we don’t have funding there’s no other place to go to get more funding for that.”<sup>276</sup>

Based on the evidence outlined in this report, the House of Commons Standing Committee on Natural Resources makes the following recommendations:

### **Recommendation 1**

**The Committee recommends that the Government of Canada continue to support geoscience programs in order to improve the development prospects of northern energy and mineral resources, and specifically renew the geo-mapping for energy and minerals (GEM) program to another productive five-year term.**

**Furthermore, the Committee recommends that the Government of Canada improve the infrastructure necessary to support geoscience initiatives in northern Canada.**

### **Recommendation 2**

**The Committee recommends that the Government of Canada work to maximize the use of space-ground infrastructure in order to advance the utilization of satellite data.**

**Furthermore, the Committee recommends that the government work with the international community to harmonize geo-reference standards in order to facilitate the sharing of geoscience knowledge between countries and organizations around the world.**

### **Recommendation 3**

**The Committee recommends that the Government of Canada, where there are willing partners, accelerate its work regarding unsettled land claims in northern Canada in order to protect the rights of Aboriginal communities as well as secure the investment environment for developers in the North.**

**In particular, the Committee recommends that the government complete the implementation of the Nunavut Land Claims Agreement**

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275 Sandy Babcock, President, Yukon Chamber of Commerce, *Evidence*, June 12, 2012.

276 Hughie Graham, President, Northwest Territories Chamber of Commerce, *Evidence*, June 12, 2012.

and other land claims, including the passage of the Nunavut Planning and Project Assessment Act.

#### **Recommendation 4**

The Committee recommends that the Government of Canada increase its support to mining training initiatives, particularly for First Nations and Inuit communities, in order to help develop the labour force required to support economic diversification and mining projects in northern Canada.

#### **Recommendation 5**

The Committee also recommends that the Government of Canada continue to support research initiatives in northern Canada, in order to improve the prospects of mining development, as well as the overall economic prosperity of northern communities.

#### **Recommendation 6**

The Committee recommends that the Government of Canada continue to address infrastructure challenges in northern Canada, particularly with regard to transportation and energy infrastructure, in order to improve the region's economic development potentials.

To facilitate the development of nuclear energy technology in Canada and harmonize nuclear energy liability terms with international standards, the Committee recommends that the Government of Canada ratify the Convention on Supplementary Compensation for Nuclear Damage.

#### **Recommendation 7**

The Committee recommends that the Government of Canada work towards clarifying the duty to consult policy, in order to improve Aboriginal consultation and engagement in resource development projects.

#### **Recommendation 8**

The Committee recommends that the Government of Canada continue to support capacity-building and infrastructure in northern communities, in order to help them meet the growing demand for essential services and improve community access.

Moreover, the Committee recommends that the Government of Canada continue to analyze territorial borrowing limits to determine if the current levels are appropriate to meet the current needs.

### **Recommendation 9**

**The Committee recommends that the Government of Canada work towards reducing inefficiency and delays in the current regulatory process, in order to improve prospects of northern resource development.**

**In particular, the Committee recommends that the Government of Canada work with provincial governments to harmonize the federal and provincial regulatory processes, in order to avoid duplication.**

### **Recommendation 10**

**The Committee recommends that the Government of Canada provide support to the Territories, in order to help improve their regulatory institutional capacity for reviewing resource development projects.**

# REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant Minutes of Proceedings ([Meetings Nos. 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 26, 27, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 49, 50, 51, 53, 54 and 55](#)) is tabled.

Respectfully submitted,

Leon Benoit, M.P.

