

## Introduction: Negotiating resources, engaging people

Mark Nuttall<sup>1</sup>, Timo P. Karjalainen<sup>2</sup> and Kaarina Tervo-Kankare<sup>3</sup>

<sup>1</sup>Department of Anthropology, University of Alberta, Canada and  
Greenland Climate Research Centre/University of Greenland, Greenland

<sup>2</sup>Thule Institute, University of Oulu, Finland

<sup>3</sup>Department of Geography, University of Oulu, Finland

The *Nordica Geographical Publications Yearbook 2012* brings new insights to the geographical interest in human-environment relations by presenting results of studies conducted by the FiDiPro research group ‘Human-Environment Relations in the North: resource development, climate change and resilience’. The research group consisted of anthropologists, sociologists and geographers and was led by Mark Nuttall during his tenure as Finland Distinguished Professor at the Thule Institute, University of Oulu from 2007-2012, under the auspices of the Academy of Finland’s Finland Distinguished Professor (FiDiPro) programme. The aim of the FiDiPro research programme was to develop innovative and multidisciplinary perspectives on human-environment relations in the Circumpolar North, especially within the context of contemporary environmental changes affecting livelihoods, human engagement with the environment, resource use and development at multiple and interrelated levels. It involved several projects linking researchers at the University of Oulu with the University of Alberta in Canada that were carried out in Finland, Russia, Iceland, Greenland and Canada. During the programme, several PhD theses related to

these themes were completed, including work by eight authors of this publication.

Much of the work carried out by the group has enhanced interdisciplinary and policy-relevant understanding of social, cultural, economic and environmental changes in the North through ethnographically-rich cases studies focusing on climate change, human–animal relations, contested perspectives on land use, conservation and development, the sustainable use of both renewable and non-renewable resources, and community resilience. The nine contributions to this volume offer a sample of the work done by considering a number of different cases illuminating issues of contestation, negotiation and engagement that cluster around the nature of resources, the meanings attributed to them, and the ways in which people are actively engaged in discussion about their appropriate uses, management and governance, but also the ways in which resources are imagined and defined.

Attention is increasingly focusing on resources in the Circumpolar North in terms of the economic potential of oil, gas, minerals, freshwater, wildlife, forests, and other constituent aspects of northern waters and landscapes. Resources and their

use, mapping, extraction, production or conservation, management and governance have assumed geopolitical and strategic importance for states and many non-state actors, including transnational corporations, and they have become central to debates about the sustainability of local livelihoods. As the global North becomes subject to greater pressures from extractive industries, resource companies, and conservationists, understanding social, cultural, political and economic perspectives on the nature and substance of resources and the different ways they are imagined, defined, used, managed and governed becomes a critical area for social science research.

Several of the contributors to this volume take a political ecology approach in examining resource frontiers or the nature of resilience, vulnerability and adaptation, but all are informed by anthropological, sociological and geographical approaches to understanding human-environment relations, the particularities of place, and the contested nature of resource use. Anthropologists, sociologists and geographers have a crucial role to play in contributing grounded and deeper understanding of the processes and social impacts of resource development, whether those resources being developed, extracted or exploited are forests, metals, oil, gas, or fish, or whether rivers are being harnessed for hydropower or rural areas are chosen as sites for nuclear power plants. At the heart of many anthropological and sociological, but also geographical approaches to resource use is a concern with how people are engaged in social and environmental impact assessments and with broader decision-making processes that affect local livelihoods and environments

(e.g. Sinclair & Diduck 2009, Nuttall 2010, O’Faircheallaigh 2010). At the same time, extractive industries have impacts on livelihoods and family and community health that undermine resilience (Gibson & Klitch 2005). The resilience of many northern communities is also challenged by governance systems and institutions that often inhibit and constrain locally specific, long-term resource availability around communities and the entitlement of individuals and rights of communities to access those resources (e.g. Heikkinen *et al.* 2011).

