



A Complex Constellation: Displacement, Climate Change and Arctic Peoples

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INTRODUCTION

Although the 400,000 indigenous people of the Arctic comprise less than 2 percent of the world's indigenous peoples, their experiences with a rapid changing and destabilized Arctic ecosystem due to climate change and its profound implications for their societies may serve as a case not only for other indigenous peoples but for marginalized and vulnerable groups worldwide.¹

The Arctic is home to unique human communities whose livelihoods and communities are increasingly challenged by the effects of climate change. Melting ice, stronger storms, growing erosion, thawing permafrost, more unpredictable weather and other direct effects of climate change are already impacting indigenous communities. But warming temperatures and melting ice are also making possible more commercial, transport and military initiatives in the region. New sea routes are being opened, new enterprises are being planned, new drilling and mining licenses are being issued and new tourist destinations are opening up. The movement of more people to the Arctic region will have significant effects on indigenous populations, cultures and livelihoods. This paper focuses specifically on the impact and potential impact of climate change on the mobility of indigenous communities in the Arctic region. Will indigenous populations be forced to move elsewhere because of the effects of climate change? Will they be relocated by governments to protect them from an increasingly unstable environment – or perhaps for other less altruistic reasons?

“Change is a fact of life for Arctic peoples generally, and they have a rich history of culturally adaptive responses to deal with it.”² One of those culturally adaptive responses – migration – has been used for thousands of years. Given the pace of climate change in the Arctic, the question is to what extent Arctic peoples will migrate, be displaced, or be resettled by their governments as adaptation strategies to climate change. Although there has been little systematic research into the potential displacement of people in the Arctic region, scientists have long predicted that one of the major effects of global warming will be the displacement of people. How do these dynamics play out in the Arctic region?

This paper is part of a collaborative research project within the Foreign Policy program of the Brookings Institution which is examining issues and trends related to the Arctic including [energy exploration, maritime security and governance](#). This study seeks to complement those efforts by focusing specifically on indigenous communities – the people who inhabit the northernmost reaches of planet earth. The paper draws on three research papers commissioned for this project which examine the effects of climate change on human mobility in three Arctic countries: Alaska

¹ Frank Sejersen, “Resilience, Human Agency and Climate Change Adaptation Strategies in the Arctic,” in Kirsten Hastrup, ed. *The Question of Resilience: Social Responses to Climate Change*, Denmark: Det Kongelige Danske videnskabernes Selskab 2009.

² Mark Nuttall, “Living in a World of Movement: Human Resilience to Environmental Instability in Greenland,” pp. 292-310 in Susan A. Crate and Mark Nuttall, eds. *Anthropology and Climate Change: From Encounters to Actions*, Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 298.

Native communities, the Russian North and the Scandinavian Arctic.³ These richly detailed studies are available in their entirety on our [website](#). This overview paper supplements these three field-based research reports by weaving in other case studies and providing a broad contextual analysis of the relationship between climate change and mobility.

A FEW WORDS ON TERMINOLOGY

The so-called ‘Arctic Five’ countries are those states with territorial borders in the Arctic: Canada, Denmark (via Greenland), Norway (via Svalbard), Russia and the United States. Sweden, Finland and Iceland are also usually considered Arctic states.⁴ It should be noted that all eight of these countries are developed countries and that indigenous groups make up a small minority of the total population in all cases.

While there is no common definition for indigenous peoples, most definitions somehow include the notion that indigenous peoples have a special connection to their environment. Considering the diversity of indigenous peoples, for example, no UN body has adopted an official definition of “indigenous.” Instead the UN system has developed a modern understanding of the term based on certain criteria:

- Self-identification as indigenous peoples at the individual level and acceptance of membership by the community;
- Historical continuity with pre-colonial and/or pre-settler societies;
- Strong link to territories and surrounding natural resources;
- Distinct social, economic or political systems;
- Distinct language, culture and beliefs;
- Form non-dominant groups of society;
- Resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities.⁵

The UN estimates that there are about 5000 different indigenous peoples, with a population of about 370 million and occupy 20 percent of the world’s territory.⁶

³ Robin Bronen, University of Alaska, "Climate-induced Displacement of Alaska Native Communities," <http://www.brookings.edu/research/papers/2013/01/30-arctic-alaska-bronen>; Susan A. Crate, George Mason University, "Climate Change and Human Mobility in Indigenous Communities of the Russian North," <http://www.brookings.edu/research/papers/2013/01/30-arctic-russia-crate>; Ilan Kelman and Marius Naess, CICERO, "Climate Change and Displacement for Indigenous Communities in Arctic Scandinavia," <http://www.brookings.edu/research/papers/2013/01/30-arctic-scandinavia-kelman-naess>.

⁴ Ebinger and Zambetakis, op. cit., p. 1222.

⁵ United Nations Permanent Forum on Indigenous Issues, “Who are indigenous peoples? Factsheet,” accessed 14 January 2013, http://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf Also see United Nations, Department of Economic and Social Affairs, Division for Social Policy and Development, Secretariat of the Permanent Forum on indigenous Issues, “The Concept of Indigenous Peoples,” Workshop on Data Collection and Disaggregation for Indigenous Peoples, New York, 19-21 January 2004, PFII/2004/WS.1/3. Also see Rachel Baird, “The Impact of Climate Change on Minorities and Indigenous Peoples,” *Minority Rights Group International Briefing*, 2008, www.gsdr.org/go/display&type=Document&id=3945, p. 1.

The term ‘mobility’ is used in this paper to indicate the movement of people, whether voluntary or coerced, temporary or permanent, planned or spontaneous, and whether an international border is crossed or not. In international law, migration is assumed to be voluntary while the term ‘displacement’ implies coercion. Almost all of those displaced within the Arctic remain within the borders of their own countries and as such, are internally displaced persons or IDPs. IDPs are defined in the *Guiding Principles on Internal Displacement* as:

persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.⁷

GENERAL OBSERVATIONS ON THE RELATIONSHIP BETWEEN CLIMATE CHANGE AND MOBILITY (MIGRATION, DISPLACEMENT AND RELOCATIONS)

In 1990, the Intergovernmental Panel on Climate Change (IPCC) reported that the greatest single impact of climate change might be on human migration.⁸ The report estimated that by 2050, 150 million people could be displaced by climate change-related phenomena, such as desertification, increasing water scarcity, floods and storms. Since then, a number of studies⁹ have looked at the potential displacement resulting from climate change; while projections of the extent of displacement differ widely, it is generally accepted that the effects of climate change will result in large-scale movements of people. The extent to which people will move because of the effects of climate change will depend on the extent to which global temperatures rise, which in turn will depend on the success of measures to mitigate the production of green-house gasses spearheaded by the United Nations Framework Convention for Climate Change. So far, the record is not

⁶ United Nations, Permanent Forum on Indigenous Issues, “Environment,” accessed 14 January 2013, <http://social.un.org/index/IndigenousPeoples/ThematicIssues/Environment.aspx>

⁷ UN Commission on Human Rights, *Guiding Principles on Internal Displacement*, E/CN.4/1998/53/Add.2, 1998, www.brookings.edu/projects/idp/gp_page.aspx

⁸ Intergovernmental Panel on Climate Change, *Climate Change: The IPCC Impacts Assessment*, 1990 http://www.ipcc.ch/publications_and_data/publications_ipcc_first_assessment_1990_wg2.shtml

⁹ See for example: Nicholas Stern, *The Stern Review on the Economics of Climate Change*, 2006, http://www.hm-treasury.gov.uk/stern_review_report.htm; German Advisory Council on Global Change, *World in Transition: Climate Change as a Security Risk*. Berlin: German Advisory Council on Global Change; Norwegian Refugee Council, *Climate Changed: People Displaced*, 2009, <http://www.nrc.no/?did=9448676>; Christian Aid, *Human Tide: The Real Migration Crisis*, May 2007, www.christianaid.org.uk/Images/human-tide.pdf Foresight: Migration and Global Environmental Change (2011), *Final Project Report*, The Government Office for Science, London. Jane McAdam, Climate Change Displacement and International Law: Complementary Protection Standards, Legal and Protection Policy Research Series, May 2011. <http://www.unhcr.org/4dff16e99.html>; Susin Park, Climate Change and the Risk of Statelessness: The Situation of Low-lying Island States, Legal and Protection Policy Research Series, May 2011 <http://www.unhcr.org/4df9cb0c9.html>; Roger Zetter, Protecting Environmentally Displaced People: Developing the Capacity of Legal and Normative Frameworks, Refugee Studies Centre, Oxford, UK, February 2011. <http://www.rsc.ox.ac.uk/pdfs/workshop-conference-research-reports/Zetter-%20EnvDispRep%2015022011.pdf>. UNHCR, *Climate change, natural disasters and human displacement: a UNHCR perspective*, 2008. UNHCR, *Summary of Deliberations on Climate Change and Displacement*, Bellagio Expert Seminar 2011)

good. But individual decisions to move will also depend on a host of other factors, ranging from individual risk tolerance to government-established adaptation measures which enable people to remain in their communities.

The importance of mobility as an adaptation measure was highlighted for the first time by the UN Framework for Climate Change Cooperation (UNFCCC) in December 2010. At that meeting in Copenhagen (known as COP-16), the need to address the movement of people as a result of climate change was included in paragraph 14 (f) of the outcome document, the Conference of Parties:

14. Invites all Parties to enhance action on adaptation under the Cancun Adaptation Framework, taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, by undertaking, inter alia, the following:

(...)

