

Adaptation, Industrial Development and Arctic Communities

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Abstract

Mining has become a complex and still poorly understood driver of both economic and socio-cultural change in the Eastern Arctic. This project has engaged 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 explored 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 and other collaborators, this project identified issues of importance in relation to mining development and community change, and explored community reactions and 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. Survey and ethnographic research in Arctic communities revealed a complex mixture of both positive and negative experiences with large-scale mineral development amongst Inuit. These impacts often have strongly gender-specific effects.

Key Messages

Key messages related to this project fall into the following categories:

1. *Historical encounters and ongoing legacies*

- Historical industrial development has driven important social, economic and environmental changes in the Arctic, including changes to settlement patterns, community economies,

and socio-cultural practices in Inuit and northern communities. Documentation of these experiences provide important context and lessons for contemporary Arctic development policy.

- Historical experiences of industrial development shape individual and community perceptions of and receptiveness to contemporary development proposals and activities. These perceptions may be positive (including a sense of identification with the post-mining landscape) or negative (including fears around social and cultural impacts, as well as pollution and environmental impacts).
- Legacy issues (environmental, social and economic) associated with northern resource development may persist long after the closure or cessation of resource extractive activities. In many cases, however, these issues are not well-documented or addressed in development policy.

2. *Contemporary experiences and impacts of industrial development*

- Harvesting, institutional programs and policies, and work in the mining sector are inter-related. Government programs and family dynamics contribute to decisions about the allocation of labour between wage employment (including employment in the mining industry) and harvesting activities. Government income support programs and Inuit capital equipment programs, though flexible enough to accommodate some of the costs of subsistence production, present significant obstacles to low-income harvesting families.
- Inuit hiring, labour arrangements and work schedules at remote mine sites such as the Meadowbank mine pose particular challenges for Inuit workers. Key issues include: fly-in, fly-out labour arrangements; cultural accommodation and intercultural relations at the mine site; increased income and inequality in home communities; and employment and training opportunities. Many

of these issues are gender-specific. Territorial organizations, such as regional Socio-economic Monitoring Committees, are working to develop reliable and relevant indicators of the social impacts of mineral development, but face challenges in doing so.

3. *Mineral development policy and governance*

- Institutional structures through which extraction is assessed and governed in Nunavut have significant limitations in relation to knowledge production and dissemination, allocation of revenue streams, accounting for community concerns, and meeting the objectives of the Nunavut Land Claim Agreement.
- Impact-benefit agreements (IBAs) have become standard components of resource governance in the Canadian North. Currently, no public policy framework guides their negotiation, terms of reference, or implementation. At a time of accelerating mineral exploration and mine development in the North, it is important to critically interrogate the function, purpose, and effects of IBAs.
- The participation of indigenous women in mining and the challenges this poses for the industry and the needs of women in facilitating their participation have received inadequate attention. Greater accountability and transparency is required in the negotiation and use of funds in relation to IBAs.
- The complexity and content of environmental impact statements is a barrier to the participation of Inuit (and non-Inuit) in debates about environmental, social and the cultural implications of resource extraction projects in the Arctic.
- Inuit Qaujimagatuqangit (IQ) is central to the assessment of proposed mines in Nunavut. To date, however, the adequacy of engagement with IQ on the part of proponents and the NIRB itself has not been assessed. Translation has been a

key site of conflict around the assessment of proposed mines in the territory; Nunavummiut have repeatedly expressed their concerns that important terminology around uranium mining is not adequately translated into Inuktitut, for example, and that key documents that are central to the assessment of proposed mines are not available in Inuktitut.

