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Melting Boundaries: Rethinking Arctic Governance

ARCTIC GOVERNANCE TASK FORCE 2011

HENRY M. JACKSON
SCHOOL OF INTERNATIONAL STUDIES
UNIVERSITY OF WASHINGTON

University of Washington

International and Canadian Studies Programs

THE HENRY M. JACKSON SCHOOL OF INTERNATIONAL STUDIES

Melting Boundaries: Rethinking Arctic Governance

Winter 2011

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The 2011 Task Force on Arctic Governance is a joint program between the Canadian and Global Studies Centers in the Henry M. Jackson School of International Studies at the University of Washington (UW) and the Makivik Corporation, Nunavik, Province of Québec, Canada as part of the UW and Makivik Corporation Educational Agreement Initiative. The vision of the program is to bring UW students together with their Inuit colleagues in Canada to address effective ways to govern the international Arctic region.

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TABLE OF CONTENTS

Preface 2
Acknowledgements 4
Executive Summary 7
Introduction to Arctic Governance
By Kelsey Barrett 9
Chapter One: Stewardship of the Arctic Environment
By John Bryan and Jennifer Grosman 15
Chapter Two: Shipping and Commercial Maritime Activity
By Ahnalee Herke 51
Chapter Three: The Northwest Passage
By Zeina Hamed and Lauren Hruska 69
Chapter Four: Delimitation of the Lomonosov Ridge
By Jeung Hwa (Victoria) Choe 85
Chapter Five: Reevaluating the Role of Arctic Security
By Griffith Couser 97
Chapter Six: Food Security in the Arctic
By Monica Chahary 115
Chapter Seven: Health and Education in Indigenous Communities
By Kim Selling 129
Chapter Eight: Maqaittiit as a Profession
By Lisa Koperqualuk 141
Chapter Nine: Aboriginal Rights as Property Rights
By Kelly Miller 157
Chapter Ten: Québec and Nunavik: A Governance Model
By Dominic Maltais 173
Chapter Eleven: The EU: Non-Arctic Participation in the Arctic Council
By Colleen Kennedy 187
Conclusion
By Scott Halliday 201
Afterword
By Kitty Gordon 207
Reference List 211

PREFACE

Note from the Faculty Advisors
The Task Force that led to the writing of this document is part of an effort to prepare International Studies majors to effectively deal with Arctic issues, and to ensure that Canada's voice, including the voice of the Inuit of Canada, is included in future negotiations regarding the region. The Task Force program in the Jackson School has an over 25-year history impacting the research and professional development of hundreds of International Studies majors.

The Task Force Program
The Task Force is a 10-week, 5-credit seminar held in winter quarter. This capstone experience is required for International Studies majors in the Henry M. Jackson School of International Studies at the University of Washington (UW). Recognizing that many International Studies students may be preparing for careers in multi-faceted non-governmental and governmental organizations, the Task Force offers students the opportunity to address policy questions in a "real world" setting. The seminar operates much like a Presidential or Royal Commission – the students research a current and relevant policy issue, prepare a written report, and present their policy recommendations to an outside expert in the field.

First Canada-Based Task Force, 2009 –
http://jsis.washington.edu/canada/file/archive/taskforce09/
In Winter Quarter 2009 we led the first Task Force on Arctic Sovereignty including a one-week research trip to Ottawa. Thirteen students produced the report, *Towards Arctic Resolution: Issues of Sovereignty and Governance in the Circumpolar North* including chapters on the Canada-U.S. dispute over the Northwest Passage, shipping issues, and the role of Canada's Inuit in Arctic sovereignty. The students presented their findings to Rob Huebert, Centre for Military and Strategic Studies, University of Calgary. The report was also presented at the *12th Annual UW Undergraduate Research Symposium*, and won Honorable Mention at the *UW Libraries Research Award for Undergraduates.*

Second Canada-Based Task Force, 2011 –
http://jsis.washington.edu/canada/courses/arctic.shtml
This year, in an effort to create a truly international educational experience, Canadian Studies and the Makivik Corporation, Nunavik, created a partnership to involve Canadian Inuit participants in the program. This came to reality as 14 UW students and two Makivik participants formed the 2011 Arctic Governance team.

The international team spent a week in Ottawa visiting Foreign Affairs and International Trade and Indian and Northern Affairs Canada; six Arctic country embassies; scholars with the Faculty of Law at the University of Ottawa; ministers of parliament; and Canada's offices for the national and international Inuit associations. In the words of one student participant, "My experiences conducting field research in Ottawa as a part of our Arctic Task force were incredible and invaluable. I have never before had the opportunity to visit so many embassies and speak with diplomats and dignitaries about important, contemporary issues … our visits in Ottawa have given me a more enlightened, hopeful, and realistic direction regarding my personal aspirations and professional development."