Based on his long-term ethnographic research in the Purovsky district of Yamal in northwest Russia, in the first article in this volume Igor Osipov examines the nature of contemporary models of agreement-making and partnerships that are negotiated and formed between local communities, governments, and resource corporations. Yamal has Eurasia’s richest oil and gas reserves, which supply much of western Europe’s demand for energy, and it is a critically important crossroads region where various geopolitical, socio-economic, and financial interests intersect. The region has a long history of oil and gas development—since the 1970s, resource extraction projects have had significant impacts on the lives of Tarko-Sale and Kharampur-Nenets communities for whom the Purovsky tundra is home, including water and soil contamination, and negative consequences for wildlife and traditional economies. Today, new oil and gas fields are coming on stream and such development, along with the accompanying construction of roads and pipelines, poses considerably more challenges to environment and

society. Osipov argues that such changes are reshaping Yamal's many "frontiers" in which people, energy, and decisions are closely linked. Yet he points out that, in responding to and negotiating development, local people have developed creative ways of adaptation, decision-making, and self-organization.

While people living in northern regions such as Yamal have several decades of experience to draw upon in dealing with extractive industries, other parts of the global North are being imagined and represented as new resource frontiers and individuals, communities and governments are struggling to work out appropriate ways of working with resource companies. Mark Nuttall explores aspects of this with reference to a planned iron ore mine northeast of Greenland's capital Nuuk. Greenland achieved greater autonomy from Denmark in the form of Self-Rule in 2009 and the development of oil, gas and mineral resources has since been a stated aim of the Greenlandic government. Greenland has become a place of intense interest for international companies who are surveying the country's mineral prospects and exploring for oil. While energy companies and Greenlandic politicians remain optimistic that discoveries of commercially-viable oil will be made in the not-too-distant future, mining activities seem far more promising for Greenland's near-term economic development. Yet Nuttall argues that both the presence of extractive industries in Greenland today and the prospect of a number of megaprojects being implemented in the immediate future have provoked contested political and social debates. In particular,

people are increasingly critical of the absence of appropriate public consultation, inadequate public engagement, and what they see as poor regulatory processes. They are concerned about the impacts of extractive industries on traditional hunting and fishing activities, as well as with the shortcomings of social and environmental impact assessments, and are increasingly skeptical that economic benefits will accrue to Greenland.

Discussion in Greenland is beginning to focus on how other countries manage the planning and regulatory processes for large-scale projects, and how impact benefit agreements are negotiated and agreed upon. Given the increasing number of oil, gas and mining projects throughout the global North, as well as other megaprojects such as nuclear power plants and aluminium smelters, it becomes pertinent to look at how communities and local and regional authorities elsewhere anticipate, prepare for, and plan development projects. In the case of Finland, Hannah Strauss argues that decision-making processes have evoked considerable admiration abroad as they produce seemingly consensual decisions on highly contested energy projects, such as new nuclear power plants. Yet, despite the apparent effectiveness of such processes, Strauss brings the impact of planning itself into focus in her contribution to this volume. She shows how communities can experience the adverse impacts of planning processes, before projects have even been approved and implemented, especially in cases when objectives and procedures appear vague. While, as Nuttall shows in his case study of the Isukasia iron ore mine in the Nuuk Fjord, people

in Greenland complain about an absence of public participation, Strauss shows how residents of local communities in northern Finland often complain that they experience frustration and participation fatigue as unintended consequences of planning for energy projects. Strauss argues that Finland's idealised procedural conduct does not allow for the use of new democratic spaces of participatory planning and assessment processes.