Chair



## APPENDIX A LIST OF WITNESSES

Organizations and Individuals	Date	Meeting
<p><b>Department of Natural Resources</b></p> <p>Anil Arora, Assistant Deputy Minister Minerals and Metals Sector</p> <p>Ginny Flood, Director General Minerals, Metals and Materials Policy Branch</p> <p>Patrick O'Neill, Director General Explosives Safety and Security Branch</p>	2011/10/03	5
<p><b>Canadian Environmental Assessment Agency</b></p> <p>Helen Cutts, Vice-President Policy Development Sector</p> <p>John McCauley, Director Legislative and Regulatory Affairs Division</p>	2011/10/05	6
<p><b>Department of Justice</b></p> <p>Michael Hudson, Deputy Assistant Deputy Attorney General</p> <p>Joanne Kellerman, General Counsel and Executive Director</p>		
<p><b>Canadian Northern Economic Development Agency</b></p> <p>Mitch Bloom, Vice-President Policy and Planning</p> <p>Donald James, Director General Northern Projects Management Office</p>	2011/10/17	7
<p><b>Department of Indian Affairs and Northern Development</b></p> <p>Sara Filbee, Assistant Deputy Minister Lands and Economic Development</p> <p>Janet King, Assistant Deputy Minister Northern Affairs Organization</p>		
<p><b>Department of Natural Resources</b></p> <p>Brian Gray, Assistant Deputy Minister Earth Sciences Sector</p> <p>John Percival, Program Manager Geomapping for Energy</p> <p>Linda Richard, Coordinator Geomapping for Energy and Minerals</p> <p>David J. Scott, Director Geological Survey of Canada Northern Canada Division</p>	2011/10/19	8

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<p><b>Canadian Space Agency</b> Chummer Farina, Vice-President Steve MacLean, President</p>	2011/10/24	9
<p><b>Geomatics Industry Association of Canada</b> James Ferguson, Chair and Acting President</p>		
<p><b>Prospectors and Developers Association of Canada</b> Scott Cavan, Program Director Aboriginal Affairs Richard Moore, Chair Geosciences Committee</p>		
<p><b>Advanced Explorations Inc.</b> John Gingerich, President and Chief Executive Officer Bernie Swarbrick, Vice-President Capital Projects and Studies</p>	2011/10/26	10
<p><b>Diamonds North Resources Ltd.</b> Mark Kolebaba, President and Chief Executive Officer</p>		
<p><b>Gedex Inc.</b> Keith Morrison, Chief Executive Officer</p>		
<p><b>Coalition pour que le Québec ait meilleure mine</b> Ugo Lapointe, Cofounder</p>	2011/10/31	11
<p><b>Saskatchewan Mining Association</b> Gary Merasty, Member Pamela Schwann, Executive Director Tammy Van Lambalgen, Member Vice-President, Regulatory Affairs and Legal Counsel, AREVA Resources Canada Inc.</p>		
<p><b>Mining Association of Canada</b> Pierre Gratton, President and Chief Executive Officer Rick Meyers, Vice-President Technical and Northern Affairs</p>	2011/11/02	12
<p><b>MiningWatch Canada</b> Ramsey Hart, Co-Manager Canada Program</p>		

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<p><b>Department of Natural Resources</b></p> <p>Brian Gray, Assistant Deputy Minister Earth Sciences Sector</p> <p>Donna Kirkwood, Acting Director General Geological Survey of Canada, Central and Northern Canada</p> <p>John Percival, Program Manager Geomapping for Energy</p> <p>Linda Richard, Coordinator Geomapping for Energy and Minerals</p>	2011/11/16	13
<p><b>Avalon Rare Metals Inc.</b></p> <p>Donald S. Bubar, President and Chief Executive Officer</p> <p><b>Canadian Zinc Corporation</b></p> <p>John F. Kearney, Chairman and Chief Executive Officer</p> <p><b>Fortune Minerals Limited</b></p> <p>Robin E. Goad, President</p> <p>Richard Schryer, Director Regulatory and Environmental Affairs</p> <p><b>Mine Training Society</b></p> <p>Hilary Jones, General Manager</p>	2011/11/21	14
<p><b>Agnico-Eagle Mines Limited</b></p> <p>Eberhard Scherkus, President and Chief Operating Officer</p> <p><b>Inuit Tapiriit Kanatami</b></p> <p>John Cheechoo, Director</p> <p>John Merritt, Senior Policy Advisor</p> <p><b>Newmont Mining Corporation</b></p> <p>Tara Christie, Senior Advisor External and Government Affairs, Hope Bay Mining Ltd</p> <p>Chris Hanks, Vice-President Environmental Affairs, Hope Bay Mining Ltd.</p> <p><b>NWT and Nunavut Chamber of Mines</b></p> <p>Lawrence Connell, Vice-President</p> <p>Tom Hoefer, Executive Director</p> <p>Brent Murphy, Director</p>	2011/11/23	15