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Nadine C. Fabbi, Canadian Studies Center, Henry M. Jackson School of International Studies
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Nadine Fabbi is Associate Director of the Canadian Studies Center. Her research focuses on the relationship between emerging concepts of territory and mapping in international relations, and foreign policy formation particularly educational policy. In 2009-10 her research project, "Arctic Educational Policies and their Impact on Canada's Leadership Role in the Circumpolar World," received Fellowship funding by University of the Arctic and Foreign Affairs and International Trade Canada. She was just invited by the International Centre for Northern Development and Governance at the University of Saskatchewan to present her research on Arctic educational strategies to policy makers from Foreign Affairs Canada. Nadine also serves on the Executive Council for the Association for Canadian Studies in the U.S. and is the UW Council Representative for University of the Arctic.

Vincent Gallucci is a Professor in the School of Aquatic and Fishery Sciences, College of the Environment; affiliated faculty in Canadian Studies; and director of the Center for Quantitative Sciences in Forestry, Fisheries and Wildlife. His research focuses on the policy dimensions and management of fishery resources in developing countries and on coldwater fisheries in the Bering/Arctic seas, including Arctic marine mammals. Gallucci has a long-term research association with the Department of Fisheries and Oceans Canada carrying out joint projects on commercial and endangered species. He also serves on an Arctic Council sub-committee with a special focus on marine species and ecosystems biodiversity in the Arctic region.

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Executive Summary

Kelsey Barrett and Scott Halliday

Global warming has triggered fundamental ecological changes to the Arctic landscape. As the sea ice melts, greater access to lucrative natural resources and new shipping lanes is intensifying economic and political interest in the region. Ownership and control over these resources has spurred debate at international, regional, national, and sub-national levels. State and non-state actors are seeking to position themselves to exploit these resources and benefit economically. If left unchecked, unsustainable resource extraction has the potential to seriously degrade the natural environment and threaten the human security of Arctic inhabitants. Existing governance frameworks in the Arctic require reassessment and alteration in light of these recent changes.

The title of this report is "Melting Boundaries: Rethinking Arctic Governance," because both the policy issues and solutions discussed are transnational in scope and implementation. Collective action is required to confront these challenges and therefore they must be undertaken in the pursuit of common interests. These interests which underlie the report's recommendations include: maintenance of the peace and stability of the Arctic region, protection of the Arctic environment, preservation of cultural integrity, and a greater commitment to human security.

The majority of the recommendations given in this report target the Arctic Council and its member states and participants, as it is the preeminent forum for discussing Arctic issues. The recommendations seek to advance comprehensive multilateral cooperation in the region. Inclusive dialogue and consensus building is the most effective way to approach Arctic governance decisions and encourage compliance. This rethinking of governance looks beyond the state-centric model of international relations towards the greater inclusion of non-traditional actors operating at multiple levels of governance. Using this multi-level approach is the best method in which to consider governance challenges and conceive of policy recommendations.

Recommendations:

- Strengthen the mandate and scope of the Arctic Council:
    - Establish a Permanent Secretariat.

    - Clarify the membership status of Permanent Observers and admit the European Union.
    - Establish new Working Groups on the following topics:
        - Indigenous self-governance through land claims agreements and greater involvement in resource management.
        - Security; the impacts of military equipment and infrastructure on the environment and indigenous communities.
        - Advancing education on and in the Arctic states.
- Pursue an ecosystem based management approach, working towards implementing a mandatory Arctic Hydrocarbon Management Code based on the Arctic Council's 2009 Oil and Gas Guidelines.
- The Arctic states must expand public security capacity and cooperation in the Arctic, utilizing the Arctic Council to promote an open security dialogue and prevent unnecessary military deployment.
- Fully implement Articles 15 and 23 of the Nunavut Land Claims Agreements and work towards the greater devolution of state governance to indigenous groups.
- Greater government funding should be allocated to the improvement of education, housing, economic development, and health and water services in indigenous regions.
- Establish a multilateral body to agree on delimitation of the Lomonosov Ridge prior to littoral state report submission to the UN Commission on the Limits of the Continental Shelf.
- All Arctic states need to sign and ratify the 2001 Stockholm Convention on Persistent Organic Pollutants.
- The littoral Arctic states and foreign investors interested in the economic development of the Arctic, such as international shipping companies and mining companies, should continue to invest in, and improve, Arctic marine infrastructure:
    - Enhanced environmental monitoring.
    - Invest in vessel communication systems.

