

3.8 Adaptation, industrial development and Arctic communities (Industrial Development)

Project Leader

Arn Keeling (Memorial University of Newfoundland)

Project Team

Network Investigators

Emilie Cameron (Carleton University); John Sandlos (Memorial University of Newfoundland); Frank Tester (University of British Columbia)

PhD Students

Dawn Hoogeveen (University of British Columbia); Warren Bernauer (York University)

MSc Students

Tyler Levitan (Carleton University); Patricia Boulter, Tara Cater, Heather Green, Jane Hammond, Scott Midgley (Memorial University of Newfoundland); Tee Lim (University of British Columbia)

ABSTRACT

This project is engaging in community-based, historical, and comparative research into industrial development as a driver of social, cultural and environmental change in the Canadian Arctic. In particular, researchers are exploring the cultural, economic and environmental impacts of past and present mineral exploration and development in several Arctic communities, including: Kugluktuk (Coppermine) in the Kitikmeot region, Qamani' tuaq (Baker Lake) and Kangiqiniq (Rankin Inlet) in the Kivalliq region, and Ikpiarjuk (Arctic Bay), site of the Nanisivik mine in the Qikiqtani Region. Research has also been conducted relating to the Polaris mine and the nearby community of Resolute. Working with community researchers, this project intends to identify issues of importance in relation to mining development and community change, and to explore community adaptations to the changes brought by industry. Researchers have collected extensive archival records relating to the history of industrial development in the Arctic, and will relate this history to changing government social and economic policies in the region, such as Inuit resettlement. This research seeks to understand how current debates and controversies over mining development reflect Inuit experiences and knowledge of previous developments. This project will also contribute to the building of both northern and southern research capacity, by providing research experiences for graduate students, postdoctoral researchers and community members. In addition, through conferences, workshops and joint publications with European researchers and other Canadian research networks, this project is furthering an international network of scholars interested in environmental, economic and cultural change in the circumpolar Arctic. The results provide a locally relevant, community record of this knowledge and history, as well as information useful for communities and policy makers in assessing the potential benefits and impacts of current development proposals.

KEY MESSAGES

- Historical industrial development has driven important social, economic and environmental changes in the Arctic.
- Industrial development in the Arctic continues to be dominated by mineral-extractive activities.
- Both Inuit and non-Inuit communities are affected by boom-and-bust cycles of development associated with mineral extraction.
- Industrial development may impact community adaptation and vulnerability to other sorts of changes, including climatic and environmental change.
- Certain mineral developments have the potential for environmental effects that adversely affect subsistence activities and threaten community health.

OBJECTIVES

- To document Inuit knowledge, experiences and memories of socio-cultural and environmental changes associated with minerals-based industrial development.
- To study processes and impacts associated with past and present mineral development and resettlement in Arctic regions, including the effects of mine closure.
- To identify indicators of environmental and social vulnerability and adaptation associated with industrial development.
- To develop insights into the intersections of industrial and economic change, and climate vulnerability and adaptation.

INTRODUCTION

This project is undertaking community-based, historical and comparative research into Arctic industrial

development. Through studies based on fieldwork in mining-affected communities and archival research into the legal and policy frameworks surrounding mineral development, our research team aims to inform debates and policy-making efforts surrounding the rapid industrialization of Arctic regions. The focus of this work is on three Nunavut communities currently encountering large-scale mineral exploration and development activities in their vicinities: Kugluktuk (Coppermine) in the Kitikmeot region, Qamani' tuaq (Baker Lake) and Kangiqiniq (Rankin Inlet) in the Kivalliq region. In addition, we have extended our research to a fourth community, Arctic Bay (Ikpiarjuk Tununirusiq), where we will examine the legacies of the former Strathcona Sound (Nanisivik) lead-zinc mine.

The social-ecological systems and cultures of Canada's Arctic regions are experiencing rapid changes, driven not only by changing environmental conditions, but also by the increasing connection of Arctic regions to national and international forces of economic and social development. Amongst the most significant of these forces is the mineral-extractive industry, which is experiencing a period of unprecedented growth in the Canadian Arctic (Conference Board of Canada 2010). At each of the project field sites, current or proposed developments present both opportunities and uncertainties related to work, economic development, social and cultural change, and environmental impacts. While these developments are taking place under enhanced regulatory regimes and with increased opportunities for local benefits (from royalties, employment or Impact Benefit Agreements), some of the proposed projects remain controversial, such as the Kiggavik uranium project near Qamani' tuaq.