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>Government of New Brunswick</b> Sam McEwan, Assistant Deputy Minister Department of Natural Resources	2011/11/30	17
<b>Québec Mining Association</b> Jean-Claude Belles-Isles, Director Environment Benoît Longchamps, Economist Dan Tolgyesi, President and Chief Executive Officer		
<b>Gem Steel Edmonton Ltd.</b> Bradley Gemmer, President	2011/12/05	18
<b>Trinity Helicopters</b> Glen Sibbeston, Chief Pilot		
<b>Northwatch</b> Brennain Lloyd, Project Coordinator	2011/12/07	19
<b>Yukon Chamber of Mines</b> Claire Derome, President		
<b>Cliffs Natural Resources Inc.</b> William Boor, Senior Vice-President Global Ferroalloys	2012/02/14	26
<b>Matawa First Nations</b> Raymond Ferris, Coordinator Ring of Fire		
<b>Nishnawbe Aski Nation</b> Les Louttit, Deputy Grand Chief		
<b>White Tiger Mining Corp.</b> Ronald Coombes, President		
<b>AurCrest Gold Inc.</b> Ian A. Brodie-Brown, President and Chief Executive Officer	2012/02/16	27
<b>City of Greater Sudbury</b> David Kilgour, Councillor Ian Wood, Director Economic Development		
<b>MacDonald Mines Exploration Ltd.</b> Kirk McKinnon, President and Chief Executive Officer		
<b>Marten Falls First Nation</b> Elijah Moonias, Chief		

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<p><b>Noront Resources Ltd.</b>  Wes Hanson, President and Chief Executive Officer  Olya Yousefi, Manager  Corporate Communication</p>	2012/02/16	27
<p><b>Alberta Federation of Labour</b>  Gil McGowan, President</p> <p><b>Department of Indian Affairs and Northern Development</b>  Michel Chenier, Director, Policy and Research  Northern Oil and Gas Branch  Mimi Fortier, Director General  Northern Oil and Gas Branch</p>	2012/05/10	39
<p><b>Babcock &amp; Wilcox Canada Ltd.</b>  Christopher Deir  Manager, Babcock and Wilcox Canada  Christofer Mowry  President, Babcock and Wilcox mPower Inc.</p> <p><b>Canadian Nuclear Safety Commission</b>  Michael M. Binder, President and Chief Executive Officer  Barclay D. Howden, Director General  Directorate of Regulatory Improvement and Major Projects Management  Patsy Thompson, Director General  Directorate of Environmental and Radiation Protection and Assessment</p> <p><b>World Wildlife Fund (Canada)</b>  Martin von Mirbach, Director  Canadian Arctic Program</p>	2012/05/15	40
<p><b>Canadian Electricity Association</b>  Francis Bradley, Vice-President  Policy Development</p> <p><b>Qulliq Energy Corporation</b>  Peter Mackey, President and Chief Executive Officer</p> <p><b>Regional Municipality of Wood Buffalo</b>  Melissa Blake, Mayor</p>	2012/06/05	41
<p><b>City of Dawson</b>  Peter Jenkins, Mayor</p> <p><b>Hamlet of Rankin Inlet</b>  Pujjuut Kusugak, Mayor</p>	2012/06/07	42

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>Hamlet of Baker Lake</b> Peter Tapatai, Representative	2012/06/07	42
<b>Northwest Territories Chamber of Commerce</b> Hughie Graham, President	2012/06/12	43
<b>Yukon Chamber of Commerce</b> Sandy Babcock, President		
<b>Government of Nunavut</b> Robert Long, Deputy Minister Department of Economic Development and Transportation Peter Taptuna, Minister of Economic Development and Transportation	2012/06/19	44
<b>Government of the Northwest Territories</b> Michael Miltenberger, Minister of Environment and Natural Resources		
<b>As an individual</b> Ginger Gibson MacDonald, Adjunct Professor Norman B. Keevil Institute of Mining Engineering, University of British Columbia		
<b>Diavik Diamond Mines Inc.</b> Gordon Macdonald, Principal Advisor Sustainable Development	2012/06/21	45
<b>Ecojustice Canada</b> William Amos, Director University of Ottawa - Ecojustice Environmental Law Clinic		
<b>Mining Association of British Columbia</b> Karina Briño, President and Chief Executive Officer		
<b>Vale</b> Jody Kuzenko, General Manager Sustainability, Base Metals, North Atlantic Region		

## **APPENDIX B LIST OF BRIEFS**

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### **Organizations and individuals**

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Advanced Explorations Inc.