Introduction to Arctic Governance

Kelsey Barrett

Governance of the Arctic is an emerging issue in global politics, as the converging forces of climate change and globalization have thrust the region into a state of rapid transition. In the last ten years, these dual forces have inspired not only physical changes to the ecosystem and lifestyle of indigenous peoples, they have also altered the perceptions and motivations of actors seeking involvement in the region. Once viewed by outsiders as a desolate, icy, wilderness, the Arctic has gained global attention as a resource-rich zone of economic and political competition. As the sea ice melts, newly accessible shipping routes and natural resources, such as oil and gas, are attracting economic interest from stakeholders eager to develop the region. Who has rights to these resources and what actors are involved in these discussions? The United States, Canada, Denmark (Greenland), Russia, Finland, Sweden, Iceland and Norway comprise the eight Arctic states, but they are not the only entities interested in the region. Oil companies, commercial fisheries, NGOs, security firms, scientific research foundations as well as other non-Arctic states each have a stake in governance decisions. Indigenous groups, having called the Arctic home for thousands of years, are also insisting they be involved in decision-making. These questions of accessibility, ownership, agency and inclusion have called for a reevaluation of existing Arctic governance systems.

This report will address current developments in the Arctic, assessing the policies and interests of both state and non-state actors, and making recommendations as to how these existing governance arrangements could be altered, strengthened or redirected to better respond to emerging challenges. A central theme throughout this report is a view of the Arctic as a unique opportunity to evaluate alternative forms of governance that foster cooperation and challenge our notions of traditional state sovereignty.

In order to introduce the concept of governance and existing frameworks in the Arctic region, it is best to start with a definition. For the purposes of this report, *governance* is understood as:

> The exercise of legitimate authority within a group to make decisions regarding the allocation of resources and the coordination and management of communal and, to some extent, individual activities. The term refers to the principles, institutions and practices that a collective employs to regulate relations among its members, and between its members and the external world. (Fondahl and IrlbacherFox 2009, 1)

We believe this definition is most appropriate for the Arctic region because it considers rules and principles that apply to a group that transcends traditional state borders. It is also the definition used by the Arctic Governance Project, which is an organization that similarly studies and devises policy proposals for governance in the Arctic region.

Many challenges to governance in the Arctic arise over ambiguities surrounding the territorial definition of the region. When territorial boundaries are unclear, so too is membership and governance jurisdiction. Difficulty defining the region is rooted in its unique geophysical characteristics and evolving environment due to climate change (Gerhardt et al 2010, 993). Unlike Antarctica, the Arctic is primarily an ice-covered ocean, not a continent. It is also inhabited by humans that use these ice-ways for cultural, subsistence, and commercial purposes. Traditionally, there are laws that govern land and those which govern the seas. Ice exists outside this binary and to complicate matters, it is melting. When the line between where ice ends and water begins is in constant flux, it is difficult to decide what existing governance structure should be employed and where (Gerhardt et al 2010, 994). Some state and non-state actors define the region utilizing boundaries that are fixed, such as latitudinal lines or certain bodies of water, while others use climate-related factors in demarcation. These vary yearly and include factors such as: the northern tree line, average temperature, and the extent of permafrost on land or of sea ice over the ocean (U.S. Library of Congress 2010, 2). In transitioning to a discussion of the Arctic Council and other governing frameworks, it is important to acknowledge that these inconsistencies in the territorial definition affect both *who* and *how* we will address current challenges.

According to Arctic scholar Carina Keskitalo, the Arctic is a region constructed by discourse (Keskitalo 2007, 187). This means that the manner in which the Arctic is discussed effects how it is conceived. The issues that are spoken about and how politicians or the media portray them affect the characteristics or connotations actors associate with the region. Keskitalo states that "the creation of a region must be seen as a political act," in the pursuit of objectives whose origins can be traced. Examining the historical development of the Arctic region can help to inform current policy discussions and understandings of the region. This is important because the manner in which the Arctic is conceived affects *how* policies are formulated and *who* is included in the discussion.

