Mining and communities in the Arctic: lessons from Baker Lake, Canada

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Abstract: In this paper, we explore mining in Arctic Canada from the perspective of the people on the communities there, in particular the Inuit, the pre-colonial people of the area. To do so, we first provide a brief overview of the history of mining in Canada including recent incursions into Nunavut. Then, we examine the place of aboriginal people including the Inuit in the modern global economy. We focus on their desire to participate in this economy on their own terms, meaning the respect of traditional land rights, and the respect and incorporation of traditional environmental knowledge, culture, values and practices in economic activities. Following this, we examine aboriginal land rights and settlement in Northern Canada. After this is done, we go on to consider the particular case of Baker Lake in Nunavut. Finally, we draw some conclusions from the case that can be generalised to other communities in the Arctic.

Keywords: aboriginal rights; Arctic; Baker Lake; mining; Nunavut; subsistence self-employment.


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1 Introduction

Canada has a long history of mineral extraction. Before the arrival of Europeans, indigenous people used copper from the Coppermine River to make tools and weapons. In 1846, commercial production was initiated to the east of Sault Ste. Marie. In 1875, the United States Navy began operated a mine producing graphite and mine at Cumberland Sound, on Baffin Island.

In 1883, during the construction of the Canadian Pacific Railway (CPR), copper and nickel were discovered in the vicinity of Sudbury, Ontario. For decades copper was used in the production of Canadian pennies. Until 1920, the large Canadian penny was made of 95.5% copper, 3% tin and 1.5% zinc. In 1920, the small Canadian penny was introduced; between 1942 and 1996 its composition was 98% copper, 0.5% tin and 1.5% zinc. From 1997 to 1999 the Canadian 1-cent coin was made of 98.4% zinc with 1.6% copper plating, and thereafter of 94% steel, 1.5% nickel and 4.5% copper plating. The 1-cent coin has since been phased out of circulation in Canada.

Figure 1  Former mining town in the province of Quebec (see online version for colours)

Source: Photograph by Léo-Paul Dana
Today, iron ore, gold, potash, diamonds, uranium and zinc are important resources in Canada, as are copper and nickel. Canada has been using nickel to produce 5-cents coins since 1922. Mining in Canada is primarily export oriented.

During the 1920s, prospectors began using airplanes resulting in valuable discoveries in the Canadian North; Pierce (1994) noted that some of the mines operated until the latter part of the 20th century. Others were closed and what remains of them are ghost towns (see Figure 1).

Given that mines require accessibility, most mines were traditionally located along transportation routes (Lucas, 1972). Almost half of the nickel used to make allied artillery during WWI came from Sudbury, Ontario, in southern Canada (see Figure 2). Over time, more and more mines were established in less accessible places, even in the Canadian Arctic.

**Figure 2** Sudbury (see online version for colours)

The year 1951 saw the first flight of the de Havilland Canada DHC-3 Otter (see Figure 3); the first production aircraft of this type was delivered to Hudson Bay Mining & Smelting Ltd., owned by the Whitney family (Mochoruk, 2004). During the 1950s and 1960s, mines were developed at: Labrador City, Newfoundland; Rankin Inlet, Northwest Territories (NWT); Schefferville, Quebec; and Wabush, Newfoundland (see Figure 4 and Figure 5). Labrador City is still known as ‘the iron ore capital’ (see Figure 6).

In 1976, Nanisivik Mine became Canada’s first mine north of the Arctic Circle, in that which is now Nunavut, traditionally homeland of the Inuit. By the early 21st century, natural resource enterprises supported more than 650 Canadian communities and according to Industry Canada this accounts for 12% of Canada’s gross domestic product (Missens et al., 2007).
Figure 3  de Havilland Canada DHC-3 Otter (see online version for colours)

Source:  Photograph by Léo-Paul Dana

Figure 4  Open-pit mining at Wabush Mines (see online version for colours)

Source:  Photograph by Léo-Paul Dana
Figure 5  Transporting iron ore (see online version for colours)

Source: Photograph by Léo-Paul Dana

Figure 6  Iron ore capital (see online version for colours)

Source: Photograph by Léo-Paul Dana
The focus of the present article is mining in the area of Baker Lake, in the Kivalliq region of Nunavut – corresponding to that which was until 1999 the District of Keewatin in Canada’s NWT. Near Baker Lake is the Meadowbank gold mine, the only operating mine in Nunavut at the time of writing, in 2013. While the mine is a source of jobs for Inuit of the nearby community of Baker Lake, mining “has historically been a source of contention in the community of Baker Lake, primarily because of the impacts exploration activities have had on the harvesting economy and the anticipated impacts of some extractive activities on both harvesting and community health” [Bernauer, (2010), p.11].