Canadian Manufacturers and Exporters

Canadian Space Agency

Canadian Zinc Corporation

Fortune Minerals Limited

Gedex Inc.

Geomatics Industry Association of Canada

Land Claims Agreements Coalition

MacDonald Mines Exploration Ltd.

Matawa First Nations

Mine Training Society

Newmont Mining Corporation

Nishnawbe Aski Nation

Noront Resources Ltd.

NWT and Nunavut Chamber of Mines

Québec Mining Association

Yukon Chamber of Mines



## **Official Opposition – New Democratic Party of Canada**

### **Dissenting opinion to the Study on Natural Resource Development in Northern Canada**

New Democratic members of the Standing Committee recognize the critical importance of natural resources to the economic development and future success of Canada's North. While the majority Report on *The Development of Natural Resources in Northern Canada* describes some of the challenges and recommendations heard by the Committee, New Democrat members of the Standing Committee on Natural Resources regret that the following key issues have been ignored or inadequately addressed in this report.

(1) The omission of key Aboriginal groups as witnesses in Committee is offensive, unjustifiable, and impoverishes the contribution of the majority report; (2) The vital need for infrastructure in Northern and remote communities is not adequately framed and represented; (3) Environmental concerns and the ramifications of recent dramatic changes to environmental legislation by the Conservative government have not been addressed; (4) The question of training and capacity-building in Northern communities is lacking and (5) There is no reference to the necessity of developing a national mining strategy.

The majority report systematically ignores the principles of economic, environmental, and social sustainability. The Committee did not hear from a full range of witnesses; the contribution of certain witnesses was not adequately represented. Therefore, the report is unbalanced and incomplete.

#### **1. Aboriginal involvement**

The majority report clearly suffers from the failure to seek input from aboriginal witnesses through the course of the study. During hearings on socioeconomic matters, the Committee was unable to hear from several Aboriginal groups that could have provided valuable input on the key issues of training, Aboriginal participation in northern development projects, and the environment. Nonetheless, various groups had been identified for the Committee's study, such as the Assembly of First Nations, Land Claims Agreement Coalition and Nishnawbe Aski Nation.

The NDP is disappointed that the majority of the Committee did not pursue extensive consultations with Aboriginal groups; and that, as a result, the majority report does not seriously address the concerns of Northern Aboriginal communities and nations. The majority recommendations address several issues concerning Aboriginal communities by approaching these communities from the top down. They suggest making general improvements to infrastructure and training entirely based on natural resources extraction, without considering a comprehensive approach to economic development. There are approximately 1200 Aboriginal communities within 200 Km of mines and exploration properties. The report fails to clarify the imperative of forming lasting partnerships with Northern communities.

This, in addition to the narrow scope from which this document was developed, is an example of how the Conservative government falls short with regards to its duty to consult and to accommodate Aboriginal communities and nations in the North.

The substance and recommendations of the majority report does not address critical issues such as revenue sharing, benefit sharing, resource access, or legacy measures, which are important to creating useful partnerships for the sustained development of Northern natural resources.

Beneficiaries of resource wealth should include people in the communities where the resources originate and these communities should be part of the decisions that have a direct impact upon them as equal partners in

decision-making and of proceeds from local resources. It is the responsibility of the Federal Government to meaningfully engage with Aboriginal peoples and ensure they are involved in all aspects and at all levels of resource development decisions.

**New Democrat Committee members recommend that the Government of Canada acknowledge its constitutional duty to consult and accommodate Aboriginal people's concerns with respect to natural resource development.**

An Action Plan should be developed detailing how existing programs can be retooled to include First Nations peoples at all levels and stages of natural resource development. Aboriginal communities affected by natural resources development projects should be engaged on a government-to-government basis and consulted on where it is built, how it is developed, what safeguards are put in place to protect their community and habitat.