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 document the long term legacy issues associated with northern resource development and the controversies surrounding environmental remediation programs
- To examine the historical and contemporary Inuit encounters with mineral development in the Kivalliq Region of Nunavut, including the Rankin Inlet nickel mine, the Meadowbank gold mine, and the proposed Meliadine gold and Kiggavik uranium mines
- To determine the social and cultural impacts of resource extraction on women and families in the community of Qamani'tuaq (Baker Lake), Nunavut

Introduction

The rapid growth of mineral exploration and development activity is reshaping the economic and social geography of the Canadian Arctic and, in concert with other drivers of social and environmental change, transforming northern territories. From a low

in the early-2000s (after the closure of the territory's two operating mines), the mining industry now constitutes a large proportion of the Nunavut economy. Between 2009 and 2013, mineral exploration and development expenditures surged from \$187.6 million to \$426.5 million (Herman 2013). This period also saw the opening of the Agnico-Eagle Ltd. Meadowbank gold mine near Baker Lake, which will soon be succeeded by the company's Meliadine gold mine near Rankin Inlet, now under construction. There are also several major new developments on the horizon, such as the mega-project mines Mary River on north Baffin Island and Kiggavik near Baker Lake. The Nunavut government predicts that the mining sector alone could create 1500 new jobs for Inuit and eventually account for 12% of the territorial workforce (Nunavut, Department of Economic Development and Transportation 2009).

Mining has thus become a complex and still poorly understood driver of both economic and socio-cultural change (Conference Board of Canada 2013). This project is undertaking community-based research into historical and contemporary Arctic industrial development. Through studies based on fieldwork in mining-affected communities and documentary research into the legal and policy frameworks surrounding mineral development, our research team aims to inform current debates and policy-making efforts surrounding the rapid industrialization of Arctic regions. The primary 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 Arctic Bay (Ikpiarjuk Tununirusiq), where we have examined the legacies of the former Strathcona Sound (Nanisivik) lead-zinc mine, and Resolute (Qausuittuq), the community closest to the former Polaris mine on Little Cornwallis Island.

This project explores how historical experiences with mining in Nunavut may inform contemporary

reactions to and participation in new developments. This retrospective assessment of mineral development and closure provides insight into processes of Inuit adaptation to rapid socio-economic change (Bernauer 2011). In addition, our project examines aspects of the contemporary political economy of mining in Nunavut (as the territory grows increasingly dependent upon mineral revenues and employment), as well as community responses to and engagements in mineral project review processes.

At several 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 Inuit Impact Benefit Agreements), some of the proposed projects remain controversial. Assessment and monitoring of the social, economic and environmental impacts of these developments present considerable challenges to Nunavut policy-makers.

As this project reaches its full maturity, the investigators are making significant contributions to scholarly debates and public understanding of issues surrounding Arctic development. Project research is prominently featured in two forthcoming major publications that were the focus of work over the past year: a special issue of *Études/Inuit/Studies* on industrial development and Inuit communities (co-edited by NI Tester) and an edited volume entitled *Mining and Communities in Northern Canada: History, Politics, and Memory*, co-edited by NIs Keeling and Sandlos, both of which feature several contributions by ArcticNet investigators and students. In addition, project researchers are actively engaged in ongoing communications with northern communities and decision-makers regarding their research findings and future research needs.

Activities

Research activities may be categorized according to the following project themes:

1. *Historical encounters and ongoing legacies*

- Submission of scoping chapter on the role of northern indigenous traditional knowledge in resource development assessment processes and the legacy issues associated with mine remediation projects in the NWT and Nunavut, for Resources and Sustainable Development in the Arctic “gap analysis” volume (AK, JS)
- Ongoing research and writing relating to the history of the Rankin Inlet nickel mine, including conference papers, book chapters and a journal article completed, and another article in preparation (AK, TC)
- Organized an international workshop on “Extractive Industries in the Arctic” at Memorial University in October 2013, a discussion of papers in progress among scholars from across the circumpolar world (AK, JS)
- NI Sandlos served as a Carson Fellow at the Rachel Carson Center for Environment and Society, Ludwig Maximilian University, Munich (Sept 2012-June 2013)
- completion of thesis on Arctic Bay community memories of development and closure at Nanisivik Mine (TL)
- Preliminary assessment of archival sources related to MA student topic and decision to adopt the Mary River Mine (and not oil and gas exploration as originally proposed) as main focus for the MA project (JS, AK, RF)
- Preparation of edited volume, *Mining and Communities in Northern Canada: History, Politics, and Memory*, for submission to University of Calgary Press, including five chapters derived from ArcticNet-funded research (AK, JS).