(f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels;¹⁰

In other words, for the first time in the UNFCCC framework, migration, displacement and planned relocation were recognized as potential adaptation strategies to climate change.

Migration is a rational, adaptive strategy that has been used by people since the beginning of recorded history. When people perceive that their lives or livelihoods are threatened, they move elsewhere. Often they move to cities within their own countries. Sometimes they migrate to other countries. In other cases, they are forcibly displaced because their homes have been destroyed, their land has become uninhabitable, conflicts threaten their lives or because someone forces them off their land for personal or political reasons. While migration is usually seen as a voluntary decision by people while displacement implies coercion, in fact, the distinction between voluntary and involuntary is often blurred. For example, people may move 'voluntarily' because they perceive that at some point their community will become uninhabitable because of the effects of climate change. The Cancun meeting also recognized that planned relocation of communities from areas which are either unsafe or uninhabitable will be an essential component of climate change-induced displacement. While migration is the result of individual decision-making and displacement is a response to dangerous situations, planned relocation is a proactive step which governments can take to ensure the rights of their people to survive.¹¹

¹⁰ Koko Warner, *Climate and environmental change, human migration and displacement: Recent policy developments and research gaps*, Ninth Coordination Meeting on International Migration, Population Division, Department of Economic and Social Affairs, United Nations Secretariat, UN/POP/MIG-9CM/2011/10, 12 February 2011

¹¹ The issue of planned relocations as a response to the effects of climate change has perhaps received the most attention in the case of the Pacific Islands. See for example Elizabeth Ferris, Michael M. Cernea and Daniel Petz, *On the Front Line of Climate Change and Displacement, Learning From and With Pacific Island Countries*, Brookings-LSE Project on Internal Displacement, September 2011. However, its potential in other setting is also considerable. Elizabeth Ferris, *Protection and Planned Relocations in the Context of Climate Change*, UNHCR, Legal and Protection Policy Research Series, PPLA/2012/04, August 2012. See also Elizabeth Ferris, *Planned Relocations, Disasters and Climate Change*, prepared for the Gilbert + Tobin Centre of Public Law's "Conference on Climate

There is a consensus that climate change-related displacement will primarily occur within countries and that it will affect primarily poorer regions and countries. Just as natural disasters disproportionately affect the poor and marginalized within countries, the effects of climate change are expected to be felt most acutely in poor countries and among poor communities within poor countries. In fact, climate change is already undermining the realization of human rights, including the rights to life, health, property, shelter, water, livelihood and culture.¹² As the Center for International Human Rights Policy has observed, “populations whose rights are poorly protected are likely to be less well-equipped to understand or prepare for climate change effects; less able to lobby effectively for government or international action; and more likely to lack the resources needed to adapt to expected alterations of their environmental and economic situation.”¹³

The literature on climate change and displacement further suggests that in particular, indigenous communities are likely to be disproportionately affected along with other particularly vulnerable groups such as children, persons with disabilities, the elderly and women.¹⁴

CLIMATE CHANGE AND INDIGENOUS PEOPLES

We are deeply alarmed by the accelerating climate devastation brought about by unsustainable development. We are experiencing profound and disproportionate adverse impacts on our cultures, human and environmental health, human rights, well-being, traditional livelihoods, food systems and food sovereignty, local infrastructure, economic viability, and our very survival as Indigenous Peoples.¹⁵

The global movement for indigenous rights has been remarkable in many ways.¹⁶ From the beginning of the UN Commission on Human Rights, indigenous groups have turned to international human rights mechanisms to raise awareness about their situation. The United

Change and Migration in the Asia-Pacific: Legal and Policy Response" at the University of New South Wales in Sydney, Australia on November 10-11, 2011, <http://www.brookings.edu/research/papers/2011/11/10-relocation-disasters-cc-ferris>

¹² See for example, International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide*, 2008.

¹³ International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide*, 2008. Also see: United Nations General Assembly, *Protection of and assistance to internally displaced persons*, Report of the Special Rapporteur on the human rights of internally displaced persons, Chaloka Beyani, Sixty-sixth Session, 9 August 2011, A/66/285.

¹⁴ Report by the Office of the High Commissioner for Human Rights *on the relationship between climate change and human rights*, 15 January 2009, <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/G09/103/44/PDF/G0910344.pdf?OpenElement> (accessed 16 January 2013); International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide*, 2008. Also see Rachel Baird, “The Impact of Climate Change on Minorities and Indigenous Peoples,” *Minority Rights Group International, Briefing*, 2008. <http://www.gsdrc.org/go/display&type=Document&id=3945>, p. 1.

¹⁵ United Nations Framework Convention for Climate Change, *The Anchorage Declaration*, 24 April 2009, unfccc.int/resource/docs/2009/smsn/ngo/168.pdf

¹⁶ Rhiannon Morgan, “On Political Institutions and Social Movement Dynamics: The Case of the United Nations and the Global Indigenous Movement,” *International Political Science Review*, vol. 28, no. 3, June 2007, pp. 273-292, <http://www.jstor.org/stable/20445095>.

Nations Working Group on Indigenous Populations, a subsidiary organ of the Sub-Commission on the Promotion and Protection of Human Rights¹⁷ was the first and only UN body involved exclusively with matters concerning the human rights of Indigenous Peoples with nearly 700 persons regularly attending the Working Group sessions, including observers for Governments, Indigenous Peoples, non-governmental organizations, and scholars.¹⁸ In 2000, the Economic and Social Council (ECOSOC) established the Permanent Forum on Indigenous Issues to consider a wide range of issues affecting Indigenous Peoples. The Forum, which includes eight Indigenous experts, is the first and only international body in the United Nations that has Indigenous Persons as members.¹⁹ It meets once a year for ten working days and submits annual reports to the Economic and Social Council. Within the UN Commission on Human Rights, replaced in 2006 with the UN Human Rights Council, a special procedure was created in 2001 in the form of a UN Special Rapporteur on the situation of the human rights and fundamental freedoms of indigenous peoples. This position, which was renamed the Special Rapporteur on the Rights of Indigenous Peoples has been held since 2008 by Prof. James Anaya.

In 2007, the United Nations General Assembly adopted the Declaration on the Rights of Indigenous Peoples²⁰ (notably there were four opposing votes: Australia, Canada, New Zealand and the US.) Among other rights, the Declaration recognizes the right of indigenous peoples to self-determination; the right to maintain their cultural traditions; the right to not be relocated without their participation; the right to participate in decisions which affect them; the right to own, use, develop and control lands they have historically occupied; and the right to develop and determine priorities for the use of their land.

These achievements on the international level were the result of decades of lobbying and advocacy work. In particular indigenous peoples have been concerned with issues of climate change for several reasons:

- The close relationship they have with their natural environments which are usually linked to culture and spirituality.²¹
- Their dependence on the environment for livelihoods and indeed survival
- Their long, intensive experience of both mitigating and adapting to climate change

The Seventh session of the UN Permanent Forum on Indigenous Issues held a special session on climate change and the stewardship role of indigenous people in 2008.²²

¹⁷ OHCHR, “Mandate of the Working Group on Indigenous Populations,” accessed 14 January 2013, <http://www.ohchr.org/EN/Issues/IPeoples/Pages/MandateWGIP.aspx>

¹⁸ For a description of the various UN bodies dealing with indigenous issues, see: University of Minnesota, Human Rights Library, “Study Guide, The Rights of Indigenous Peoples, accessed 14 January 2013, <http://www1.umn.edu/humanrts/edumat/studyguides/indigenous.html#V>

¹⁹ UN Permanent Forum on Indigenous Issues, “Indigenous Peoples at the United Nations,” accessed 14 January 2013, <http://social.un.org/index/IndigenousPeoples.aspx>

²⁰ United Nations, *United Nations Declaration on the Rights of Indigenous Peoples*, March 2008, http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

²¹ Rachel Baird, op. cit., p. 1.

²² United Nations Permanent Forum on Indigenous Issues, “Environment,” accessed 14 January 2013, <http://social.un.org/index/IndigenousPeoples/ThematicIssues/Environment.aspx>

It is important to understand that the issue of climate change and displacement in the Arctic takes place within a broader context of indigenous rights. Arctic indigenous communities have often raised their issues in and been supported by broader international indigenous fora. Indeed, given that indigenous people represent only a small proportion of the world's population and their typically painful historical relationships with governments, the global movement for indigenous rights has provided support for numerous small groups struggling to assert their rights and maintain their traditions. At the same time it is important to recognize that indigenous groups (like non-indigenous groups) have different interests, agendas, and capacities. This is true for Arctic indigenous communities as will be discussed later in this paper.

This paper now turns to an examination of the relationship between climate change and displacement for the indigenous peoples of the Arctic. The first section explores the extent and effects of climate change in the region. Discussion then turns to the effects of climate change on human mobility in the Arctic with particular reference to the studies commissioned for this research project. The next section then discusses some of the political dimensions affected by climate change-induced displacement in the region both for the governments of concerned countries and for international institutions. The final session then deals with how this discussion relates to other concerns about the impact of climate change on the Arctic – security, trade, natural resource development, and governance.