The engagement of each of these communities with contemporary development is informed by experiences with previous rounds of mineral exploration and/or development, as well as with government "modernization" efforts more generally (McPherson 2003). This research explores those historical experiences and considers how they inform contemporary reactions of people in the region to new developments. This retrospective assessment of mineral development and closure pro-

vides insight into processes of Inuit adaptation of rapid socio-economic change, and the local and regional impacts of global commodity markets (Bernauer 2011).

By tackling critical issues such as these, this project contributes to a broadening of the concept of "adaptation" to change by: understanding Inuit adaptations to rapid social, cultural and environmental changes (especially in the evolving relations between "traditional" activities and waged employment, or what is known as the "mixed economy"); investigating the physical and cultural legacies of these changes for socio-ecological systems; and exploring the ways in which traditional knowledge, memories and experiences of past changes continue to shape contemporary responses to new developments (Cameron 2011, Bowes-Lyon et al. 2009, Cruikshank 2007, Gibson and Klinck 2005).

Research undertaken into these questions during 2011 was varied and substantial, involving not only the four Network Investigators, but also students, research assistants, and community researchers.

ACTIVITIES

This list of activities combines the activities of the four NIs as well as students and research assistants over the course of 2011. It is presented broadly in sequence of the different NI-directed initiatives, rather than chronologically, hence there may appear to be overlap or similarities. Where appropriate, individuals carrying out or participating in the research activity are identified.

- Trip to Kugluktuk Nov 2011 for meetings, consultation, interviews.
- Trip to Qamani'tuaq July/Aug 2011 for interviews, meetings, workshops.
- Trip to Yellowknife for interviews, meetings.
- Successful completion of "LANG 1010C – Inuktitut", a term-length Inuktitut language course at Carleton University (Cameron).

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- Archival document consultation and digitization (National Archives, Ottawa; Prince of Wales Northern Heritage Centre, Yellowknife).
 - Consultation with Edward Atkinson, Nunavut Territorial archivist, on relevant holdings of the GN Archives. Mr. Atkinson shared several relevant digitized archival files related to Rankin Inlet, as well as dozens of photographs.
 - Processing and analysis of archival documents.
 - Research on historical newspaper articles and government reports related to Arctic mining and development.
 - Oral history research on women in the iron ore mining industry in Labrador City.
 - Oral history interviews with former miners in Rankin Inlet (with assistance of Peter Irniq, Inuit cultural consultant, and a local research assistant).
 - Community workshop in Rankin Inlet, with over 70 attendees, including many elders and former miners.
 - Co-ordination with Arviat History Project participant and filmmaker, Jordan Konek; filming of Rankin Inlet interviews, workshop, and landscapes for educational film about Rankin Inlet Mine.
 - Transcription of Rankin Inlet workshop and interviews.
 - Recovery and digitization of historical films related to Rankin Inlet held in Community Resource Centre.
 - Informal meetings and discussions with Rankin Inlet Hamlet Council and Kivalliq Inuit Association.
 - Collection of archival material from the Nunavut Social History Collection at UBC, and the collection of archival and contemporary documents from various library archives and web resources. Over 1,000 documents collected to date relating to the closure and reclamation of the Nanisivik mine.
 - Conducted key-informant interviews and collected relevant documents relating to historical and contemporary coal mining activities on Svalbard.
 - Participated in the IPY Interdisciplinary field-school on Svalbard (June-July 2011); partially supported by the ArcticNet Student Training Fund.' (Midgley).
 - Training of 3 Inuit youth from Arviat in interview methods, camera work, sound and editing. This was accomplished with the assistance of research assistant, April Dutheil, 4th year undergraduate student, Department of Sociology, University of British Columbia (ongoing).
 - Arviat community forum (with archival films and photos) on the experience of working in the North Rankin Nickel Mine, 1957 – 1962.
 - Interviews in Ottawa with Anne Weiler, former community nurse, North Rankin Nickel Mine, and Floyd Neville, former social worker, Department of Indian and Northern Affairs.
 - Interviews in Arviat with Inuit Elders who were employed at the North Rankin Nickel Mine (ongoing).
 - Archival research in Ottawa. This included work primarily with RG 21, the records of the Department of Mines and Resources. Material was collected dealing with mining activities throughout Nunavut Territory with an emphasis on material relevant to the work of Dr. Emily Cameron (Coppermine), Arn Keeling John Sandos and Frank Tester (Rankin Inlet), Masters level graduate student Tee Lim and Frank Tester (Nanisivik: Arctic Bay) and Frank Tester [Baker Lake (Qamani'tuaq) and environs].
 - Abstracting and uploading of abstracts of these documents to the Nunavut Social History database hosted by the Faculty of Arts, University of British Columbia <http://nunavutsocial-history.arts.ubc.ca>. This work is in progress. Attendance by IRES graduate student Tee Lim at the University of Manitoba, Department of Native Studies summer field course, held in Pangnirtung,
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June 2 – August 5, 2011. Tee completed courses in ‘Cultural Continuity and Change in Cumberland Sound’, ‘Theory and Praxis, Traditional Land Use & the Ecology of Cumberland Sound’, and ‘Introductory Inuktitut & Inuit Literature’. This experience was supported by an ArcticNet Training Fund award.