- Background historical research on Arctic oil exploration and development in an international context for talks (at the Extractive Industries Workshop and the ArcticNet ASM) on the history of imagined Arctic futures (JS).

2. *Contemporary experiences and impacts of industrial development*

- community-based Participatory Action Research in Qamani'tuaq: 7-day long workshop employing popular education techniques was designed and delivered to a group of 8 women in Qamani'tuaq. Women were trained as researchers and designed instruments (interview guides and a questionnaire) to be used in surveying women in the community about the impact of the Meadowbank mine on women and families. Women held a focus group with other women in the community and interviewed key informants associated with the delivery of social, educational and related services locally. A focus group was held with young Inuit women, and community researchers commenced interviews with women in the community using the survey that they had developed. This work is on-going (FT).
- Completion of master's thesis related to historical and contemporary encounters with mineral development in Rankin Inlet, based on community-based, ethnographic research in the community (TC)
- Dissemination of results and consultation with decision-makers in Rankin Inlet regarding social impacts of mining in Kivalliq Region (see Networking) (TC)

3. *Mineral development policy and governance*

- detailed assessment of the ways in which Inuit Qaujimajatuqangit (IQ) was identified, documented, and synthesized in the assessment of the proposed Mary River iron ore mine in Nunavut, in order to critically interrogate the extent to which IQ shapes decision-making

around mine development in the territory (AW, EC).

- Analysis of the ways in which key climate-related terms are translated into Inuktitut, investigating how notions of resilience, adaptation, and climate change itself mean something fundamentally different in Inuktitut than they do in English, with implications for climate policy and politics (EC, JM, RM)
- Investigation of institutional arrangements and family dynamics around wage labour and harvesting labour: semi-structured interviews held in Cambridge Bay with community members, including policy and program officials from the Department of Family Services, the Department of Environment, the local housing association, and the Ekaluktutiak Hunters and Trappers Association. Consultations were held with Nunavut Tunngavik Incorporated and the Kitikmeot Heritage Society, two organizations that formally support the project (EC, JG).

Results

Results from these activities included: the collection of thousands of pages of archival and public policy documents related to historical and contemporary mineral development; interviews with key informants and community members regarding current proposed or ongoing mining activity; and the development of long-term research relationships with Inuit community and territorial organizations concerned with the social and environmental aspects of mining. These activities have yielded concrete results, reported in theses, presentations, posters, and articles (see “Publications”), as well as providing the foundation for future research and engagement surrounding the issue of Arctic industrial development.

1. Historical encounters and ongoing legacies

At Rankin Inlet, the development and the closure of the North Rankin Nickel Mine (NRNM) brought

great changes to the Kivalliq region as a whole. From 1957-1962, seventy percent of the NRNM’s workforce was Inuit working in both above and below ground industrial positions. After the mine’s closure in 1962, most Inuit people stayed while most qallunaat left, and this short encounter with mining remains an ongoing presence within the community. Community members that chose to stay in (or returned to) Rankin Inlet after the closure of the mine were left with environmental hazards still present on the mined landscape. The hazardous tailings, or the materials left over after separating the nickel from the unproductive ore, were left in the community. The mining company managed the tailings poorly leaving the hazardous materials in ponds below sea level that ended up running into Hudson Bay and contaminating the shoreline.

Similar to previous findings related to the Nanisivik and Polaris mines (Green 2013; Midgley 2013; Tester et al. 2013; Bowes-Lyon et al. 2009), the negative environmental impacts of the NRNM have created on-going challenges for the community, producing a tangled legacy and raising questions of how to remember the NRNM (Cater 2013). Though the mine ceased operations in 1962, it took until 1995 for final closure and reclamation to be completed. Remediation efforts were completed in 1995; however, in 2009, Aboriginal Affairs and Northern Development Canada (AANDC) discovered that a small amount of the tailings may not have been entirely covered, and in 2011, 15,000 cubic metres of additional clean fill were added. AANDC has a long-term monitoring plan in place to ensure the freezeback of tailings in permafrost will be effective and that the area will be safe for community members and the environment.