Arctic scholar Oran Young and Keskitalo argue that modern conceptions of the Arctic are rooted in Mikhail Gorbachev's famous Murmansk Speech of 1987. In the spirit of détente and an easing of East-West tension, Gorbachev gave this speech with the goal of inspiring greater political cooperation in the Arctic and defusing apprehension over security concerns (Keskitalo 2007, 194). Gorbachev stated:

> The community and interrelationship of the interests of our entire world is felt in the northern part of the globe…The Arctic is not only the Arctic Ocean, but also the northern tips of three continents: Europe, Asia and America. It is the place where Euroasian, North American and Asian Pacific regions meet, where frontiers come close to one another and the interests of the states belonging to mutually opposed military blocs and nonaligned ones cross. (Gorbachev 1987)

He goes on to suggest a six-part program with proposals for a nuclear-free zone in Northern Europe and greater cooperation in polar science, natural resource development, environmental preservation and naval affairs. This speech was decisive in the region-building process (Keskitalo 2007, 195). From this point forward, the Arctic evolved from a strategic region for the Cold War to a zone for peace and cooperation in science and environmental protection.

The Arctic Council emerged out of this new conception of the Arctic region. Following Gorbachev's speech and a conference in Finland, the forerunner to the Arctic Council, the Arctic Environmental Protection Strategy (AEPS) was formed and later signed in 1991 (Koivurova and VanderZwaag 2007, 123). The Arctic Council grew out of this strategy, with significant Canadian leadership. The 1996 signing of the Ottawa Declaration marked the official establishment of the Arctic Council, which has risen to become the principal forum for considering matters of Arctic policy.

The Council has come to serve as a symbol for the Arctic, embodying the uniqueness of the region in its cooperative, innovative and inclusive governance structure (Keskitalo 2007, 190). Its membership framework made the bold and progressive decision to incorporate indigenous peoples' organizations as "Permanent Participants," alongside the eight Arctic member states. Today there are six Permanent Participant groups including: the Inuit Circumpolar Council (ICC), the Saami Council, the Arctic Athabaskan Council, the Gwich'in Council International, the Aleut International Association, and the Russia Association for Indigenous People of the North (RAIPON). Additionally, the Council grants "Observer" status to non-Arctic states, non-governmental organizations, and inter-governmental organizations.

The Arctic Council's mandate was founded on the two pillars of protecting the environment and ensuring sustainable development (Koivurova and VanderZwaag 2007, 137). These two focuses continue to drive the policy and research agenda of the Arctic Council today. Outside of forum meetings, the main work of the Council takes place through its "Working Groups." Representatives participating in these groups are drawn largely from various member governments and participant indigenous organizations. Each Working Groups has a specific mandate and consists of the following six groups: Arctic Contaminants Action Program (ACAP), Arctic Monitoring and Assessment Program (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Emergency Prevention, Preparedness and Response (EPPR), Protection of the Arctic Marine Environment (PAME), and Sustainable Developing Working Group (SDWG), reflecting the Council's strong environmental focus. In recent years, the Arctic Council has received praise for its work on facilitating cooperation on climate change research. Among the Arctic Council's most notable accomplishments was publishing the 2004 Arctic Climate Impact Assessment (ACIA). This report was a groundbreaking achievement, bringing together over 200 climate researchers from 11 countries, and is a strong example of success born in cooperative undertakings (ACIA 2004). Many of the chapters included in our report argue that the Arctic Council could similarly work to foster cooperation in new areas by broadening its mandate to include issues such as security and indigenous governance.

The Arctic Council is not the only governing body warranting an introduction. During the 1980s and 90s, as a result of global environmental concerns and technology, many new transnational organizations and legal structures formed to address concerns in the Arctic. These governance arrangements exist at the global, multinational, regional and national level and compose what Oran Young terms a "network of cooperative activities" in the region (Young 2009, 427). Global frameworks include the United Nations Convention on the Law of the Sea (UNCLOS), which governs activities on, over, and under the world's oceans, including territorial seas, international straits and exclusive economic zones, while also dealing with continental shelf delineations and protection of the marine environment (UN 1982). Multilateral arrangements include the Stockholm Convention on Persistent Organic Pollutants (POPs), which is a treaty aimed at protecting humans and the environment through restricting production of these harmful chemicals (Stockholm 2008). Besides the Arctic Council, another regional agreement discussed in this report is the Barents Euro-Arctic Council, which similarly fosters cooperation and

involves both states and indigenous groups. There are also functionally specific regimes contributing to governance such as the International Maritime Organization (IMO), which releases guidelines for shipping. And finally, at the national level there are land claims agreements, which determine indigenous people's rights to land and other resources, offering a further governance framework. (Arctic Governance Project 2010, 13). These arrangements form the collection of institutions, discussed in our report as governing the region and providing the existing capacities by which new challenges may be confronted.