In the next section, we examine issues related to land and resources, which have emerged to provide the Inuit (and other aboriginal people in Canada) the capital to demand the right to participate in the global economy, and to negotiate the terms of such participation.

2 Communities, land settlements and resources in northern Canada

In 1870, the Hudson’s Bay Company sold Rupert’s Land and the North-Western Territory to the Dominion of Canada. These were merged to create the NWT, which then included that which is now Nunavut and also northern Quebec. In 1880, London transferred sovereignty in the Arctic to Canada. This included the Arctic islands as well as mainland; a few years later, the establishment of North West Mounted Police posts across the Canadian Arctic symbolised government presence.

Boas (1888) pioneered research about the Central Inuit, which Birket-Smith (1959) distinguished from other geographic groups, namely the Alaskan and the Greenland groups. While KajBirket-Smith’s writings are historically important, nowadays, his classifications are not accepted by the Inuit.

During the early 20th century, the literature distinguished among five regional subgroups of Central Inuit:

1 the Baffin Island Inuit
2 the Caribou Inuit
3 the Copper Inuit
4 the Iglulik
5 the Netsilik

After 1936, Inuit affairs in Canada were administered by the Department of Mines and Resources (Anderson, 2006). In 1950, Inuit gained the right to vote in federal elections, but First Nations would be denied voting for another decade; meanwhile, a 1951 amendment to the Indian Act specifically stated that “an Indian does not include any person of the race of aborigines commonly referred to as Eskimos” [Anderson, (2006), p.192]. The Department of Indian Affairs and Development was created in 1966, taking over the responsibility for the administration of Inuit affairs, while Inuit housing was administered by the NWT Housing Corporation.

Geographically and politically, there are four Inuit groupings in Canada today:

1 he Nunavummiut in Nunavut (descendants of the Baffin Island Inuit, the Caribou Inuit, the Copper Inuit, the Iglulik, and the Netsilik)
Recent decades have witnessed the negotiations of various land settlements between the Government of Canada and Inuit people:

1. In 1971, the provincial Government of Quebec announced its intention to develop a hydroelectric project flowing into James Bay, a project developed with no consultation with the aboriginal people who had lived in the area for thousands of years. Concerned about impact on wildlife upon which people depended, the Northern Quebec Inuit Association and the Grand Council of the Cree of Quebec took the provincial government to court to stop development. In 1973, the Inuit and Cree won an interlocutory injunction. In 1975, the James Bay and Northern Quebec Agreement was finalised for northern Quebec. Makivik was instituted in 1978 and has since served as the regional development corporation with the mandate to protect the rights, interests and financial compensation provided by the agreement; for a discussion of Makivik, see Dana (1996).

2. In 1977, the Committee of Original Peoples’ Entitlement submitted a land claim on behalf of approximately 4,500 Inuvialuit living in six communities in and around the mouth of the Mackenzie River (Anderson et al., 2005); negotiations culminated in the Inuvialuit Final Agreement, in May 1984, allowing the Inuvialuit title to “91,000 km² of land, 13,000 km² with full surface and subsurface title” [Frideres, (1998), p.118].

3. In 1993, the Nunavut Land Claims Agreement was reached for the eastern Arctic. The Nunavummiut have legal title to 352,191 square kilometres of land, of which 37,000 square kilometres include mineral rights vested in Nunavut Tunngavik Incorporated, the Inuit corporation responsible for implementing the Nunavut Land Claims Agreement, with the mandate to safeguard, administer and advance the rights and benefits of the Inuit in Nunavut. Its mining policy stresses a desire to work in partnership with the exploration and mining sector to foster an efficient and profitable industry that respects the environment, wildlife and Inuit culture, and its management rules make it easy to explore and mine on Inuit lands, including the ability to acquire exploration rights without having to stake. In 1999 the eastern Arctic broke off from the NWT and became Nunavut, with Iqaluit as territorial capital. Suluk and Blakney (2008) discussed some of the situations, government policies, and Inuit perceptions of the Nunavut Land Claims Agreement.