CLIMATE CHANGE AND THE ARCTIC: THE SCIENCE

Since the Third Assessment Report of the Intergovernmental Panel on Climate Change in 2001, there has been a recognition that climate change is occurring faster accelerated in the Arctic than in other parts of the world.

Warming temperatures

In the last few decades, the average Arctic temperature has increased twice as much as the average global temperature.²³ It is projected to continue to warm by as much as 18 degrees Fahrenheit by 2100.²⁴ This may be due to the influence of the Gulf Stream's warmer waters and the long periods of sunlight.²⁵ This Arctic warming influences weather throughout the world. As Cho explains, "the difference in fall and winter temperatures between the colder Arctic and more southern regions is what propels the jet stream, which moves weather patterns around the Northern Hemisphere. But warmer Arctic temperatures have lessened that differential, affecting

²³ Union of Concerned Scientists, *Fact Sheet, Early signs of Global Warming: Arctic and Antarctic Warming*. <http://www.ucsusa.org/warming/gw<uscore>arctic.html>

²⁴ Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change - Overview: Alaska, U.S. Global Change Research Program, 2000. pp. 74-75. <http://www.globalchange.gov/publications/reports/scientific-assessments/605>

²⁵ Renee Cho, "How the Warming Arctic Affects Us All," Earth Institute, Columbia University blog, 6 December 2012, <http://blogs.ei.columbia.edu/2012/12/06/how-the-warming-arctic-affects-us-all/>

the jet stream's west-to-east speed; as a result, weather conditions seem to stall in place for a longer time, creating extreme snowfalls, droughts and heat waves.²⁶

These warming temperatures have major consequences for the sea ice, the glaciers, the land, the storms, the vegetation, the animals, and the humans living in the region.

Ice

In the summer of 2011, Arctic Ocean sea ice shrunk to the smallest size ever seen in satellite images. In the fall of 2012, the National Snow and Ice Data Center documented a record low in the level of Arctic sea ice – a figure 49 percent lower than the 1979-2000 average.²⁷ The Greenland ice sheet is shrinking twice as fast as estimated by the IPCC and is losing mass at about five times the rate it was in the early 1990s.²⁸ During the last thirty years, about half of the Arctic sea ice cover, 80 percent of sea ice volume and much of the old multiyear ice have been lost. Many climate models had predicted that summer sea ice would remain through this century and into the next, so the speed of the melting has taken scientists by surprise.²⁹ As sea levels rise, land will be submerged, causing countries to lose physical territory. The areas expected to experience the largest land loss by 2030 are the Arctic Ocean coasts of Canada, Alaska, Siberia and Greenland.

The loss of sea ice has major consequences. One aspect of late freeze-up is the way in which sea ice forms. “Under normal conditions, the water is cold in fall and permafrost under the water and near the shoreline helps create ice crystals on the sea floor. When they are large enough, these crystals float to the top, bringing with them sediments. The sediments have nutrients used by algae growing in the ice, thus stimulating the food chain in and near the ice. When the ice melts in spring, the sediments are released, providing nutrients in the melt water. In years with warm summers and late freeze-up, on the other hand, the water is warm and freezes first from the top as it is cooled by cold winds in late fall or early winter. Less ice is brought up from the bottom, and fewer nutrients are available in the ice and in the melt water the following spring, and overall productivity is lower.”³⁰ This affects the algae that grow in the ice which in turn affects the fish that feed on the algae which in turn affects the mammals that feed on the fish.

²⁶ Ibid.

²⁷ National Snow & Ice Data Center, “Arctic Sea Ice News & Analysis,” accessed 14 January 2013, <http://nsidc.org/arcticseaicenews/>

²⁸ Anthony Oliver-Smith, *Sea Level Rise and Vulnerability of Coastal Peoples, Responding to the Local Challenges of Global Climate Change in the 21st Century*, InterSecTions, United Nations University, No. 7/2009, <http://www.ehs.unu.edu/file/get/4097>

²⁹ Renee Cho, op. cit.

³⁰ Caleb Pungowiyi, “Native observations of change in the marine environment of the Bering Strait region,” http://www.arctic.noaa.gov/essay_pungowiyi.html.

Erosion

Because sea ice forms a natural barrier against storm wave action, ice melting allows larger storm surges to develop.³¹ When sea ice melts, waves hit the coast directly, driving rapid erosion. This is exacerbated by melting permafrost that traditionally has bound coastal soils. Warmer ground temperatures, increased thaw and more subsidence are all linked to the melting of ground ice and permafrost.³² When there is no protection from sea ice, a single storm can erode the shoreline up to 10 meters.³³

For example, in the Canadian village of Tuktoyaktuk, sea ice that normally forms a protective barrier against erosion is melting, increasing erosion of the shoreline. This erosion has in turn created a new channel of water dividing the town. This erosion, along with the thawing of the region's permafrost is destroying buildings and threatening the village cemetery.³⁴

Thawing permafrost contributes to erosion and damages houses, buildings and infrastructure as a stable, rock-hard foundation gives way to soggy land.

These changes in temperature and ice extent have major consequences for marine life, animals and vegetation. For walrus, reduced sea ice, means they have to swim further and have fewer rest areas, making it more difficult for them to secure food. Moreover, due to water action and sedimentation, the productivity of the sea bed may have declined (e.g. producing fewer clams), forcing walrus to go further to find food.³⁵ There are changes in the areas inhabited by fish species with certain species, such as cod, moving further northwards as waters warm. This means that some animals such as walrus which live south of the far polar north see their traditional source of protein disappear.³⁶ For polar bears and ringed seals, the lack of snow makes it difficult for them to form dens for giving birth. As bears prey on ringed seals, when their number diminishes, polar bears also find less food.³⁷

Different kinds of insects are reportedly moving northwards as a result of warming temperatures; this has a direct impact on forests. For example, spruce bark beetles are reportedly reproducing at twice their normal rate and there have been outbreaks of other defoliating insects in the boreal forest.³⁸ Between higher temperatures and insect infestations, forests are more susceptible to

³¹ Potential Consequences of Climate Variability and Change for Alaska, USGCRP Foundation Report (1998), Chapter 10, p. 292.

³² Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC Fourth Assessment Report (2007), Chapter 6, p. 320.

³³ Report of the Indigenous Peoples' Global Summit on Climate Change, p. 2.

³⁴ *Ibid.*, p. 2.

³⁵ Caleb Pungowiyi, "Native observations of change in the marine environment of the Bering Strait region," http://www.arctic.noaa.gov/essay_pungowiyi.html. For more on walrus, see David Suzuki Foundation, "Fact Sheet, Climate Change: Imperiled Ecosystems," 1999, <http://www.davidsuzuki.org/campaigns<uscore>and<uscore>Programs/Climate<uscore>change/Climate<uscore>Science/Climate-Damage/Imperilled<uscore>Ecosystems.asp>.

³⁶ Ebinger and Zambetakis, *op. cit.*, p. 1218.

³⁷ Pungowiyi, *op. cit.*

³⁸ Timothy Egan, "In Alaska, Hotter Weather Provokes Startling Changes," *The New York Times*, 18 June 2002; The spruce bark beetle has destroyed more than 2 billion board feet of timber in Alaska in the last 25 years.

forest fires, with implications for both human settlements and for animals, such as caribou which depend on forests.

New patterns of bird migration seem to be developing as a result of changing vegetation and warmer temperatures with potentially large implications not only for the Arctic's ecological systems but for other regions as well.³⁹

Feedback loops

Warming contributes to climate change. The effects of climate change in the Arctic are producing changes that in themselves intensify global warming. "Greying of the icecap, as black carbon from incomplete hydrocarbon combustion lodges itself in snow and ice, causes what was once a reflective surface to absorb more sunlight, melt and warm the water. The resulting dangerous feedback loop is part of an alarming phenomenon that is pushing the current drive for policies to slow down climate change."⁴⁰ Warming is also leading to large plant growth, that like black carbon, darkens the landscape and further warms the ice.⁴¹ In addition, permafrost thawing intensifies release of methane, compounding the warming trend by adding yet more greenhouse gas to the atmosphere.⁴²

And a recent study posits that the pace of melting could be even faster than predicted. In looking at "our recent paleoclimate history, melt didn't necessarily happen with a smooth, linear curve. Indeed there is evidence that Earth's climate had sensitive tipping points, with potential 'run away feedback loops' which means that the "Greenland and Antarctic Ice Sheets could break down much faster than the IPCC predicts, as melt rates potentially double over short intervals of time. By 2090, meters of sea level rise could be entirely possible globally."⁴³

CLIMATE CHANGE, MOBILITY, INDIGENOUS PEOPLES IN THE ARCTIC

The Saami don't like it getting warmer, it is their right to want to feel cold.⁴⁴

The Arctic is inhabited by approximately 4 million people⁴⁵ of whom 400,000 are considered indigenous. Approximately two-thirds of the total population in the Arctic lives in relatively

"Battling the Bark Beetle: As Global Warming Rises, so do Tree-Killing Infestations," Emagazine.com, November/December 2001.

³⁹ Caleb Pungowiyi, "Native observations of change in the marine environment of the Bering Strait region," http://www.arctic.noaa.gov/essay_pungowiyi.html

⁴⁰ Ebinger and Zambetakis, op. cit., p. 1215. Also see: The Economist, "The new black," 18 January 2013, <http://www.economist.com/news/science-and-technology/21569686-soot-even-worse-climate-was-previously-thought-new-black>

⁴¹ Ebinger and Zambetakis, op. cit., 1218.