While environmental contamination continues to be a concern, nevertheless many Inuit in the community retain positive memories of the mining past. Oral history research indicates the strong sense of connection with the mine and a sense of mining identity amongst Inuit former miners (Keeling and Boulter, submitted). The miners interviewed talked not only with evident pride about their achievements working underground at the Rankin Inlet mine and

elsewhere, but also about the importance of hunting and language, their work ethic, and their sense of connection to Kangiqiniq as an Arctic place. In addition, younger current residents of Rankin Inlet expressed a strong sense of connection with the industrial past, expressed through encounters with industrial ruins in the landscape, and through images and iconography associated with the hamlet's mining history (Cater and Keeling 2013). Rankin Inlet, as a community, is coming to terms with and (re)staking its claims to its industrial past, as part of contemporary efforts to manage the costs and benefits of new mineral development in the region.

These historical questions were further explored in a circumpolar, comparative context through a literature review and through papers presented at an international workshop, "Extractive Industries in the Arctic," hosted at Memorial University. This research suggests that scholars have been less inclined to address the long-term environmental legacies of large-scale developments, whether concluded or continuing, particularly the extent to which local knowledge and community perspectives are included in environmental remediation processes (Keeling et al, 2013).

Answering these questions will provide crucial insight into the ongoing environmental challenges associated with historic resource development, particularly extractive industries, and help guide decision-making in the future. In particular, there is a strong prospect for circumpolar, comparative research into the questions surrounding cumulative effects, long-term environmental hazards, remediation, and industrial heritage at Arctic industrial sites, past and present.

2. Contemporary experiences and impacts

Historical experiences with mineral development directly inform community perceptions and experiences of contemporary development. For instance, with the current growth in mineral development in the Kivalliq Region, experiences of the social and environmental legacies of the NRNM can and are being drawn on to better understand the risks and opportunities of contemporary developments such

as the Meliadine mine. In particular, issues around adaptation to industrial labour (particularly fly-in, fly-out labour), responsibility for the environmental impacts of development, and the impacts of mine closure are at the forefront of contemporary community debates around mining in the Kivalliq (Cater 2013).

At Qamani'tuaq, qualitative research into the impacts of the Meadowbank mine on Inuit women revealed the intersectionality of impacts, involving combinations of: the two-week in, two week-out work schedule; increased income for those working at the mine; greater access to alcohol and drugs; and the occupational segregation of women (primarily housekeeping and kitchen work). A draft report, *The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory: A Qualitative Assessment*, (Czyzewski and Tester 2014) discusses increases in violence against women and children, the implications for the schooling of children of mine-involved families, sexual harassment and assaults against women, racism and discrimination in the workplace. The report notes that some families have benefited disproportionately from the presence of the mine, with implications for social harmony and relations in the community. It also identifies problems with the impact benefit agreement and its implementation.

Industrial development may also have a destabilizing effect on family decisions regarding wage labour (including employment in the mining industry) and harvesting labour in some Arctic communities. Preliminary observations suggest that some families choose to forego wages in favour of harvesting, but that the associated level of income can interact with other social vulnerabilities (e.g. age, family supports, number of children) to create significant barriers to sustained harvesting activities. In particular, government income support programs and Inuit capital equipment programs, though flexible enough to accommodate some of the costs of subsistence production, present significant obstacles to low-income harvesting families.