4. In 2005, the Labrador Inuit Association and the governments of Canada and Newfoundland and Labrador concluded 28 years of negotiations by signing the Labrador Inuit Land Claims Agreement (Alcantara, 2007). This granted Labrador Inuit legal title to 72,520 square kilometres in Nunatsiavut, and mineral rights to 15,800 square kilometres of land. The Nunatsiavut Government officially came into being on December 1, 2005, and has since been responsible for economic development, planning, preserving Inuit culture and implementing social programmes.
5 The Governments of Canada and Nunavut and Makivik Corporation, an organisation that represents about 10,000 Nunavimmiut (Inuit from Nunavik, northern Quebec) signed the Nunavik Inuit Land Claims Agreement on December 1, 2006 (Department of Indian Affairs and Northern Development, 2007).

3 The Kivalliq region of Nunavut

The aboriginal people, who lived west of Hudson Bay on the barren lands now known as Kivalliq, traditionally relied heavily on the barren-ground caribou for food, tools, and raw materials for clothing and shelter. These people were therefore given the name Caribou Eskimo, by the Fifth Thule Expedition of 1921-1924. Many descendants of Caribou Inuit now reside in the village of Baker Lake.

Kivalliq is rich with gold and other mineral deposits. In 1928, R.G. Johnston discovered an ore body at Rankin Inlet (Meis-Mason et al., 2009). During the 1930s, the Knight Prospecting Syndicate and Nippising Mines (not to be confused with Nipissing Mines of Ontario) drilled for diamonds in this area (Dailey and Dailey, 1961).

Increased use of nickel, coupled with the high price of nickel during the Korean War and the discovery of nickel at Rankin Inlet, prompted the establishment of Rankin Inlet Nickel Mines, the name of which was changed in 1954, to North Rankin Nickel Mines (Meis-Mason et al., 2009). Dailey and Dailey wrote, “Although construction of the mine was begun in the year 1953, local Eskimo labour was not utilized in the development until the spring of 1956 (1961, p.4)”. In 1955, at the head of the inlet, a community was established with the same name – Rankin Inlet. The mine introduced a wage economy to the region and Hughes reported, “In 1957–58 some 320 Eskimos from Eskimo Point and Chesterfield Inlet (on the west coast of Hudson Bay) moved to Rankin Inlet, where in 1959, 107 were working in the nickel mine” [Hughes, (1965), p.16]. The North Rankin Nickel Mine closed in 1962.

Immediately west of Hudson Bay, the seven communities of the Kivalliq region of Nunavut are:

1 Arviat¹⁵ (known as Eskimo Point until 1989)
2 Baker Lake (Qamani’tuaq in Inuktitut), which is Nunavut’s only inland community
3 Chesterfield Inlet (Igluligaarjuk in Inuktitut)
4 Coral Harbour¹⁶ (Salliq in Inuktitut)
5 Rankin Inlet¹⁷ (Kangiqliniq in Inuktitut)
6 Repulse Bay¹⁸ (Nanijaarín Inuktitut)
7 Whale Cove (Tikirarjuaq in Inuktitut).

In 2013, one mine was in operation in Nunavut, Agnico-Eagle’s Meadowbank gold mine near Baker Lake.
4 Baker Lake

Baker Lake is situated near the geographical centre of Canada, and is surrounded by barren tundra, 320 kilometres inland from the western shore of Hudson Bay. It was named for Sir William Baker a governor of Hudson’s Bay Company.

Concerned about Canadian sovereignty and the unchecked activities of whalers\(^{19}\) in Hudson Bay, in 1903, the Government of Canada established the first eastern Arctic police post, at Hudson Bay. Before a trading post was established near Baker Lake, Caribou Inuit would travel as far as Fort Churchill (Richardson, 1852; West, 1824) and further west to Brochet on Reindeer Lake (Janes, 1973) to trade.

Promoting white fox trapping among the Inuit, the Hudson’s Bay Company opened a permanent trading post at the east end of Baker Lake during 1914 (Damas, 2002). As demand for furs escalated, the people of the Baker Lake area began trapping fox as part of their harvesting activities in order to trade with the posts (Brody, 1975).