⁴² Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC Fourth Assessment Report (2007), Chapter 6, p. 320.

⁴³ The Center for Climate and Security, "The Ice Melt Equation: An Ultimate Geopolitical Calculus," 14 January 2013, <http://climateandsecurity.org/2013/01/14/the-ice-melt-equation-an-ultimate-geopolitical-calculus/>

⁴⁴ Report of the Indigenous Peoples' Global Summit on Climate Change, 2009, para 73, p. 25

large settlements, although indigenous peoples living in circumpolar countries are characterized by small, widely separated communities. There are different definitions of ‘indigenesness’ by countries in the region and different ways of categorizing the various indigenous groups. And different names are used in different countries. In Alaska, the most common reference is “Alaska Native” while the Constitution of Canada uses the term “aboriginal” and “First nations” is commonly used in Canada. Russian legislation defines indigenous peoples based on their population size, distinguishing between ‘small-numbered’ and ‘large-numbered people while non-Russian peoples with a population size of over 50,000 are denied indigenous status. The table below provides some general information about indigenous populations in seven Arctic countries (note that Iceland does not have an indigenous population.)⁴⁶

Arctic Region or Country	Date	Population (1,000) Total	Indigenous	Share of indigenous (%)
USA (Alaska)	Census 2000	627	98 (119)*	15.6 (19.0)
Canada: Arctic region	Census 2001	130	66	50.8
Denmark: Greenland	2003	57	50	88.1
Iceland	2003	288	NA	
Denmark: Faroe Islands	2003	48	NA	
Norway: Arctic region	2003	463		
Sweden: Arctic region	2003	254	50**	~5
Finland: Arctic region	2003	188		
Russia: Arctic region	Census 2002	1982	~90***	>4

Notes:
 * Just American Indians & Alaska Natives (American Indians & Alaska Natives and some other race)
 ** Estimate for Nordic Saami (AMAP, 1998)
 *** Estimate author (D. Bogoyaviensky, Census 1989 = 77)

⁴⁵ Stefansson Arctic Institute, *Arctic Human Development Report*, 2004.

<http://www.svs.is/ahdr/AHDR%20chapters/English%20version/Chapters%20PDF.htm>. Note that using a broader definition of the circumpolar North, the population is estimated at 13.1 million.

⁴⁶ Timo Koivurova, Henna Tervo and Adam Stepien, *Indigenous Peoples in the Arctic*, Background Paper, Arctic Centre and Arctic Transform, 4 September 2008. <http://arcticcentre.ulapland.fi/docs/Indigenous+Peoples+background+Koivurova+et+al.pdf>, p. 7



Indigenous peoples of the Arctic countries

Subdivision according to language families

Na'Dene family	Eskimo-Aleut family
Athabaskan branch	Inuit group of Eskimo branch
Eyak branch	Yupik group of Eskimo branch
Tlingit branch	Aleut group
Haida branch	Uralic-Yukagirian family
Penutan family	Finno-Ugric branch
Penutan family	Samodic branch
Macro-Algonkian family	Yukagirian branch
Algonkian branch	Altaic family
Wakasha branch	Turkic branch
Salish branch	Mongolic branch
Macro-Sioux family	Tunguso-Manchurian branch
Sioux branch	Chukotko-Kamchatkan family
Iroquois branch	Ket (isolated language)
Indo-European family	Nivkh (isolated language)
Germanic branch	Ainu (isolated language)

Notes:

For the USA, only peoples in the State of Alaska are shown. For the Russian Federation, only peoples of the North, Siberia and Far East are shown.

Majority populations of independent states are not shown, not even when they form minorities in adjacent countries (e.g. Finns in Norway).

Areas show colours according to the original languages of the respective indigenous peoples, even if they do not speak these languages today.

Overlapping populations are not shown. The map does not claim to show exact boundaries between the individual groups.

In the Russian Federation, indigenous peoples have a special status only when numbering less than 50,000. Names of larger indigenous peoples are written in green.

⁴⁷Norwegian Polar Institute, "Indigenous peoples of the Arctic countries," accessed. <http://www.arctic->

Like other nomadic peoples, mobility has long been recognized as characteristic of Arctic communities as they have traditionally moved in response to seasonal changes and to support of livelihoods, whether hunting, reindeer herding, fishing or foraging. Also like nomadic peoples in other parts of the world, there have been increasing pressures on Arctic indigenous communities to settle in villages rather than to move continually. This sedentarization is due in large measure to the desire by governments to provide services to their citizens – services which are much easier to provide when people are grouped together. In this respect education can be singled out as a prime driver of sedentarization. In all three of the cases researched for this project, nomadic peoples in Siberia, Alaska and the Scandinavian Arctic began to settle down as a result of government policies of compulsory education. Similarly, Sejersen found that mobility of Inuit living in Greenland was impacted by increased sedentarization caused in large measure by establishment of schools, health centers, and shops for trading.⁴⁸

In other words, mobility was limited by government policies long before climate change occurred on the horizon. There have also been cases where Arctic indigenous communities have been relocated as when in 1953, the Thule population of northern Greenland was forced to move to make way for the establishment of an American air base.⁴⁹ The government of Greenland has continued to encourage the concentration of populations in order to provide schools and services and to facilitate trade. The indigenous communities of the Arctic are also increasingly using modern technology such as snowmobiles and GPS devices in support of their traditional livelihoods.

It was around the mid-1980s that indigenous groups began reporting that their climate was changing and that it was having an impact on their livelihoods.⁵⁰ Although there are important differences between the indigenous groups (for example, the Inuit depend on ice and the Saami on forests, tundra and coasts⁵¹), the changes in climate and weather patterns are changing the ways that indigenous groups survive in the polar region. Both the research into the Russian Far North and the Scandinavian Arctic document the changes in habitat which affect the foraging habits of reindeer on which the communities depend. In particular the patterns of repeated thawing and freezing, resulting from both warmer and more variable temperatures, means that a layer of ice often forms under the snow cover which makes it difficult or impossible for reindeer to forage for the lichen that is their staple diet in winter. Changing weather patterns are also changing the traditional range of herds.

council.org/images/maps/indig_peoples.pdf

⁴⁸ Frank Sejersen, “Resilience, Human Agency and Climate Change Adaptation Strategies in the Arctic,” in Kirsten Hastrup, ed. *The Question of Resilience: Social Responses to Climate Change*, Denmark: Det Kongelige Danske videnskabernes Selskab 2009, p. 225.

⁴⁹ Kirsten Hastrup, “Arctic Hungers: Climate Variability and Social Flexibility,” in Kirsten Hastrup, ed. *The Question of Resilience: Social Responses to Climate Change*, Historisk-filosofiske meddelelser 106, Det kongelige Danske Videnskabernes Selskab, 2009, p. 255.

⁵⁰ Baird, op. cit., p. 4.

⁵¹ Mark Nuttall, “Living in a World of Movement: Human Resilience to Environmental Instability in Greenland,” in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 305.

Changing reindeer migration patterns means that indigenous peoples are now taking food to the reindeer.⁵² Reindeer-herding is more than a livelihood; it is tied up with many aspects of Saami culture – language, songs, child-rearing, marriage – if climate change affects their ability to herd reindeer, there will be monumental changes to culture.⁵³ Inuit tribes report massive drops in the walrus and seal populations, two vital commodities for their own livelihoods.”⁵⁴ In Greenland, winter fishing, essential to feeding families, is becoming hazardous or impossible.⁵⁵

Climate change is impacting infrastructure as melting permafrost affects foundations of houses and buildings and as increased incidences of thawing/freezing damages roads. This has occurred in all three of the areas studied by researchers working with this project. Most dramatically perhaps has been the situation in Alaska where indigenous communities face crumbling infrastructure, damaged sewage systems and destroyed schools and public facilities. Susan Crane reports that homes in the Russian North have collapsed and Ilan Kelman and Marius Naess predict that roads in Scandinavian Arctic will need more maintenance; repair work could bring more non-indigenous to the region (but could also perhaps create more livelihood opportunities for Saami not engaged in reindeer herding – the jury is still out.)

A second impact of climate change is on communications and transportation. With less ice, people can no longer cross rivers and lakes as they did before and hunters face greater risks because of the thin ice.⁵⁶ Mobility has been central to the identity of those living in Thule district in Northern Greenland (the northernmost inhabited area in the world) but now fog and changing weather are affecting sledging patterns.⁵⁷ Moreover, the ice thickens later, it breaks up earlier, and travel by dogsled is more difficult because of the holes in the ice.⁵⁸ More wind means rougher ice which is not freezing as solidly, making travel dangerous.⁵⁹

Calving glaciers make hunting and movement more dangerous. As Bronen reports, increased erosion (as a result of rising sea level, increasing storms, and the melting of sea ice which served as a protective barrier) has destroyed barge sites. In the case of Newtok, for example, the community depended on the annual arrival of a large barge with the supplies for the winter. When the barge can no longer dock at the community, the only alternative is by small plane which is prohibitively expensive.⁶⁰ Communities in northern Alaska thus face the danger of

⁵² Baird, op. cit., p. 7.

⁵³ Baird, p. 4.