3. Mineral development policy and governance

Impact-benefit agreements have become standard components of resource governance in the Canadian North, but no public policy framework guides their negotiation, terms of reference, or implementation. Understood in relation to the neoliberalization of resource governance and Indigenous-state relations in Northern Canada, IBAs are functioning as tools for the privatization of the federal duty to consult Indigenous peoples about resource development on their lands, naturalizing market-based solutions to social suffering, and limiting access to important political and legal channels (Cameron and Levitan 2013). As the example of the Meadowbank Mine illustrates, at a time of accelerating mineral exploration and mine development in the North, it is important to critically interrogate the function, purpose, and effects of IBAs.

Related issues surround Inuit and community participation in environmental and social governance processes surrounding both industrial development and climate change adaptation. According to the scoping guidelines and final hearing reports produced by the Nunavut Impact Review Board over the last decade, Inuit Qaujimajatuqangit (IQ) is central to the assessment of proposed mines in Nunavut. To date, however, the adequacy of engagement with IQ on the part of proponents and the NIRB itself has not been assessed. Ongoing research, focused on the assessment of the proposed Mary River iron ore mine in Nunavut, aims to critically interrogate the extent to which IQ shapes decision-making around mine development in the territory.

Interpretation and translation between English and Inuktitut is a part of everyday life in Nunavut and is essential for ensuring informed, open, and meaningful public education, discussion, and decision-making. Translation has been a key site of conflict around the assessment of proposed mines in the territory; Nunavummiut have repeatedly expressed their concerns that important terminology around uranium mining is not adequately translated into Inuktitut, for example, and that key documents that are central to

the assessment of proposed mines are not available in Inuktitut. Through an investigation of the ways in which key climate-related terms are translated into Inuktitut, Cameron et al. (2013) argue that notions of resilience, adaptation, and climate change itself mean something fundamentally different in Inuktitut than they do in English, and that this has implications for climate policy and politics. To the extent that climate change is understood in Inuktitut as a wholly environmental phenomenon over which humans have no control, both “adaptation” and “resilience” come to be seen as appropriate and distinctly Inuit modes of relating to shifting climatic conditions, calling upon practices of patience, observation, creativity, forbearance, and discretion. In the context of a broader global shift away from climate change mitigation and toward enhancing the adaptive capacities and resilience of particular populations, this mode of translating climate change is deeply political.

Discussion

Through this research, a complex, fine-grained picture is emerging of how Inuit people and institutions, individually and collectively, understand and respond to the changes associated with large-scale mineral development. Historical experiences with mining occurred in the context of a series of social, economic, and environmental changes, including relocation/resettlement, the growth of colonial authority in the region, and shifting combinations of wage labour and subsistence practices (Keeling and Boulter 2013). Similarly, contemporary mineral development is intersecting in complex ways with other developments in the Arctic, including Indigenous self-government and land claims, changing community and family arrangements, educational and technological change, public and private sector economies, and climate variability and change. Understanding how resource extraction intersects with and reinforces these challenges is a key goal of the project.

Historical research is critical to understanding not only the social, environmental, and economic impacts

of the development phase of resource exploitation, but also ongoing social and environmental legacies in the post-closure period. Our findings suggest that the question of how to remediate abandoned mines (or zombie mines [Sandlos and Keeling 2013]) raises many of the same controversies and environmental issues associated with the original development. New mines may similarly contribute to the “cumulative effects” of development in the region of former mines. We have also begun to articulate how indigenous knowledge and community interests might be incorporated into mine remediation processes, adding a social dimension to what are often highly technical processes. Community members themselves draw on past experiences of mineral development to guide their preparation for new projects (Cater 2013). Our research suggests that contemporary assessments of mines and their impacts must account for these past experiences and understandings of work, its relation to traditional practices and knowledges, and relations with histories of colonization and dispossession in the Arctic.

Considerable social-scientific research effort is being focused on understanding the community impacts and benefits of contemporary mineral development (Ali 2003; Knotsch et. al. 2011). The picture of the social outcomes and changes initiated by large-scale developments and their associated IIBAs, however, remains far from clear, in spite of ongoing research into social indicators of development impacts (cf. Haley et. al. 2011). Community monitoring accompanying IIBAs, through bodies such as the Nunavut Regional Socio-economic Monitoring Committees, may provide useful information on short- and long-term changes to community conditions related to mineral development, as well as building capacity within northern communities to monitor environmental and social changes occurring over periods of rapid industrial development. Further attention is warranted to the signing and implementation of Impact and Benefit Agreements for projects with significant long-term social, political, economic, and environmental effects, and how these agreements may or may not effectively mitigate these effects.