 Whereas Anglican missions were established in 1926 at Eskimo Point (as Arviat was then known) and at Coral Harbour, and the following year at Baker Lake, and in Pond Inlet 1929, Catholic missionaries – based in Chesterfield Inlet, since 1912 – opened posts in: Baker Lake in 1927; Coral Harbour in 1926; Iqaluit in 1933; Pelly Bay in 1935; Pond Inlet in 1929; and Repulse Bay 1933 (Laugrand and Oosten, 2009). Thus, Baker Lake was among the communities with two missions.

Among explorers in the region was George Binney who noted, “In the vicinity of Baker Lake some of the natives adopt a unique practice in order to obtain the shelter of an igloo before the snow lies sufficiently deep. They cut out blocks of ice and build a temporary igloo with them, filling in the crevices with snow” [Binney, (1929), pp.17–18]. Although police were present in Baker Lake since 1916, the RCMP only established a police station here in 1930.

Hoebel listed the location of Caribou Inuit groups prior to WWII, including the “Qaernermiut at Baker Lake” (1941, p.664). Following the war, Freeman (1948) conducted field research at Baker Lake, studying an uncommon variety of butterfly.

Until the 1940s, most Inuit were nomadic, making their dwellings from locally available natural resources. Fox trapping in the region collapsed at the end of the 1940s (Vallee, 1962). Settlement of formerly nomadic families escalated during the 1950s (Mowat, 1959), and post-contact diseases spread between people in the same home (Thomas and Thompson, 1972). Mitchell (1954) reported high incidence of tuberculosis at Baker Lake. A small hospital was constructed here in 1957. After the famine of 1958, many Hanningajumit were relocated to Baker Lake (Tester and Kulchyski, 1994). In 1959, the Department of Northern Affairs and National Resources initiated the large-scale Eskimo Housing Loan Programme, followed by the Eskimo Rental Housing Programme, with rents scaled to income and targeted to Baker Lake and Frobisher Bay in particular (Robson, 1995). High rates of respiratory disease and infant mortality were correlated with over-crowding. During the 1960s, half of the children at Baker Lake had contracted tuberculosis and 55% of households had at least one case (Brody, 1975). Bruce (1969) noted that the government’s goal was to have all Inuit in government-constructed housing by 1971. Changes in lifestyle led to unemployment, alcoholism, drug abuse, violence, depression and high suicide rates.
During the mid-20th century, the Caribou Inuit were the largest group of Canadian Inuit to have maintained a traditional own way of life (Oswalt and Stone, 1960). Comparing the intake of traditional foods among residents of five Arctic communities, Tracy and Kramer (2000) found that the highest per person intake of caribou in grams per day during the late 20th century was at Baker Lake.

Despite the introduction of a capitalist economy, Inuit residents of Baker Lake continue to maintain close ties with their land and hunting continues to be a valued activity, although not necessary for survival. Bernauer wrote, “Subsistence wildlife harvesting, especially of caribou, fox, wolf and lake trout, plays a substantial role in the contemporary well-being of the Inuit of Baker Lake (2010, p.11)”. The sharing of food among Inuit also continues to be important; for a discussion on food sharing see: Damas (1972), Hunt (2000), and Wenzel (2005). Kishigami (2008) observed Inuit sharing with people outside their ethnic group.

In the vicinity of Baker Lake live Arctic foxes, Arctic hares, caribou, geese, jackrabbits, king eiders (see Figure 7), lake trout, marmots, muskoxen, wolverines, and wolves. What if one or more of these species were to become extinct? In Alaska, where muskoxen were exterminated, the species was re-introduced (see Figure 8); such experiments, however, can take many years. For discussions of this species, see Rosing (2002), Tener (1965) and Teal (1970) elaborates on the domestication of musk oxen.

**Figure 7** Pair of king eiders (*Somateria spectabilis*) with male in breeding plumage at left (see online version for colours)

*Source: Photograph by Léo-Paul Dana*
Figure 8 Ear-tagged musk ox (*Ovibos moschatus*) in captivity in Alaska (see online version for colours)

Source: Photograph by Léo-Paul Dana

5 Uranium

There is a long history of uranium mining in northern Canada. Dana et al. (2009) noted that in 1930, silver and pitchblende (an ore containing radium and uranium) were discovered at Great Bear Lake, in the NWT; when, in 1933, the Port Radium mine was established on the lake’s shores, as a base where Crown-owned Eldorado Mining and Refining extracted uranium, Dene people from a community at Great Bear Lake, namely Fort Franklin (changed to Déline, 1993) were hired to carry the ore in cloth sacks on their backs and to load tug boats and trucks. As a result of the radiation, many men died of lung and other types of cancer. Déline has since been referred to as the village of widows (Dana et al., 2009).