**New Democrat Committee members recommend that the Government of Canada work with industry and with Aboriginal governments to ensure full Aboriginal participation in decision-making and in the employment and other economic benefits accruing from resource development in the North.**

The Committee heard testimony of the positive impacts of settled land claims on economic development for aboriginal communities. Two examples of Aboriginal businesses resulting from settled land claims are The Inuvialuit Development Corporation, which operates a logistics company, an airline, a construction company and an oil field logistics company and the Gwich'in Development Corporation, which operates a pipeline company, a construction company, an oilfield services company, a number of real estate and property management companies, a hotel and a helicopter company. The GDC is also a partner in Larga Limited which operates a logistics company with two other Aboriginal corporations the Nunasi Corporation and the Kitikmeot Development Corporation also result from settled land claims.

Another successful example is the Manitoba Keewatinowi Okimakanak First Nation (MKO) group which is building partnerships with businesses for projects such as the \$19 billion Manitoba Hydro dam project, Custom Helicopter Ltd to create Piminawin Ltd, and The North West Company to create Muskehi Distributors Inc.

The Committee also heard testimony from industry about the importance of settling outstanding land claims in order to provide greater certainty for resource development investments in Canada. Too often, the Federal government has not been sufficiently engaged and companies have been left to attempt consultation and negotiation with Aboriginal groups on their own; this, in spite of the fact that the courts have established it as a federal responsibility.

**New Democrat Committee members recommend that the Government of Canada devotes the necessary resources and political will to settle outstanding land claims with the Aboriginal communities of Northern Canada in order to facilitate and guarantee their meaningful participation in the responsible development of the natural resource sector and provide greater certainty for investors.**

## **2. Infrastructure Development**

Numerous witnesses stressed the fact that the lack of infrastructure was the main barrier preventing continued economic development in their region. The majority report ignores that the Federal government has the necessary tools to address infrastructure problems in the North.

The question of infrastructure development is intimately linked with that of effective financing mechanisms to allow Northern jurisdictions the ability to build the infrastructure that they require. Resource revenue sharing

mechanisms should be grounded in the financial realities of resource development in the North. Nunavut and the Northwest Territories are the only two jurisdictions in Canada without control of their own over land, water and non-renewable natural resources. The Committee heard that structural challenges and inadequate support from the Federal government prevent the Territories from building the infrastructure they need.

There are many unaddressed critical needs for infrastructure development. For instance, Nunavut does not have one single port to ship goods to market. Rankin Inlet is desperately facing a severe housing shortage that leads to overcrowding, and health and other well-being issues.

Major consideration should be given to financing capacity. Peter Mackey of the Quilliq Energy Corporation spoke about the current \$400 million debt cap facing the government of Nunavut, which is too low to allow the territory to switch to cleaner fuels like hydro and renewables. Financial institutions are ready to help Nunavut switch to cleaner energies, but the Federal government's current policies do not allow Northern governments to borrow the required capital to invest in renewable energy, cleaner fuels and smart grids.

**New Democrat committee members recommend that the Government of Canada increase the territorial borrowing limit to help the Territories mobilize additional funding for infrastructure projects.**

The Regional Municipality of Wood Buffalo is seeking federal support for their airport evaporate at precisely the moment they need it the most to deal with an exploding population. The government is quick to boast of the benefits that the oil sands contribute to the Canadian economy, but they are slow to invest resources to create strong and sustainable communities in the North. The costs of not investing in our Northern infrastructure are severe and this report ignores the growing infrastructure deficit.

**New Democrat Committee members recommend that the government undertake a comprehensive review of all financial mechanisms used to fund infrastructure in the North, including borrowing powers of territories, resource revenue sharing, taxation powers, royalty rates and other federal transfer funds.**

### **3. Environmental Protection**

It is time to stop taking a case-by-case approach: The New Democrat Committee members wish to express their concern and disapproval regarding the Conservative government's recent introduction of numerous amendments to the environmental assessment process. In particular, the government has used omnibus budget bills C-38 and C-45 to introduce exemptions for major projects and provisions allowing the Minister of Environment to limit the scope of assessments. In addition, amendments were made to many existing laws that contradict the principles of sustainable development (*Fisheries Act, Navigable Waters Protection Act, etc.*).