⁵⁴ Ebinger and Zambetakis, p. 1218

⁵⁵ Elisabeth Rosenthal, “A Melting Greenland Weighs Perils Against Potential,” *The New York Times*, 23 September 2012. <http://www.nytimes.com/2012/09/24/science/earth/melting-greenland-weighs-perils-against-potential.html?pagewanted=all>

⁵⁶ Report of the Indigenous Peoples’ Global Summit on Climate Change, paras 81-85, p. 26-2

⁵⁷ Hastrup, op. cit., p. 248.

⁵⁸ Hastrup, op. cit., p. 249.

⁵⁹ Anne Henshaw, “Sea Ice: The Sociocultural Dimension of a Melting Environment in the Arctic,” in Susan A. Crane and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 12.

⁶⁰ Robin Bronen, *Climate-induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine*, *New York University Review of Law & Social Change*, Vol.37, 4 August 2011, p. 374; Robin Bronen, University of Alaska, “Climate-induced Displacement of Alaska Native Communities,” <http://www.brookings.edu/research/papers/2013/01/30-arctic-alaska-bronen>.

being unable to receive critical supplies, such as fuel, because of the inability of barges to reach the community and the expense of flying these supplies to the community.

Changes in the mobility of indigenous groups affect the indigenous in other, less-obvious ways. As Hastrup summarized: “mobility became more than an activity getting from one place to another for the Inuit; it became a fundamental aspect of who they were, and still are, and how they learn about their environment.”⁶¹ Crate reports that for indigenous groups in the Russian North “their sense of place and their understanding of ‘homeland’ are both tied directly to an ecosystem dependent on water in its solid state.”⁶² Changes in icescape are changing local sense of emplacement. Place names in Greenland refer to physical features, such as hunting grounds. “When place names are no longer consistent with the appearance of the land, a sense of homelessness enters perception. Memories are no longer valid.”⁶³

The role of traditional knowledge in indigenous communities is changing. Many indigenous say their traditional knowledge is not as reliable as it was in the past for predicting safe ice conditions.⁶⁴ Knowing when to plant and hunt is more difficult in a changing climate. Inuit people in Kinngait, on southwest Baffin Island, Nunavut, find that they’re relying more on weather radio.⁶⁵ This is changing community respect for elders – their knowledge can no longer assure livelihoods.⁶⁶ Rachel Baird cites Olav Mathis-Eira, a herder and vice-chair of the executive board of the Sami Council, “[o]ld people used to tell us how to move the herds and where it was safe to go... Now they are not sure if they can do that anymore... because conditions are so different. “ The loss of the ability to provide this guidance has damaged old people’s status; Mathis-Eira concludes: “Suddenly they are nothing.”⁶⁷

One of the characteristics of indigenous communities, as mentioned above, is their intimate relationship with the environment; those relationships are the basis not only for their indigenous worldview but are also related to mythological symbols and meteorological orientation.⁶⁸ When those relationships change because of the effects of climate change, the effects go to the core of their identity.

While this description paints a grim picture, the changes brought about by climate change – coupled with modern economic measures – offer other possibilities. While melting ice creates disadvantages in terms of their traditional way of life – hunting and fishing, “[o]n the other hand, an Arctic region that is more accessible to lucrative activities such as the exploitation of

⁶¹ Hastrup, op. cit., p. 248

⁶² Susan S. Crate “Gone the bull of Winter? Contemplating Climate Change’s Cultural Implications in Northeastern Siberia, Russia,” in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 142.

⁶³ Hastrup, op. cit., p. 251-252.

⁶⁴ Report of the Indigenous Peoples’ Global Summit on Climate change, para 51, p. 22.

⁶⁵ Anne Henshaw, “Sea Ice: the Sociocultural Dimensions of Melting Environment in the Arctic,” in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 12.

⁶⁶ Baird, op. cit., p. 4.

⁶⁷ Ibid., p. 4.

⁶⁸ Susan S. Crate and Mark Nuttall, “Introduction: Anthropology and Climate Change,” in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 12.

hydrocarbons, fish and minerals will necessarily attract increased governmental attention, and this could benefit the citizens of the region.”⁶⁹

There are diverse views among the indigenous about these new opportunities. In particular, the case of Greenland suggests that at least some Inuit see opportunities for independence for Greenland because of climate change.⁷⁰ The warming climate offers not only opportunities to develop fishing and mining and stimulate economic growth, but also to decrease reliance on subsidies from Denmark. In Northern Greenland, hunters are catching more polar bears as they leave ice-floes for firmer ground.⁷¹ The case of Greenland is explored in more detail in the following section.

At the same time the Inuit also are rapidly exploring economic development opportunities resulting from warmer environments. Shrinking sea ice in the summer offers possibilities for economic development in new ways. For example, the Canadian government has plans to locate a military training center to be located somewhere in Nunavut.⁷² Greater access to the Arctic offers new possibilities for tourism and for trade. These present both opportunities and threats for indigenous communities whose livelihoods are changed by the effects of climate change.

The relationship between climate change and indigenous peoples in the Arctic is complex. Climate change is leading to increased economic development of the Arctic, “but any economic advantage that may trickle down to the Inuit cannot compensate for the hugely negative effects of climate change on their health and well-being,” although they acknowledge that new technologies can help.⁷³

In some cases, such as Alaska, indigenous communities can no longer survive in their settlements and are actively seeking the opportunity to relocate. Robin Bronen examined twelve of the most threatened communities facing Alaska Natives, showing that in some cases communities have tried to relocate their infrastructure to higher ground near their original village sites, while others need to relocate their entire communities.

But in other cases it is not a straightforward relationship that ‘warming means people will have to move because their livelihoods are destroyed.’ Other factors interact with climate change. As Susan Crate shows, the impact of Soviet collectivization had a far greater impact on indigenous groups in the Russian North than global warming. “The coercive Soviet resettlement of indigenous peoples from small settlements into larger villages had a profound effect on indigenous communities, destroying the fundamental ecological and social relationships that underpinned subsistence livelihoods.”⁷⁴ In fact, she notes that the forced settlement and industrialization policies extinguished the last two Viliui reindeer herding, hunting, fishing and foraging communities, the Shologinskii and the Sadinski.⁷⁵ Since the collapse of the Soviet Union, many ‘temporary’ non-indigenous workers in the north have left the region – in fact by 2009 one of every six people had migrated out of the Russian North.

⁶⁹ Ebinger and Zambetakis, p 1219

⁷⁰ Nuttall, 2009, op. cit.

⁷¹ Hastrup, op. cit., p. 245.

⁷² Henshaw, op. cit., p. 159.

⁷³ Report of the Indigenous Peoples’ Global Summit on Climate Change, 2009, para 58, p. 23

⁷⁴ Susan Crate, Executive Summary

⁷⁵ Susan Crate, Executive Summary

While climate change is impacting the lives of indigenous communities, she notes that other factors interact with the effects of climate change, including the departure of young people from rural settlements for urban areas and improved access to consumer groups. She concludes that the “Viliui Sakha are not yet in need of relocating due to the effects of climate change although given current trends of permafrost degradation, increasing precipitation and overall climatic softening, they may need to move in the future if they intend to maintain their cow and horse breeding practices.”

As Ilan Kelman and Marius Naess demonstrate, the greatest impact on mobility for the Scandinavian Arctic may be the movement of more (non-indigenous) people and more money into the Arctic region. “The increased dominance of outside cultures and demographics (plus their agendas) rather than local Arctic cultures and interests, is expected to influence migration decisions.” However, they warn that no assumption should be made regarding the net influence of these factors on migration – it may increase permanent migration to the Arctic or result in indigenous groups moving south.⁷⁶

Writing on the situation in Greenland, Nuttall reaches a similar conclusion: “While shifting ice conditions and changing animal migration routes may indeed make it difficult for hunters to secure what they need, blaming this entirely on climate change is a simplistic explanatory account, ignoring historical processes, colonial encounters, Inuit participation in the global economy and even contemporary Inuit political attitudes towards Inuit tradition.”⁷⁷

If the relationship between mobility and climate change is complex, there are still burning questions about how policies are adopted which affect the conditions and lives of indigenous populations. The following section very briefly looks at some examples of indigenous influence on domestic political processes and then at international efforts of indigenous groups to influence policies at the global level.

THE POLITICS OF IT ALL

National level

While it is beyond the scope of this paper to review the long histories of relations between indigenous communities and central governments in Arctic countries, indigenous groups have increasingly pressed their governments to recognize their political rights and to support their efforts to adapt to the effects of climate change. It is important to recognize that the seven Arctic countries which have indigenous populations (excluding Iceland) have democratic governments;

⁷⁶ Kelman and Naess, “Climate Change and Displacement for Indigenous Communities in Arctic Scandinavia,” p. ii.

⁷⁷ Mark Nuttall, “Living in a World of Movement: Human Resilience to Environmental Instability in Greenland,” in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 305.

for all but Russia, these democratic traditions have a long history. For the seven Arctic countries with indigenous populations, there have been struggles by the indigenous vis a vis their governments for recognition, preservation of cultural identity and land rights.