In 1978, residents of Baker Lake sought litigation to halt uranium exploration in the area of Baker Lake. As noted by Bernauer, “they contended that exploration crews – through loud noise created by low flying aircraft and drilling – were scaring caribou herds away from the community…” (2010, p.11). Indeed, aerial electro-magnetic surveys are common nowadays. Figure 9 illustrates a modified Douglas DC-3C, which is used for Anglo American Corporation airborne electromagnetic surveys. Aboard the aircraft are sophisticated instruments (see Figure 10).
Figure 9  Spectrem Air is a subsidiary of Anglo operations (see online version for colours)

Source: Photograph by Léo-Paul Dana

Figure 10  This DC-3C is fitted for airborne electro-magnetic surveys (see online version for colours)

Source: Photograph by Léo-Paul Dana
A decade later saw more controversy when the German firm Urangeselleschaft proposed to create an open-pit uranium mine at Kiggavik, 80 kilometres upwind and upstream from Baker Lake, inside the boundaries of the caribou calving grounds – an area used by the Beverly caribou herd in their post-calving period. Disturbance, here, is correlated with high calf mortality and a decrease in fertility. A plebiscite was held about the proposed Kiggavik mine in early 1990; over 90% of the ballots rejected Kiggavik.

In September 1992, Joan Scotties – a member of the Baker Lake Hunters and Trappers Association – made a presentation to the World Uranium Hearing held in Salzburg, Austria, representing the Baker Lake Concerned Citizens’ Committee (part of the Northern Anti-Uranium Coalition) that had been formed to fight uranium mining near Baker Lake. Concerns included heavy run-offs that might contaminate the water and hence the caribou.

A few years later, Areva Resources Canada acquired the rights to the Kiggavik ore 80 kilometres from Baker Lake. Since Areva Resources Canada initiated a public relations campaign with free hats, free T-shirts, free fuel for hunting, and free helicopter rides, there appeared to be less opposition to uranium mining. In 2007, Nunavut Tunngavik Inc. reversed its stance on uranium, adopting a new policy supporting ‘sustainable’ uranium mining; the guiding principle of its “Policy Concerning Uranium Mining in Nunavut” is that uranium exploration and mining must be carried out in an environmentally and socially responsible way and the uranium that results from the mining shall be used only for peaceful and environmentally friendly purposes.

Accordingly, Nunavut Tunngavik Inc. established the following objectives:

1. nuclear energy will be used for peaceful and environmentally responsible purposes
2. uranium exploration and mining in Nunavut will bring significant economic benefits to Inuit
3. uranium exploration and mining will be carried out in a manner that protects the health and safety of workers and of all Nunavummiut
4. uranium exploration and mining will be carried out in a manner that will not cause significant adverse effects on people, the environment or wildlife
5. Inuit shall be participants.

The Government of Nunavut subsequently announced that:

1. It regards mining, including uranium mining, as an important potential source of revenues to meet the needs of Nunavut’s growing population and also as a potential source of employment and associated skills development for Nunavummiut.
2. It recognises that uranium development places special responsibilities on government because of the nature of uranium and its by-products, the history of its use for both peaceful and non-peaceful purposes, and its potential risks to human health and the environment.
3. Uranium exploration and mining must have the support of Nunavummiut, with particular emphasis on communities close to uranium development.
4. The government would support the exploration and mining of uranium subject to the following principles:
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1. The health and safety of workers involved in uranium exploration and mining and all Nunavummiut shall be protected to national standards.

2. Environmental standards must be assured for uranium exploration and mining, especially for the land, water, and wildlife.

3. Nunavummiut must be the major beneficiaries of uranium exploration and mining activities.

5. The government believes that nuclear power generation will be an important part of global strategies for ensuring energy supplies while reducing reliance on greenhouse gas-emitting fossil fuels.

6. The government believes that Canadian law and international agreements provide a reasonable level of assurance that uranium mined in Nunavut will be used for peaceful purposes.

Despite meetings of proponents and residents, Bernauer observed that “a variety of barriers to meaningful Inuit participation still exist...Some Inuit feel that there is insufficient time available to absorb issues and discuss concerns in the context of short consultation meetings. This is often made more problematic by the fact that many consultation meetings take place without adequate information being sent to the community prior to meetings...Inuit participation in public consultation meetings is further constrained by difficulties associated with accessing information about potential projects” (2010, p.14).