Societies and cultures throughout the Circumpolar North have long relied on marine mammals such as seals and whales, or land animals such as reindeer, for their sustenance. Yet, animals are not merely viewed as economic resources by northern peoples—they provide a fundamental basis for cultural survival. Freshwater resources, especially in the form of migratory fish such as salmon, have also constituted the bedrock of human-environment relations. Outi Autti and Timo P. Karjalainen show how the construction of hydro-electric power facilities in northern Finland during the past 60 years has transformed freshwater ecosystems as well as the socio-ecological and cultural dynamics of many local communities living near rivers. Dam construction on the Kemijoki and Iijoki, they argue, led to the loss of migratory fish with far-reaching consequences for local people. Autti and Karjalainen describe the cultural meanings migratory fish have for local people and local social relations. The loss of salmon from the Kemijoki and Iijoki had a corresponding impact on local identity, eroding the very essence of human-environment relations. Restoration projects, they argue, need to be attentive to local histories of salmon and to the

importance of migratory fish to people for whom rivers constitute an essential part of local identity and sense of place.

The contribution to this volume by Franz Krause also focuses on the Kemijoki, Lapland's largest river. Like Autti and Karjalainen, Krause is concerned with explicating the nature of the river for identity and local social relations. Drawing on rich ethnographic and historical material, he describes how the Kemijoki's seasonal variations have long formed an integral part of the rhythmic dynamics of social and ecological life along the length of its banks. Permanent infrastructure and development activities mean that the annual spring-flood is increasingly conceived as a hazard, however. Plans are afoot to dam the river in hitherto protected areas with the aim of decreasing the risk of floods to Rovaniemi, the provincial capital. Krause unravels a complexity of divergent perceptions of floods, hazards, risk and security to get at the very nature of the Kemijoki. Crucially, he argues that regulating the rhythms of the river also implicates the management of places and resources, biological processes and river dwellers.

Moving from northern Finland to northern Canada, Jodie Asselin is also concerned with a diversity of human-environment relations and she explores the nature of different meanings, experiences and understandings of forests in Yukon Territory. Providing a fascinating discussion of alternative interpretations and versions of forest history, as well as different perceptions of forests held by contemporary Yukon residents, Asselin explores the implications of such diversity for understanding multiple use issues in boreal regions. Examining the

relationship between experience, practice, knowledge, stewardship, and belonging, Asselin's work is an important contribution to demonstrating how forms of knowledge and legitimacy inform decision-making. Asselin is concerned with different ways of seeing, understanding and encountering the physical environment. As both multivocal and multilocal, forests are defined in different ways by individuals and groups. As a consequence, she argues, many meanings overlap in a single locality, with the result that a forest is not always the same place for all people. It also means that forest labels such as "used" and "pristine" are not necessarily exclusive. In the context of forest planning in the Yukon, Asselin argues for the need to embrace the contested and convoluted nature of place in order to understand local land values and inter-group relations.

The contribution from Mervi Kasanen and Hannu Heikkinen continues the discussion of diverse and often contested approaches to perceiving, using and managing forests. Their concern is with understanding the nature of power relations of forest management in connection with private forest owners' decision-making processes in Finland. As in Yukon Territory, Finland's forests mean different things to different people and there is often dispute about what a forest is, how it should look, and how it should be managed and used. Kasanen and Heikkinen show how the application of different silvicultural methods has been debated and contested in Finnish forestry since the beginning of the 20<sup>th</sup> century, often leading to litigation cases between forest owners and forest administrators. Their research draws

on interviews with owners of private forests and from the documents and transcripts of three court cases, in which private forest owners were accused of transgressing official ways of managing forests. Kasanen and Heikkinen draw attention to the construction of knowledge, especially in how forest owners think about and conceptualise silvicultural systems and practices, and the interplay between experience, practice and power in decision-making processes. They call for recognition of the varying needs of forest owners in Finnish forest policies, arguing that forest management practices can be improved if the knowledge of forest owners is recognised as having more legitimacy and application than forest administrators currently acknowledge and accept.