While the Federal government seems ideologically driven to eliminate all environmental protection mechanisms, we believe it is possible to develop the North in a responsible and sustainable manner and still allow Northern communities to maintain their traditional way of life. We propose that the Canadian government develop a strategic environmental assessment (SEA) plan that would allow the scope and type of environmental and socioeconomic impacts to be assessed in advance of any project.

**In accordance with the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*, the New Democrat members of the Committee recommend that the government take a Strategic Environmental Evaluation approach to guide resource development in Canada's Arctic prior to issuing any licenses in Canada's Arctic.**

We believe this is particularly important to ensure that future exploration and development activities are properly structured, especially hydrocarbon development in northern offshore environments. The primary purpose would be to enable governments to gather the necessary information *before* deciding whether exploration should be allowed in new areas. We believe that the SEA would reduce uncertainty for proponents and encourage investment.

William Amos, Director of the University of Ottawa's environmental law clinic and of Ecojustice Canada, summed up our point of view eloquently during his appearance before the Committee on June 21, 2012:

*"In Canada the environmental assessment process has kicked in once the actual exploration activities are beginning. I would suggest that the uncertainty that this generates for industry and particularly for communities is significant. At the stage of the issuance of licences there needs to be a full strategic environmental assessment of whether offshore drilling should go ahead in a particular area, well before significant investments are made to prepare for exploration activities. This way capital wouldn't be paralyzed and decisions by those communities up north could be made at a much earlier phase, so that they could determine that over here is not an area where they want to be drilling, and over there, potentially, yes." (June 21, 2012)*

This government's rush to overhaul environmental legislation may actually lead to more court challenges and greater uncertainty for business and communities. It is also revealing to note that *none* of the majority recommendations make any reference to sustainable development.

It is important to ensure that the Aboriginal communities and governments involved have the right to review project proposals by mining companies before they are implemented so that problems or negative impacts can be prevented, as Dr. Ginger Gibson MacDonald highlighted in her testimony to the Committee.

The Committee also heard about the potential for renewable electricity generation to beneficially transform the experiences of communities and resource projects which are currently largely dependent on imported diesel. In light of this significant environmental and economic challenge faced by Northern Canadians, New Democrats regret that the Conservative Government has ended all federal support for renewable wind and solar power in Canada. Nevertheless, territorial governments and industry recognize the potential of renewable technologies for northern and remote communities.

Hon. Michael Miltenberger, Minister of Environment, and Government of the Northwest Territories: *"We are making what are for us very substantial investments in biomass, geothermal, solar, and wind. We see these as critical developments that are going to allow us to in fact have a sustainable cost of living in the North and a cost of doing business so that businesses can come in and run their businesses in an environmentally sustainable way that's affordable." (June 19, 2012)*

Francis Bradley, VP Canadian Electricity Association: *"An example of a really innovative project that may have application elsewhere is a project that Newfoundland and Labrador Hydro has been working on, specifically for remote communities served by diesel. This is a project called Ramea. What they've been doing is integrating wind, hydrogen production, and diesel. It's an example of an innovative approach. In effect, when the wind is blowing, and it's producing more electricity than required by the remote community, excess electricity is used to produce hydrogen. Then when the wind isn't blowing, the hydrogen is used to produce electricity." (June 5, 2012)*

The Federal Government should be a supportive partner to initiatives by territorial governments and industry to develop renewable energy in the north.

**The New Democrats support the active and effective promotion of renewable energy sources as a key element of the sustainable development of areas in the Far North.**

New Democrat committee members also note the significant cuts made by the Conservatives to scientific capacity. The closure of the PEARL arctic research station and significant cuts to the Canadian Space Agency will harm Canada's ability to manage environmental challenges and resource development opportunities in the North.

**The New Democrat members of the Committee recommend that the Government of Canada cancel cuts to scientific research programs, particularly the Canadian Space Agency, so as not to hinder funding decisions or mortgage the development of the North's energy and mineral resources.**

#### **4. Training, Skills Development and Employment Equity**

Northern Canadians have long suffered from an inequality of access to training and education opportunities compared to Canadians living in more populated Southern areas. This has had a negative impact on the economic outcomes of people living in the North and it has created challenges for companies looking to fill skilled positions in resource development projects in Northern regions.