Ethnographic research in Rankin Inlet and the community study in Qamani'tuaq using Participatory Action Research methods, both focused on the experiences of Kivalliqmiut with the Meadowbank gold mine, provide important models and insights in this regard. Contemporary mobile labour practices, particularly the two-week rotation schedule characteristic of remote mine work, pose challenges to the balance of family and work life for Kivalliqmiut. These stresses, as well as sometimes difficult intercultural interactions at the Meadowbank mine site, have led to high levels of turnover and personal stress among Inuit workers. In the forthcoming study of Inuit women at Qamani'tuaq (Czyzewski and Tester 2014), key recommendations are made with respect to: women and an economic legacy; the provision of child care; dealing with addictions; greater support for families; mental health services; meeting the needs of youth; initiating lifeskills training and education; creating women and men's emergency shelters; and improving and introducing an effective program of cross-cultural understanding and historical awareness at the mine.

Conclusion

Industrial development based on extractive industries has become a cornerstone of federal and territorial economic policies for Nunavut. However, historical “boosterism” regarding northern development has rarely lived up to its promise, raising questions about the social and economic promises associated with contemporary Arctic megaproject proposals and oil and gas development (Sandlos 2013). Indeed, the volatility and uncertainty associated with this economic sector has recently been in evidence in the region: as gold prices continued their long slide in the wake of the global recession, Agnico-Eagle, the company that owns Meadowbank, announced it would close the mine three years early (in 2017) and shift operations to another northern site. Mineral exploration funds began drying up in 2012, and new development proposals were scaled back across the North. Most dramatically, the massive Baffinland

Mary River iron mine project radically curtailed its investment and development plans, cancelling a proposed railway and port development on Baffin Island, and scaling back its project investment to \$740 million from an initial \$4 billion.

Notwithstanding these setbacks, it appears likely that a wave of industrial development is rising in Nunavut. Thus, ongoing investigations of the individual, community, and institutional reactions to these changes are imperative. Research to date indicates the complexity of the challenges facing Nunavummiut in terms of their potential engagements with and benefits from large-scale development; similarly, our findings indicate that these changes are likely to interact in complex ways with climate, socio-cultural, and environmental change in the region. The cumulative impacts of past, present and future developments will test the resilience of already stressed Arctic communities. As critical drivers of environmental and social change in the contemporary Arctic, the mineral and energy industries pose major challenges to sustainability and the ability of communities to absorb and adapt to both the short-term impacts of development and its longer-term social and environmental consequences.

Acknowledgements

This research depends vitally on the participation, support and collaboration of Arctic residents, Inuit community partners, collaborators and informants, including Piita Irniq, Peter Ittinuar, Pallulaaq Kusugak Friesen, Kivalliq Inuit Association, the Hamlet of Rankin Inlet, Edward Atkinson (Nunavut Archives), Bill and Joan Kashla, David Aksawnee, Pauktuutit, Rebecca Kudloo and the women of Qamani'tuaq, Kitikmeot Inuit Association, Kugluktuk HTO, Kugluktuk Hamlet, Shirley Tagalik, and Jordan Konek.

Research assistance has been provided by Janet Tamalik McGrath, Andrew Williams, Tara Cater, Josh Gladstone, Karina Czycewski, Emma LeClerc. Additional funding support comes from the Social

Sciences and Humanities Research Council (SSHRC), Resources and Sustainable Development in the Arctic (ReSDA) Major Collaborative Research Initiative, and the Northern Scientific Training Program. This project benefits from the infrastructure support Memorial University (the Culture, History and Technology [CHaT] Lab) and the Nunavut Social History project at UBC.