Figure 11 Convair 580 during fuel stop in Churchill, Manitoba (see online version for colours)
6 The Meadowbank gold mine

In 2007, Agnico-Eagles Mines Limited began construction of the open pit Meadowbank gold mine 70 kilometres north of Baker Lake. A private aerodrome, CMB2, was built at Meadowbrook, for use by employees, and for the transport of food and other supplies. A Convair 580 turboprop, operated by Nolinor (see Figure 11) was used to fly construction workers from Montreal, to Meadowbank, with fuel stops in Val d’Or (Quebec) and Churchill (Manitoba). Gold production commenced in 2010 and today employees continue to work on a fly-in fly-out rotation.

At time of writing in 2013, about two fifths of the staff at Meadowbank is Inuit, and Nunavut Tunngavik Incorporated recently received $2.2 million in royalties from that mine. Employment rates have increased, as has average income for residents of Baker Lake.

There is question, however, as to whether the outcome is felt homogeneously across the community. How stratified is the workforce, in terms of ethnic roots? How welcome is the use of Inuktitut language in the workplace? Are young people abandoning their schooling for work? It could be that firms to benefit from mining are those with capital-intensive equipment; what is the role of smaller local firms and their owner managers? Will competition for labour result in inflated wages for some and inflation for all? Is mine income contributing to alcohol or drug dependence as noted elsewhere by Gibson and Klinck (2005)?

7 In closing

There are few wage jobs in Baker Lake, where unemployment is much higher than in elsewhere in Canada. People are poor, in monetary terms, but everyone manages because people can live from the land, either from

1 subsistence self-employment in the form of hunting
2 traditional food-sharing; most of men here hunt caribou to feed their families.

As noted by Rhéaume and Caron-Vuotari “Historically, mining activities in Northern communities have led to a legacy of environmental degradation…communities still fear the potential adverse effects mining activities can have on traditional hunting…” (2013, p.55).

In the short-term, employment from mines seems attractive. In the longer term, many questions remain unanswered and could inspire future research: What impact will new mines have on Inuit entrepreneurs? What impact will in-migration have on demands for education, health services and police? What impact will the mines have on health? Will air quality be affected by uranium mining through the release of radon, dust and other typical pollutants such as increased vehicle exhaust?

Mines have a limited life-span, as do the jobs they provide. The impact they have on the environment lasts much longer. As long as there is continuous permafrost, tailings from a uranium mine can be buried. What will happen if global warming reduces areas of permafrost?
Acknowledgements

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References


**Notes**

1 The American 1-cent coin has a different composition; since 1982, it has been made from 97.5% zinc, and 2.5% copper.

2 Inuit is the cultural designation used across Canada for speakers of Inuktitut, the Inuit-Inupiaq (Eastern Eskimo) branch of the Esk-Aleut language (Woodbury, 1984).

3 For a discussion of the Hudson’s Bay Company, see Ferguson (2011).
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4 The North West Mounted Police became the Royal North West Mounted Police in 1904, and merged with the Dominion Police in 1920 to create the Royal Canadian Mounted Police (RCMP).

5 Munn (1922) focused on the economic life of these people.

6 Birket-Smith (1929), and more recently Arima (1984) focused on these people.

7 Jenness (1921) focused on these people.

8 See Mathiassen (1928).

9 For a detailed study of the Netsilik, see Balikci (1989).

10 In December 2001, the name of the Canadian province of Newfoundland was changed to Newfoundland and Labrador.

11 For a recent study of economic development in Nunavik, see Dana (2010).

12 For a recent study of the impact of extractive industry on the Inuvialuit, see Dana et al. (2008).

13 McPherson (2003) focused on minerals and Inuit land claims.

14 For a study of entrepreneurship in Iqaluit see Dana et al. (2005).

15 For a recent study of entrepreneurship at Arviat, see Dana and Anderson (2011).

16 For a recent study of entrepreneurship at Coral Harbour, see Meis-Mason et al. (2008).

17 For a recent study entrepreneurship at Rankin Inlet, see Meis-Mason et al. (2009).

18 For a recent study of entrepreneurship at Repulse Bay, see Dana et al. (2010).

19 For a discussion of whaling in Hudson Bay, see Dana et al. (2010).