- Field work in the community of Arctic Bay. This included in-depth interviews conducted with 22 former Nanisivik mine employees, Elders and other community members exploring their experiences in relation to the Nanisivik mine.
- Community workshop held with 46 community members to discuss the initial findings of interviews, shared recollections of the experience with Nanisivik and to hear their concerns and opinions with regard to ongoing and future mineral development that might affect the community (i.e. the Baffinland iron ore proposal).
- Field work by graduate student, Tee Lim, Iqaluit. Completed 7 interviews with former Arctic Bay residents, and with current and former administrators and bureaucrats involved with the Nanisivik mine (including members of the ‘Nanisivik Committee’).
- Ottawa – visit to Library and Archives Canada. Further archival research conducted on Nanisivik mine, including licenses and monitoring reports. Meeting with Doug Brubacher, author of 2002 report ‘The Nanisivik Legacy in Arctic Bay: A Socio-Economic Impact Study’ commissioned by the Government of Nunavut.
- Compilation of case studies and annotated bibliography pertaining to the impacts of uranium mining near Aboriginal communities in Australia, as an analog to the Baker Lake (Qamani’tuaq) experience.
- Preliminary work with historical records on mining in the eastern Arctic in the library of the Department of Aboriginal Affairs, Les Terrasses de la Chaudière, Hull, Québec.
- Recruitment of full-time, master’s level graduate students in history (1), geography (2), as well as employment of several research assistants in transcription, documentary research, field assistance.

RESULTS

The first full year of research activity on this project yielded a wealth of information pertaining to industrial drivers of change in the Arctic, both historical and contemporary. Researchers collected many thousands of archival documents, as well as thousands of pages of government, company and scientific reports, in order to document environmental and social policy development surrounding extractive development in the Arctic. In addition, NIs and student researchers worked with local community researchers to conduct interviews with key informants and with community members with experience of Arctic industrial projects.

Analysis of this information is ongoing. Some early results include the production of two master’s level major papers in history: Patricia Boulter’s “The Survival of an Arctic Boom Town Socio-Economic and Cultural Diversity in Rankin Inlet, 1956-63,” and Jane Hammond’s “Labrador City: Gender, labour and community in a remote mining town.” The former student’s research was fully funded by ArcticNet, while latter was partially funded to conduct oral history interviews in Labrador City. These students are engaged in revising their work for publication. Students in-program and research assistants are in the process of generating further results on other cases. In addition, the NIs have several publications and presentations in progress drawing on early results for this research, some of which are summarized below.

Fieldwork activities also significantly advanced community partnerships and participation in the research. Community workshops enabled researchers to share early results and, more importantly, to learn from community members about their priorities for research.

DISCUSSION

Minerals-driven industrial development has been and continues to be a major driver of socio-economic and cultural change in the Arctic. The Rankin Inlet Nickel Mine—Arctic Canada's first industrial mining operation—was hailed at the time of its opening in the 1950s as a grand experiment in Arctic modernization. Unusually for the time, the mine actively sought to employ indigenous labour, both during the construction phase beginning in 1953, and (more notably) both on the surface and underground during the mine's short operational phase, from 1957-1962. The mine was viewed by many as the strategy through which modern wage earning citizens could be created out of the once "primitive" Inuit. Due to the mine's success, mining was heralded as the solution to the "Eskimo Problem". However, Inuit were not passive recipients of modernization, for they actively pursued and created their own realities. At Rankin Inlet, the traditional economy, rather than simply being displaced, co-existed with and in some respects facilitated both mineral development and Inuit employment. Ironically, plans to diversify the Rankin Inlet economy in the wake of mine closure centred around traditional and social-economic activities, including hunting, fishing, handicrafts and other co-operative ventures.