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Publications

(All ArcticNet refereed publications are available on the ASTIS website (<http://www.aina.ucalgary.ca/arcticnet/>)).

Blasco, S., Byers, M., Cameron, E., Harris, L.N., Keeling, A., Kittmer, S., Knopp, J., Lasserre, F., McAlister, J., Reist, J., Southcott, C., Tallman, R.,

- Têtu, P.-L., 2013, Resource Development, Draft Chapter 9, IRIS-1 Report,
- Boutet, J.S. , Keeling, A., and Sandlos, J., 2013, Historical Perspectives on Mining and the Social Economy, Northern Communities Working Together: The Social Economy of Canada's North,
- Cameron, E., 2013, Critical Geographies of Arctic Climate Change: Toward Different Locals, paper presented at Canadian Association of Geographers Annual Meeting, St. John's.
- Cameron, E., 2013, Critical Perspectives on Indigeneity and Extraction, invited panel commentator, Association of American Geographers Annual Meeting, Los Angeles.
- Cameron, E., 2013, Scaling Climate: Critical Geographies of Arctic Climate Change, paper presented at at Critical Climate Change Conference, Minneapolis, MN.
- Cameron, E., and Levitan, T., 2014, Impact and Benefit Agreements and the Neoliberalization of Indigenous-State Relations and Resource Governance in Northern Canada, *Studies in Political Economy*.
- Cameron, E., and Mearns, R., 2013, Genealogies of Adaptation and Resilience in Contemporary Nunavut, paper presented at Association of American Geographers Annual Meeting, Los Angeles.
- Cameron, E., de Leeuw, S., and Desbiens, C., 2014, Indigeneity and Ontology, *cultural geographies*, v. 21, no. 1, 19-26.
- Cameron, E., Mearns, R., and McGrath, T., 2013, Translating climate change: adaptation, resilience, and climate politics in Nunavut, Canada, *Annals of the Association of American Geographers*.
- Cater, T., and Keeling, A., 2013, 'That's Where Our Future Came From': Mining, Landscape, and Memory in Rankin Inlet, Nunavut, *Études/Inuit/Studies* v. 37, no.2.
- Cater, Tara, 2013, When Mining Comes (Back) to Town: Exploring Mining Encounters in the Kivalliq Region, MA Thesis.
- Czyzewski, K., Tester, F., Pauktutit: Inuit Women of Canada, Aaruaq, N., and Blangy, S., 2014, The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory: A Qualitative Assessment, Report, 174pp.
- Dowsley, M., Mills, S., Cox, D. and Cameron, E., 2013, Gendering Understandings of Resource Development, Resources and Sustainable Development in the Arctic: Gap Analysis.
- Fox, R., Sandlos, J. and Keeling, A., 2013, Fifty Years in the Making: Mary River, Baffin Island, Iron Ore Exploration Project, poster presented at ArcticNet ASM.
- Green, H., 2013, If You Ask them, They Will Tell: Conducting Oral Histories to Study High Arctic Mining, Heritage, and Memory, paper presented at American Society for Environmental History conference, Toronto.
- Green, H., 2013, State, Company and Community Relations at the Polaris Mine (Nunavut), *Études/Inuit/Studies* v. 37, no.2.
- Green, H., 2013, "There is no memory of it here": Closure and Memory of the Polaris Mine in Resolute Bay, 1973-2012", *Mining and Communities in Northern Canada: History, Politics, and Memory*, n/a
- Keeling, A., 2013, Mining and Social Memory at Rankin Inlet, NU, paper presented at ArcticNet ASM.
- Keeling, A., 2013, From Igloo to Mineshaft: Inuit Labour and Memory at the Rankin Inlet Nickel Mine, paper presented at Extractive Industries and the Arctic: Historical Perspectives on Environmental Change in the Circumpolar World workshop, St. John's, NL.
- Keeling, A., 2013, Adaptation, Work, and the Work of Adaptation: Remaking Inuit workers at Rankin Inlet in the 1950s and 1960s, paper presented at Canadian Association of Geographers Annual Meeting, St. John's.
- Keeling, A., 2013, Legacies of Extraction: Thinking Historically About Extractive Industries, invited panel