These interactions have played out in different political processes to recognize the rights of the indigenous (e.g. Alaska Native Claims Settlement Act, Greenland with home rule, the establishment by Inuit in Northern Canada of Nunavut in 1999.) Some of these agreements take the form of regional self-government, others with ethno-political governments, others have been focused on agreements for land claims. Some indigenous groups have pursued more autonomy under existing political structures (e.g. Inupiat of N. Alaska) in some, such as Nunavut (Canada) regional self-government is combined with land claims. Institutional setups are changing and are important tools for Arctic peoples to cope with challenges.⁷⁸

In policy discussions concerning the Arctic, discussions of climate change are linked to indigenous rights, decentralization, participation and self-determination.⁷⁹ Questions around land, ownership of land and mineral rights have often been particularly difficult. For example, the Nunavut Land Claims Agreement gives the Inuit ownership rights to 18 percent of the land of which 10 percent includes subsurface rights by which Inuit can benefit from any mineral or energy extraction.⁸⁰ In light of new possibilities for mineral exploitation in the Arctic, these agreements on land claims take on additional importance for indigenous communities.

Kelman and Naess also note that there has been a perceived need for strong, almost militant, advocacy on the part of the Saami because of the history of the three central governments (Finland, Norway and Sweden) in ignoring indigenous interests, pursuing assimilation programs and forced displacement, and avoiding acknowledgement of indigenous rights. The negotiation of the Reindeer Management Act of 1976 in Norway sought to protect reindeer pasture areas from encroachment from other industries and to provide both welfare and income for Saami reindeer herders. In 1978, the new Reindeer Act implemented co-management between the Saami and different governmental levels. The extensive subsidy system in Norway is intended to provide the Saami with support for their traditional livelihoods. The focus on co-management was broadened and de-centralized in the Reindeer Management Act of 2007. Kelman and Naess also cite the case of Finland where under Finnish law (unlike both Sweden and Norway), governmental authorities “are obliged to negotiate with the Saami Parliament on all important decisions that either directly or indirectly affect the Saami's status as an indigenous people.”⁸¹

In the Scandinavian Arctic, Saami Parliaments sit in each of the Scandinavian countries. While their mechanisms differ, they all exist to try to give Saami people a more prominent voice in Saami affairs. At the regional level, representatives of the three parliaments, together with an observer from the Russian Saami, make up a Saami Parliamentary

⁷⁸ Sejersen, op. cit., pp. 222-223.

⁷⁹ Sejersen, op. cit., p. 222.

⁸⁰ Sejerson, op. cit., p. 236.

⁸¹ Eva Josefsen, The Saami and national parliaments: Channels for political influence, Inter-Parliamentary Union, United Nations Development Program, 2010, p. 7-8, cited by Kelman and Naess in “Climate Change and Displacement for Indigenous Communities in Arctic Scandinavia,” pp. 16
<http://www.brookings.edu/research/papers/2013/01/30-arctic-scandinavia-kelman-naess>

Council which seeks to promote Saami interests and rights, to attain recognition for the Saami as a nation and to increase Saami identity.⁸²

The Saami have made it clear they are deeply concerned about the government's approach to managing Arctic Scandinavia under climate change. In 2008, the Saami Parliamentary Council's President stated at the UN Permanent Forum on Indigenous Issues that "neither our governments nor the industrial interests seeking exploration of the non-renewable resources on our territories have recognized our right to take part in the governing of and the right to share in the economic benefits of industrial resources found in our territories" (Olli, 2008).

Central to discussions of government-indigenous relationships has been the question of ownership of land and access to resources. Kelman and Naess describe some of the agreements that have been reached by oil and mineral companies with the Saami as they have expanded their operations in the Norwegian Arctic. In negotiating the opening of the oil fields of Snohvit and Goliat, for example, consideration was given to Saami livelihoods particularly in job creation and agreements to use local suppliers. Kelman and Naess argue, however, that the development of these mineral resources will bring increasing numbers of outsiders to Northern Norway and that this migration will affect indigenous culture.

The situation of indigenous groups in Russia is very different. Civil society did not really develop on a large scale until the fall of the Soviet Union in 1989. Among the many NGOs formed in the post-Soviet period was the Russian Association of Indigenous Peoples of the North, Siberia and the Far East (RAIPON). Begun as a loosely knit congress of peoples in 1990, RAIPON was established to protect the human rights of indigenous peoples of the North. On the national level, it works with the Russian Federation's State Duma (parliament) committees, Russian federal agencies and regional authorities. It has also served as an effective interlocutor of Russian indigenous interests with various international forums although according to Susan Crate, it has been less effective in improving the situation on the ground of Russia's indigenous peoples.⁸³ However, in November 2012, RAIPON was shut down by the Russian authorities on grounds that it received foreign funding. Since then RAIPON has taken legal and other actions in an effort to reverse this decision.⁸⁴

In Alaska, Robin Bronen examines the steps the Alaska state government has taken to address the needs of Alaska Native communities, including establishment of an Immediate Action Workgroup in 2007 to identify the immediate needs of communities "imminently threatened by the effects of erosion flooding, permafrost degradation and other climate change-related impacts." The IAWG facilitated many meetings with members of the communities to develop a strategy, advancing recommendations for funding to the Alaska State Legislature. However, on the national level, she reports that there is a gap in federal procedures to support communities which need to relocate because of the effects of climate change. She writes that there is "no

⁸² Saami Council. <http://www.saamicouncil.net> cited by Kelman and Naess, p. 17

<http://www.brookings.edu/research/papers/2013/01/30-arctic-scandinavia-kelman-naess>

⁸³ Susan Crate, "Climate Change and Human Mobility in Indigenous Communities of the Russian North," p. 34 <http://www.brookings.edu/research/papers/2013/01/30-arctic-russia-crate>

⁸⁴ Charles Diggers, "Russia strangles international indigenous peoples organization as war on NGOs continues," Bellona, 15 November 2012, http://www.bellona.org/articles/articles_2012/raipon_closure

federal agency with the authority to relocate communities, no governmental organization ... to address the strategic planning needs of relocation, and no funding ... specifically designated for relocation.⁸⁵ Bronen's conclusion is that the US government needs to take the necessary steps to support communities for whom relocation is the only response to the effects of climate change.

The situation in Greenland is quite different. Greenland voted for increased self-rule in November 2008 and in June 2009 obtained a new self-government agreement where it is recognized by the international community as a separate entity from Denmark. The movement for independence is strong, but has been limited by Greenland's need for financial support from the Danish government. Presently the Danish subsidy comprises nearly 60 percent of Greenland's budget.⁸⁶ Greenland is thought to sit on vast mineral deposits but previous efforts at large-scale mining were unsuccessful because of the expense of working in the bitterly cold climate. This is now changing as warming conditions make exploration more feasible. Greenland's Bureau of Minerals and Petroleum currently has 150 active licenses for mineral exploration, up from 20 a decade ago. Companies spent \$100 million exploring Greenland's deposits in 2011 and foreign companies are exploring for oil. The Greenlandic government hopes that mining will provide new revenue. It should be noted that in granting Greenland home rule, Denmark froze its annual subsidy and it is scheduled to be decreased further in coming years. Greenland is looking to leverage the power from its newfound mineral resources to wield political influence. (Greenland is also seeking to persuade the European Union to lift its 2009 ban on seal products – currently there is a backlog of 300,000 skins, crucial business for the Inuit.) Development of Greenland's mineral riches will also mean an influx of non-indigenous workers into areas largely populated by small indigenous communities. There are not enough native workers to build the mines that are expected to open.⁸⁷ For the indigenous of Greenland, the new opportunities which are emerging because of climate change offer hopes for economic development and for the country's political independence from Denmark.⁸⁸

While indigenous groups have, to varying degrees, been active in urging their governments to recognize their claims and rights in decisions about economic development of their habitats – decisions which are changing as global warming offers new possibilities to them – they have also been active on the international level. In fact, bringing their concerns to global forums and developing strong cross-border networks has likely strengthened their case at the national level.

There have been several cases where indigenous groups have used legal means in support of their claims. The best-known of these cases is that of the petition submitted in 2005 by Sheila Watt-Clouthier, on behalf of the Inuit in Alaska and Canada, with support of the Inuit Circumpolar Council to the Inter-American Commission on Human Rights. In this petition, she argued that the Arctic was more severely affected by climate change than any other place on

⁸⁵ Bronen, Executive summary. "Climate-Induced Displacement of Alaska Native Communities," <http://www.brookings.edu/research/papers/2013/01/30-arctic-alaska-bronen>

⁸⁶ Ebinger and Zambetakis, op. cit., p. 1229.