Rankin Inlet was also notable as a catalyst for changing health-care delivery for Inuit. Health care for Inuit mine workers and their families was ceded by the federal government to the mine operator under a private health insurance scheme, in spite of the responsibility of the Indian and Northern Health Service for Inuit health-care provision. The subsequent closure of the mine threw Inuit health care into crisis at a time when Inuit families were still adjusting to the radically different living conditions associated with settlement life and wage labour.

Research into abandoned mine sites at Nanisivik and Svalbard (in the Norwegian High Arctic) demonstrate the ways in which minescapes continue to be productive after the extraction of ores has ceased. At Svalbard, alongside the continued production of coal at some

sites, abandoned mining infrastructures have been adapted to produce scientific knowledge, making the landscape productive again and extended the lifecycle of mining spaces there. Mining and other economic activities on Svalbard are not productive solely in economic terms, but productive in terms of reproducing Norwegian sovereignty. At Nanisivik, the minescape has produced environmental problems which demand remediation according to Canadian government policy. Producing knowledge on environmental degradation has been essential to informing the nature and economic value of this remediation. However, this knowledge and its valuations of the cost of reclamation have been contested, thus demonstrating the ways in which mining landscapes continue to be economically valued after closure, but in contradictory ways.

Nanisivik also provides an instructive example of the impact of past High Arctic mining on Inuit communities, and its relevance to contemporary developments. Residents of Arctic Bay, including Elders and former Nanisivik workers, were interviewed about their experiences in relation to the Nanisivik Mine. Inuit labour at the mine was also characterized by remote site or "fly-in, fly-out" labour from communities across the Eastern Arctic, including Clyde River, Pangnirtung, Iqaluit Rankin Inlet, and others. This work seeks to complement studies undertaken on the impact of community labour while the mine was open (Wenzel 1983). These experiences also inform reactions of Inuit communities to the massive proposed Mary River Baffinland iron mine on Northern Baffin Island, near Pond Inlet. The Baffinland development proposed to mine millions of tons per year of iron ore and ship it out along a railway and seaport built for the purpose. Construction of the project is projected to cost nearly \$2 billion and create nearly 1,000 jobs (Waldie 2011). But the project remains controversial for the surrounding Inuit communities, which are concerned about environmental impacts and the influx of workers and cash into their local economies. A community workshop at Arctic Bay explored concerns and opinions with regard to ongoing and future mineral development that might affect the community. Analysis of these interviews and workshop outcomes is ongoing.

In Kugluktuk, where mineral development is tied to both colonial and decolonizing processes, research has focused so far on understanding the ways in which Inuit experiences of mine-related labour relate to broader social, historical, and political-economic transitions. Interviews with Elders have considered the changing nature of “work” in Inuit communities, shifts in personal, family, and community economic and social systems, and the opportunities and challenges posed by industrial resource development. As at Rankin Inlet, interviews with former employees of the Lupin mine are being combined with archival materials to make sense of how experiences at this mine might inform contemporary mineral development. Interviews and qualitative research in Qamani’tuaq has focused on past and present responses to uranium development and Inuit experiences working at the Meadowbank gold mine. Together, research in Arctic Bay, Rankin Inlet, Kugluktuk and Qamani’tuaq suggests that Inuit understandings of, and responses to, the potential benefits of contemporary industrial resource development are shaped by histories of colonization, the design and implementation of the Nunavut Land Claims Agreement, and contemporary social suffering.

CONCLUSION

Research into the role of minerals-driven industrial development in the Arctic offers an important lens on drivers of change in Indigenous communities. Our project highlights the broader colonial and political-economic context within which northern Indigenous peoples struggle to adapt to environmental change, an important contribution to overall assessments of the human dimensions of climate change. The current project’s effort to document Inuit engagements with, perceptions of, and resistance to historical and contemporary industrial development offers important insights into the potential impacts of the resource boom in the Arctic, a phenomenon closely related to existing and future climatic change.

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