- commentator, Association of American Geographers Annual Meeting, Los Angeles, n/a.
- Keeling, A. and Boulter, P., 2013, From Igloo to Mineshaft: Inuit Labour and Memory at the Rankin Inlet Nickel Mine (book chapter), *Mining and Communities in Northern Canada: History, Politics, and Memory*.
- Keeling, A., and Sandlos, J., 2014, Introduction: The Complex Legacy of Mining in Northern Canada, *Mining and Communities in Northern Canada: History, Politics, and Memory*.
- Keeling, A., and Sandlos, J., 2013, The Politics and Practice of Oral Environmental History Research in Northern Canada, paper presented at American Society for Environmental History conference, Toronto.
- Keeling, A., Sandlos, J., Boutet, J.S., and Longley, H., 2013, Managing Development? Knowledge, Sustainability and the Environmental Legacies of Resource Development in Northern Canada, *Resources and Sustainable Development in the Arctic: Gap Analysis*.
- Levitan, T. and Cameron, E., 2013, IBAs and the Neoliberalization of Northern Resource Extraction (book chapter), *Mining and Communities in Northern Canada: History, Politics, and Memory*.
- Lim, T., 2013, Inuit Encounters with Colonial Capital: Nanisivik--Canada's First High Arctic Mine, MA Thesis.
- Midgley, S., 2013, Contesting Closure: The Science, Politics and Community Responses to Closing the Nanisivik Mine (book chapter), *Mining and Communities in Northern Canada: History, Politics, and Memory*.
- Sandlos, J., 2013, Arctic Dreaming? History, Resource Development, and the Future of the Arctic Meltdown, *Seeing the Woods: A Blog by the Rachel Carson Center for Environment and Society*.
- Sandlos, J., 2013, Mining, Energy, and the Challenge of Sustainability in Canada, Keynote Address, Energy Histories of the North Atlantic World Workshop, Center for Foreign Policy Studies, Dalhousie University.
- Sandlos, J., 2013, Zombie Mines and the Legacies of Industrial Development in Northern Canada, Invited presentation, John F. Kennedy-Institut, Freie Universität Berlin, and the Amerika Institut, Ludwig Maximilian Universität München.
- Sandlos, J., 2013, Histories of the Arctic Future: the Elusive Dream of Northern Development, paper presented at ArcticNet ASM.
- Sandlos, J., 2013, The History of Arctic Futures, Panel presentation, Extractive Industries in the Arctic Workshop, Memorial University.
- Sandlos, J. and Keeling, A., 2013, Ghost Towns and Zombie Mines: The Historical Dimensions of Mine Abandonment, Reclamation and Redevelopment in the Canadian North, *Exploring Environmental History in Northern Canada*.
- Sandlos, J., and Keeling, A., 2013, Zombie Mines and the (Over)Burden of History, *Solutions Journal*, v. 4, no. 3, online.
- Tester, F., 2013, Not Frozen in Time: A photographic record of social and environmental change in the eastern Arctic, 1949 – 1979, keynote address, *Extractive Industries in the Arctic: Historical Perspectives on Environmental Change in the Circumpolar World* workshop, St. John's, NL.
- Tester, F., and Czyzewski, K., 2013, Impacts of the Meadowbank Gold Mine on Women and Families in Qamani'tuaq (Baker Lake), Nunavut Territory, paper presented at ArcticNet ASM.
- Tester, F.J., and Blangy, S., 2014, Industrial Development and Mining Impacts, *Études/Inuit/Studies* v. 37, no.2.
- Tester, F.J., Lambert, D., and Lim, T., 2013, Wistful thinking: Making Inuit labour and the Nanisivik mine near Ikpiarjuk (Arctic Bay), northern Baffin Island, *Études/Inuit/Studies* v. 37, no.2.