⁸⁷ Elisabeth Rosenthal, "A melting Greenland Weighs Perils Against Potential," *the New York Times*, 23 September 2012, <http://www.nytimes.com/2012/09/24/science/earth/melting-greenland-weighs-perils-against-potential.html?pagewanted=all>

⁸⁸ Mark Nuttall, "Living in a World of Movement: Human Resilience to Environmental Instability in Greenland," in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 295

earth and that the US, as the world's largest greenhouse gas emitter, bore more responsibility for this than any other nation. The petition asked the Commission to adopt mandatory measures to limit greenhouse gas emissions, to implement a plan to protect Inuit culture and natural resources and to help the Inuit to adapt to the unavoidable effects of climate change. This would have been a landmark case, except in the Commission in 2006 said it couldn't accept the petition and offered no reasons for rejecting the case. (The Commission did grant a thematic hearing on the issue.) Observers suggest that the reason the Commission declined to accept the petition was concern about setting a precedent for other legal action.⁸⁹ It should be noted that the petition was not submitted on behalf of the Greenland Inuit 'who have achieved a greater degree of self-government than any other Inuit population since Home Rule was introduced by Denmark in 1979.'⁹⁰

International level

We uphold that the inherent and fundamental human rights and status of Indigenous Peoples, affirmed in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), must be fully recognized and respected in all decision-making processes and activities related to climate change. This includes our rights to our lands, territories, environment and natural resources as contained in Articles 25-30 of the UNDRIP.⁹¹ –The Anchorage Declaration

There are several important international bodies which provide forums for discussions about Arctic concerns, including indigenous communities and climate change. The Arctic Council, founded in 1996, is an international forum intended to foster cooperation on a broad range of issues. Its antecedents date back to 1987 when Mikhail Gorbachev made a speech calling for a new era in circumpolar cooperation. It is not, however, a security organization and almost all members are opposed to setting up a new system or broadening the Council's mandate.⁹² The Arctic Council has 8 member states (Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden and US) but also includes the category of Permanent Participant which was created to provide for the active participation of, and full consultation with, indigenous representatives within the Arctic Council, but there are barriers in the high cost of travel. The Inuit Circumpolar Council (ICC), discussed further below, has been active since the Arctic Council's inception and has played a key role in raising the issue of climate change in the Council's discussions.⁹³ With the increased possibilities for development and transportation routes through the Arctic it is likely that the Arctic Council will become a more important forum in the future although this depends on the roles its members expect it to play. Overall, inter-state

⁸⁹ Baird, *op. cit.*, p. 9.

⁹⁰ Mark Nuttall, "Living in a World of Movement: Human Resilience to Environmental Instability in Greenland," in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 294.

⁹¹ Report of the Indigenous Peoples' Global Summit on Climate Change, 24 April 2009, www.un.org/ga/president/63/letters/globalsummitoncc.pdf

⁹² Ebinger and Zambetakis, *op. cit.*, p. 1226

⁹³ Inuit Circumpolar Council, "Activities and Initiatives," accessed 18 January 2013, <http://inuitcircumpolar.com/section.php?ID=12&Lang=En&Nav=Section>

cooperation in the Arctic has been good.⁹⁴ As Bruce Jones et al say “We conclude that – for now – the prospects for continued cooperation outstrip the potential for conflict among Arctic states, and that the Arctic offers a model for tackling evolving challenges in other regions.”⁹⁵

Inuit Circumpolar Council which represents the Inuit of Denmark, Canada, the US and Russia launched its Circumpolar Inuit Declaration on Arctic Sovereignty on 28 April 2009, stating “it is our right to freely determine our political status, freely pursue our economic, social, cultural and linguistic development, and freely dispose of our natural wealth and resources.”⁹⁶ The ICC represents all 155,000 Inuit – from Russia to Greenland -- on matters of international concern.⁹⁷ The ICC has expressed its hope that the Arctic Council will be strengthened by bringing the priorities of the Inuit and other indigenous peoples to the table. “Inuit have demonstrated that we are an open people. We have adapted to change, and sometimes embraced it. This is part of our strength as a culture. Many times, we have worked with others to help us adapt, to help us change. But we have always done it on our terms.” The issue of expanding the Arctic Council to include observers from non-Arctic nations has been a topic of intense discussion. The ICC’s perspective seems to be that if observers are included in the Council, they should stick to the role of observers.⁹⁸ From an outsider’s perspective it seems clear that the indigenous voice in the Arctic Council could well be diluted with the addition of observers and potential expansion of membership.

On the global level, indigenous groups have mobilized in various forums to speak out against the effects of climate change and to urge governments to do more to mitigate their effects. Indigenous groups restate the 2000 declaration by indigenous peoples at the annual COP UN framework conventions.⁹⁹

In 2009, the Indigenous Peoples’ Global Summit on Climate Change was held in Anchorage, Alaska from with the participation of over 400 indigenous people from 80 countries.¹⁰⁰ The Anchorage declaration also emphasizes that Indigenous peoples have contributed the least to climate change and already practice low carbon lifestyles but are the most vulnerable.¹⁰¹

The Anchorage Declaration calls “upon the fifteenth meeting of the Conference of the Parties to the UNFCCC to support a binding emissions reduction target for developed countries ... of at

⁹⁴ Sejersen, op. cit., p. 229.

⁹⁵ Andrew Hart, Bruce Jones and David Steven, “Chill Out: Why Cooperation is trumping conflict among great powers in the new Arctic,” Brookings Institution, May 2012, <http://www.brookings.edu/research/reports/2012/05/30-arctic-cooperation-jones>

⁹⁶ “circumpolar Inuit Declaration on Arctic Sovereignty,” 28 April 2009. <http://www.itk.ca/circumolar-inuit-declaration-arctic-sovereignty>

⁹⁷ Report of the Indigenous Peoples’ Global Summit on Climate Change, April 2009, para 58, p. 23

⁹⁸ Kirt Ejesiak, “The Baby and the Bathwater: Addressing Arctic Governance from an Inuit Perspective,” Address to the Arctic Security conference “the Arctic Council: Its Place in the Future of Arctic Governance,” 17 January 2012. http://gordonfoundation.ca/sites/default/files/images/Jan17%20-%20Ejesiak_TheBabyintheBathwater.pdf

⁹⁹ Susan S. Crate and Mark Nuttall, “Introduction: Anthropology and Climate Change,” in Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009, p. 18.

¹⁰⁰ Report of the Indigenous Peoples’ Global Summit on Climate Change, 20-24 April 2009, para 2 www.un.org/ga/president/63/letters/globalsummitoncc.pdf

¹⁰¹ The Anchorage Declaration, 24 April 2009, p. 12.

least 45 percent below 1990 levels by 2020 and at least 95 percent by 2050 ... to work towards decreasing dependency on fossil fuels ... for a just transition to decentralized renewable energy economies, sources and systems owned and controlled by our local communities to achieve energy security and sovereignty.”¹⁰²

But so far, minorities and indigenous peoples have little impact on policies related to mitigation.¹⁰³ Although discussions about a post-Kyoto framework are continuing, the world’s record in reducing carbon emissions to limit global warming is not encouraging. In this context, consideration of effective adaptation strategies becomes more urgent, particularly in the Arctic where global warming is occurring much more rapidly than in other parts of the world. For indigenous communities in the Arctic the big question is who will influence these political processes is processes which will affect whether the indigenous will be able to remain in their traditional habitats or will be forced to relocate.¹⁰⁴

In this regard, the Anchorage Declaration calls upon the UNFCCC’s “decision-making bodies to establish formal structures and mechanisms for and with the full and effective participation of Indigenous Peoples,” including regular technical briefings on traditional knowledge and culture change, engage the International Indigenous Peoples’ Forum on Climate Change, establish an Indigenous focal point in the UNFCCC secretariat, appoint Indigenous Peoples’ representatives in UNFCCC funding mechanisms, and “take the necessary measures to ensure the full and effective participation of Indigenous and local communities in formulating, implementing, and monitoring activities, mitigation and adaptation relating to impacts of climate change.”¹⁰⁵

The question of the participation of indigenous groups in governmental and inter-governmental bodies which are dealing with both climate change mitigation and adaptation measures is a central one which will be considered further in the concluding section of this paper. But before turning to conclusions and recommendations, the following section considers the role of research in providing the evidence which policy-makers need to make informed decisions.

THE RESEARCH APPROACH MATTERS

“However small and remote some of the Arctic communities seem, they are tightly linked to the national (and international) political order and to the global economy.”¹⁰⁶

While there have been a number of important case studies on specific Arctic indigenous groups, including the potential impact of climate change on their livelihoods,¹⁰⁷ the dissemination of this

¹⁰² The Anchorage Declaration, 24 April 2009

¹⁰³ Baird, op. cit., p. 7.

¹⁰⁴ Sejersen, op. cit.

¹⁰⁵ The Anchorage Declaration, 24 April 2009, para 4.

¹⁰⁶ Kirsten Hastrup, “Arctic Hungers: Climate Variability and Social Flexibility,” in Kirsten Hastrup, ed. *The Question of Resilience: Social Responses to Climate Change*, Historisk-filosofiske meddelser 106, Det ongellige Danse Videnskabernes Selskab, 2009, p. 252.

information seems to be rather narrow, particularly with respect to the policy-making community. Much of the research seems to focus on the indigenous groups as ‘victims’ and the need to preserve unique cultures. This corresponds to the focus on vulnerability which is central to the engagement of humanitarian actors. But focusing on the indigenous solely as ‘victims’ and as ‘vulnerable’ may miss the broader picture. Some have argued that the focus should be on the ‘agency’ of indigenous communities – their ability to shape the future.¹⁰⁸ Others suggest that a focus on resilience is needed which emphasizes the system’s ability to maintain stability in times of shock or under stress.¹⁰⁹

As Kelman and Naess point out in their study for this project, while most of the research on and discussion about the Saami focuses on reindeer herding, the fact is that only 10 percent of the Saami are engaged in reindeer herding. Similarly Sejersen warns of the danger of just focusing on reindeer herding or hunting. “Societal and economic changes related to tourism, militarization, commercialization of harvests, industrial development (e.g. mining) and wage-based activities are treated as something from the outside that influence the coping strategies within the hunting sector rather than as something that have to be understood as an integral part of the system and the community’s adaptation strategy.”¹¹⁰ The different research approaches lead to different policy recommendations. Sejersen suggests, for example, that encouraging the Inuit to remain as hunters may be a more comfortable image than considering urbanization or industrialization as adaptation strategies. In fact, he argues that the emphasis on mainstreaming continues the status quo and that the indigenous need to benefit from the development of the region.¹¹¹

As Crate argues in her paper on indigenous groups in the Russian North, transdisciplinary research is needed which brings together the insights of anthropologists and the knowledge of indigenous communities as well as those working in natural science disciplines. Many indigenous peoples emphasize the importance of securing indigenous peoples’ free, prior and informed consent for such research. But in order for research to support policy-makers, it needs to be reported and disseminated in different ways.