Simo Sarkki and Hannu Heikkinen turn their attention to the usefulness of the concept of resilience for assessing sustainability in relation to social and environmental change in the North. Resilience and vulnerability (both social and ecological) are crucial aspects of the sustainability of people's livelihoods, communities, and resource utilization. Examining their social dimensions helps provide conceptual ways of explaining variations in the success of societal adaptation strategies in anticipating (i.e. being proactive) and responding (i.e. being reactive) to environmental change. With a focus on reindeer herding, forestry and nature conservation, Sarkki and Heikkinen broaden discussion beyond the consequences climate change and resource extraction have for resilience and argue that conservation practices and policies may also threaten local livelihoods, but

that this is often a neglected area of study. Importantly, they distinguish between community resilience and the resilience of the livelihoods that communities depend upon, emphasizing the need to decide on appropriate definitions of systems as well as what resilience actually means in different social-ecological settings. In the final article in this volume, Hannu Heikkinen, Mervi Kasanen and Élise Lépy develop some of the themes discussed by Sarkki and Heikkinen by considering resilience, vulnerability and adaptive capacity in reindeer herding communities along the Finnish-Swedish border. In particular, they demonstrate the importance of understanding climate change in a broader context of other stressors. Thus, they show how climate change adaptation issues are intertwined with a multitude of other forms of land use and challenges, all of which influence and often determine the resilience, vulnerability and adaptive capacity of local communities.

The articles in this volume encapsulate/summarise several key messages for social science research in the Circumpolar North, which can perhaps be subsumed under two broad themes – understanding processes and impacts, and critical reflections on concepts and images. First, social scientists have a crucial role to play in understanding the processes and impacts of global environmental change and resource development. Climate change, resource extraction and other contemporary socio-economic changes are increasingly changing the living conditions and livelihoods of people throughout the global North. Adaptation to and mitigation of these changes cannot be understood

and fostered without critical social science perspectives. For example, the issues of public participation and public engagement, local knowledge and power relations remain deeply contested in the context of resource use and extraction or energy debates more broadly. Understanding the nature of power imbalances, inequity, and the barriers to effective and legitimate public engagement becomes paramount in the context of the increasing presence and even dominance of extractive industries in the lives and homelands of northern peoples, or in situations where environments such as forests and rivers are planned, modified, used and managed without due attention to or recognition of their social and cultural significance. Second, while we certainly need interdisciplinary perspectives in studying environmental changes and impacts, we also need critical reflections on the concepts and images used in interdisciplinary studies. For example, concepts such as vulnerability, resilience, adaptation, and ecosystem services were first developed in the natural sciences and have gradually entered the lexical repertoires of other fields. Often, the use of such concepts is adopted in uncritical fashion without much consideration of the relevance of their application in diverse social settings to understand a complexity of human-environment dynamics. Social scientists should – and do – contribute to the development of these concepts by discussing and reflecting on their own studies on the histories of local communities, environments, livelihoods, institutions and governance systems. For example, what are the differences in resilience of a high altitude boreal forest ecosystem in the face of climate change compared to a

local community using the final ecosystem services of that forest, i.e. in the form of wood, and how is the resilience of each connected in a particular socio-ecological system comprising of human-environment relations that are connected yet ontologically distinct? With this kind of question in mind, this volume is offered as a contribution to understanding the complexity of human-environment relations in the North.

## References

- Gibson, G., & J. Klinch (2005). Canada's resilient North: the impact of mining on aboriginal communities. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health* 3(1), 116–134.
- Heikkinen, H. I., O. Moilanen, M. Nuttall & S. Sarkki (2011). Managing predators, managing reindeer: contested conceptions of predator policies in Finland's southeast reindeer herding area. *Polar Record* 47(242), 218–230
- Nuttall, M. (2010). *Pipeline Dreams: people, environment, and the Arctic energy frontier*. IWGIA, Copenhagen.
- O'Faircheallaigh, C. (2010). Public participation and environmental impact assessment: Purposes, implications, and lessons for public policy making. *Environmental Impact Assessment Review* 30(1), 19–27.
- Sinclair, A.J. & A. P. Diduck (2009). Public participation in Canadian environmental assessment: Enduring challenges and future directions. In Hanna, K. S. (ed): *Environmental impact assessment: participation and practice*, 58–82. Oxford University Press, Oxford.