Providing more local training and education, or the opportunities to access them, is essential and a key driver of development. By refusing to treat Aboriginal needs and concerns as a priority and by failing to adequately invest in developing skills amongst the northern population, the Government is perpetuating a cycle of poverty and marginalisation that has developed in Northern Canada. This means that there is less incentive to return for the few who do pursue educational opportunities elsewhere. Comprehensive training and skills development across all segments of society will be vital for success and social sustainability in Canada's North. It's a win-win for the region and its people.

*"The Northern Aboriginal population, and the Aboriginal population in particular, could fill as many as 400,000 of the one million jobs that are expected to be vacant in Canada by 2025."* Ginger Gibson Macdonald, Adjunct Professor at Norman B. Keevil Institute of Mining Engineering UBC (June 19, 2012)

The Government of Canada should be engaging First Nations and other local communities to encourage full and meaningful participation in resource projects as skilled labourers, managers, professionals and decision-makers. Improving training would address the lack of access to skilled labour, particularly from the regions where the projects are situated.

The Committee heard that training and education initiatives should not be narrowly focussed on the needs of mining projects but should contribute to the development of broad skills required to achieve sustainable economic development within northern communities.

As John Cheechoo of Inuit Tapirit Kanatami says: *"Educational attainment doesn't just focus on the industry [but] it should focus on different sectors --- health, public sector jobs, private sector jobs, having your own enterprise... Also, we need the ability to move from one region to the next to apply our skills. [Educational attainment] should provide for people to move to different places for job opportunities and to apply their skills."* (November 23, 2012)

Melissa Blake, Mayor Regional Municipality of Wood Buffalo: *"An independent monitoring institute or facility would further show the federal and provincial governments' commitment to the environment and offer us a unique opportunity to diversify our economic base into a knowledge base."* (June 5, 2012)

Based on the testimony the Committee heard, it is clear that the Federal Government has failed to play its role in improving skills training and educational outcomes in Northern Canada.

**New Democrat members of the Committee recommend that the Federal Government demonstrate a greater commitment to training and education in Northern Canada and that educational attainment should have a broad target range and not be directed solely at mining workers.**

Training for prospective Aboriginal workers should begin years before a mine opens, and continue as mining proceeds. With the Ring of Fire mine scheduled to open in 2015-2016, the Federal Government needs to identify other government, Aboriginal and business partners to invest now in training in Northern Ontario. **The successful *Aboriginal Skills and Employment Partnership* program which was cancelled by the Conservative government should be renewed.**

#### **5. A National Mining Strategy**

The case study of the massive Ring of Fire mining project in Northern Ontario illustrates many of the challenges facing the development of Northern resources, which the majority report properly addresses. However, the report does not acknowledge the necessity of developing a Canadian Mining strategy to optimize development of this industry and maximize its benefits on local communities as recommended by key witnesses, including the City of Sudbury:

*“More than ever before, Canada requires a national mining strategy, a policy framework that recognizes the high-tech, research-driven nature of modern mining and positions the resource-rich areas of our country to realize maximum benefits from the riches under their feet.”* (David Kilgour, City of Sudbury, February 16, 2012)

**New Democratic members of the Committee recommend that a Joint Review Panel should proceed on the environmental and related consequences of the Ring of Fire mining project, as called for by the First Nations communities.**

**Furthermore, we recommend that the Government of Canada work with the Aboriginal communities, other levels of government, industry, and other stakeholders to develop a national mining strategy. This strategy should support Canada’s strategic interests and ensure that Canadian workers and their communities would be the primary beneficiaries of our natural resources.**

Canada Northern regions are blessed with an abundance of natural resources that, if guided by the principles of sustainable development, can be managed in a way that protects our environment and ways of life while providing economic benefits for generations to come.



**Peter Julian, MP**  
**Burnaby-New Westminster**



**Jamie Nicholls, MP**  
**Vaudreuil-Soulanges**



**Claude Gravelle, MP**  
**Nickel Belt**



**Lauren Liu, MP**  
**Rivière-des-Mille-Îles**