CONCLUSIONS: TRACING THE CONNECTIONS

“Global climate change has catapulted the Arctic into the centre of geopolitics, as melting Arctic ice transforms the region from one of primarily scientific interest into a maelstrom

¹⁰⁷ See for example, the collection of essays in Crate and Nuttall 2009 (Susan A. Crate and Mark Nuttall, eds. *Anthropology and Climate Change: From Encounters to Actions*. Walnut Creek, CA: Left Coast Press, Inc. 2009) as well as other studies referenced in this paper.

¹⁰⁸ Frank Sejersen, “Resilience, Human Agency and Climate Change Adaptation Strategies in the Arctic,” in Kirsten Hastrup, ed. *The Question of Resilience: Social Responses to Climate Change*, Denmark: Det Kongelige Danske videnskabernes Selskab 2009.

¹⁰⁹ Ibid, pp. 220-21.

¹¹⁰ Ibid, pp. 232.

¹¹¹ Ibid, pp. 232-235.

of competing commercial, national security and environmental concerns, with profound implications for the international legal and political system.”¹¹²

This paper has explored the relationship between the Arctic’s indigenous communities, climate change, and different forms of mobility. A few general observations can be drawn:

- a. Mobility is not new for Arctic peoples. Migration for livelihoods – whether hunting or reindeer herding – has been central to indigenous ways of life for centuries.
- b. Limitations to mobility occurred long before climate change appeared on the international agenda, particularly as the result of indigenous groups settling in villages in order to access education and other public services.
- c. Climate change is likely to affect the mobility of Arctic peoples in many different ways. In some cases, they may be forced to relocate because their habitats are no longer habitable (as in the Alaskan cases examined by Robin Bronen). In some cases, their traditional livelihoods will become more difficult (e.g. reindeer in Scandinavian Arctic and cattle among the Viliui Sakha in the Russian North will have more difficulties in finding food in winter months.) Changing fish and animal species (often with knock-on effects) may mean different patterns of hunting. Traditional transportation is likely to change as sea ice melts.
- d. But people in the Arctic will likely be influenced as much by new realities made possible by global warming as they are by melting permafrost and melting sea ice. With “longer ice-free periods now available to explore for hydrocarbons, a new scramble for oil and gas could occur” especially if the price of oil and gas increase and new technological developments take place.¹¹³ In 2009, 15 percent of petroleum production came from onshore Arctic production. But 30 percent of the world’s undiscovered gas and 13 percent of world’s undiscovered oil is in the Arctic.¹¹⁴ New maritime routes in the Arctic raise new issues about sovereignty and offer expanded opportunities for military operations. The stakes are getting higher for control of territory in the Arctic and indigenous communities should engage in these discussions – and not just on issues of maintaining traditional lifestyles. In fact, article 26 of the UN Declaration on the Rights of Indigenous Peoples enshrines their right to own, use, develop and control the lands they have traditionally occupied.
- e. The issue of adaptation to climate change is an intensely political issue. A focus on climate change adaptation “downplays the fact that climate adaption is to make societal choices informed by many other concerns and challenges than climate.” The question is who in the Arctic will make these choices.¹¹⁵

¹¹² Ebinger and Zambetakis, op. cit., p. 1215.

¹¹³ Ebinger and Zambetakis, op. cit., p. 1216.

¹¹⁴ Bruce Jones et al, op. cit., p. 3.

¹¹⁵ Sejersen, op. cit., p. 239.

RECOMMENDATIONS FOR NEXT STEPS

“Climate change may magnify existing local problems and amplifies the international stakes in the Arctic.”¹¹⁶

1. Increase research on Arctic indigenous peoples and climate change, with a particular focus on the ways in which they are affected by broader change processes in the region – increasing economic exploitation, the long-term consequences of ‘development’ in the region, the impact of increased transportation (and transit) possibilities and growing military pressure in the region. This research should explore the ways in which the indigenous are presently linked to the national and international political order and should be based on collaborative research carried out with indigenous communities’ full participation and free, prior, and informed consent.
2. Support meetings in the Arctic of indigenous communities where they are given the space to identify their concerns, issues, priorities and recommendations. To ensure that these perspectives are communicated to policy-makers, encourage researchers to work with these meetings to ensure that reports include policy recommendations in a format that will have an impact on decision-makers in national capitals and inter-governmental forums. It isn’t enough for indigenous groups to produce declarations and reports that are primarily read by other indigenous groups and human rights advocates. Rather, if the intent is to increase the impact of indigenous groups on political activities, their recommendations need to be communicated in a format that policy-makers can respond to. These recommendations should be targeted at the Arctic Council as well as relevant UN bodies.
3. Recognize that taking the issue of indigenous participation seriously will require change. While it is relatively easy to affirm the importance of including indigenous communities in these discussions, in practice implementation is more difficult. As we have seen, there are different interests among indigenous communities (for example between the Canadian and Greenlandic Inuit) and different capacities. Including indigenous perspectives in intensely political discussions means opening up structures of competing interests to an even greater variety of groups. If the participation of indigenous groups in these discussions is to be more than a token presence, support must be provided to build their capacity, enable them to meet with each other and to formulate common positions. It means building the capacity of organizations such as RAIPON and paying for expensive airplane tickets. But it also may mean that existing political structures at the international level must be open to changing the way they work: the way they make decisions and the issues that are included in the agenda. Policy-makers also need to be open to understanding the indigenous peoples’ worldview, including rights and value systems that privilege communal over individual rights, even in countries where individuals enjoy relatively high levels of rights. Several Arctic governments have generations of

¹¹⁶ Sejersen, op. cit., p. 230.

experience of working with indigenous groups on contentious issues and have developed means to provide for mutually-satisfactory participatory mechanisms.

4. Broaden the base – and the reach – of indigenous arguments. While indigenous people generally and Arctic indigenous communities in particular have used existing human rights instruments effectively, particularly the United Nations Declaration on the Rights of Indigenous Peoples, their arguments might be strengthened through reference to the existing international frameworks related to migration, displacement and relocation.¹¹⁷ These normative frameworks affirm the rights of people displaced by climate change, including the right to be consulted and to participate in decisions which affect their lives. Similarly, incorporating the issue of indigenous rights into questions of development and possibly humanitarian response might be a way of broadening support for the issues identified as affecting Arctic peoples.
5. Monitor the ways in which the Arctic states are addressing issues of climate change and displacement through production of an annual report. This could be modeled on a recent study evaluating the way in which 15 governments are exercising their responsibility to protection of internally displaced persons.¹¹⁸ This could serve as a resource for both indigenous groups and their governments on best practices for responding to climate change and could also identify areas where governments need to do more. Such a report could also include an analysis of the ways in which Arctic governments have reported on indigenous issues in the Universal Periodic Review of human rights.
6. Mobilize greater international support for indigenous groups working at the national level. The national contexts of the Arctic countries are very different and indigenous groups need to be supported in their efforts to develop specific recommendations in accord with these contexts. For example, Alaskan indigenous groups may need support to develop strategies to change US disaster laws to finance relocation while Russian indigenous groups may need support to challenge federal government crackdowns on indigenous organizations. There may be ways that the broader international community – not just international indigenous groups – can support these efforts.

¹¹⁷ These include such agreements as the 1951 Refugee Convention (United Nations General Assembly, *Convention Relating to the Status of Refugees*, 28 July 1951, <http://www.unhcr.org/refworld/docid/3be01b964.html>), the Guiding Principles on Internal Displacement (UN Commission on Human Rights, *Guiding Principles on Internal Displacement*, E/CN.4/1998/53/Add.2, 1998, www.brookings.edu/projects/idp/gp_page.aspx), the 1990 Convention on the Rights of all Migrant Workers and their Families (United Nations General Assembly, *International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families*, 18 December 1990, <http://www2.ohchr.org/english/law/cmw.htm>) as well as the World Bank's Operational Policy on Involuntary Resettlement (The World Bank, "OP 4.12 – Involuntary Resettlement," December 2001, <http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTOPMANUAL/0,,contentMDK:20064610~menuPK:64701637~pagePK:64709096~piPK:64709108~theSitePK:502184,00.html>).

¹¹⁸ The Brookings-LSE Project on Internal Displacement, *From Responsibility to Response: Assessing National Actions on Internal Displacement*, Washington: Brookings-LSE Project on Internal Displacement, 2011. <http://www.brookings.edu/research/reports/2011/11/responsibility-response-ferris>

This research (preliminary as it is) suggests that the relationship between climate change, displacement and Arctic indigenous communities is a complex one. Broader analysis and advocacy efforts are needed to ensure that indigenous peoples are able to minimize the threats posed by the effects of climate change to their cultures, identities and livelihoods, that they are able to participate in the decisions that affect their lives, and that they receive the support they need from the broader international community.