The chapters in this report address recent developments in the Arctic posing challenges to governance. Each is structured to include a background section that defines an issue and relevant stakeholders as well as existing policies and governance frameworks effecting resolution efforts. A need for action section explains why this issue is important before offering evaluation and analysis and listing recommendations. Chapter one examines the institutional arrangement in place to preserve the Arctic environment threatened by climate change and pressures to develop resources. Chapter two addresses logistical challenges and safety concerns posed by increased commercial shipping in the Arctic. One emerging sea route, whose impending navigability is gaining attention, is the Northwest Passage, discussed in chapter three. Chapter four looks at efforts on the part of Russia, Canada, and Denmark to prepare scientific data on the continental shelf, supporting a legal claim to partial ownership of the Lomonosov Ridge. Chapter five examines security concerns arguing for a greater emphasis on human and community security versus national security interests. Chapter six takes this argument one step further by asserting that food security is a critical component of human security, especially for indigenous Arctic communities. These communities are also the focus of chapter seven, which examines policies and areas for improvement within the public health and education sectors. Chapter eight looks at making changes to existing educational institutions so that they consider *maqaittiit* or Inuit traditional hunters to be a professional and respected occupation. Chapter nine argues for the strengthened rights of indigenous groups through full implementation of land claim agreements and greater resource devolution. Further delving into state and indigenous relations, chapter ten examines how the government of Quebec can serve as a model for indigenous inclusion in governance. And finally, chapter eleven discusses the European Union's application for Permanent Observer status and the greater need to clarify membership criteria and roles within the Arctic Council.

The approach our Task Force has taken to address these issues was strongly influenced by our research trip to Ottawa, Canada. Having spent the week interviewing a diverse group of politicians, embassy representatives, academics and community leaders, these perspectives greatly impacted our insights and recommendations. We are aware that the Arctic has received great media attention as a zone of anticipated conflict, with states aggressively claiming territory and vying to exploit natural resources. However, this is not the viewpoint we have adopted. Throughout our meetings in Ottawa we were consistently met with the perspective that the Arctic is a region where cooperation can and is flourishing. Our experiences and research have inspired us to view the region as a commons where mutual interests will serve as the foundation for collective governance. The challenge thus becomes balancing interests, both human and environmental, among state and non-state actors. Our approach to offering recommendations is driven by a commitment to a cooperative and inclusive vision of the region as exemplified by the Arctic Council. The importance of fostering an inclusive dialogue on these issues is a consistent recommendation and one that we pursued in the writing of this report. Our Task Force team is comprised of 14 University of Washington students and two participants, Kitty Gordon and Lisa Koperqualuk, from the Makivik Corporation that represents the Inuit of Nunavik, Canada. Having this transnational team allowed us to address and discuss these issues from both a non-Arctic and Arctic perspective. The addition of Kitty and Lisa was an invaluable contribution and indicative of what we would like to see take place on a broader level through enhanced efforts at institutionalizing indigenous political influence.

To conclude, our report's afterword presents a contemplative interpretation of the concept of sovereignty from an Inuit perspective. Many scholars such as Jessica Shadian argue that traditional conceptions of sovereignty, which ascribe absolute and independent authority to solely nation-state bodies, are growing outdated (Shadian 2010, 485). In this new era in which people increasingly unite under identities that transcend state borders, there is great potential for harnessing this collective spirit towards the resolution of shared problems. In the words of the president of the Canadian Inuit organization, the Inuit Tapiritt Kanatami, Mary Simon, "the Arctic must become part of our shared sense of who and what we are, of what defines us, and what we are accountable for" (Simon 2009). As we approach governing the Arctic and combating climate change it is essential to recognize that these are shared pursuits requiring collective action towards the betterment of our common future.

Chapter One

Stewardship of the Arctic Environment: Environmental Protection and Natural Resource Development

John Bryan & Jennifer Grosman

Abstract

The Arctic environment is being transformed and its ecosystems threatened by climate change. Among the effects of climate change are increased economic opportunities, particularly hydrocarbon exploration and extraction. These new resource development projects are accompanied by additional potentially devastating consequences for the Arctic's fragile ecosystems. Arctic states have pursued contradictory policies of conservation and resource development in the Arctic in an attempt to achieve these goals simultaneously. Current international institutions do not have the ability to address the unique pressures facing the Arctic environment and the Arctic Council does not have the power to create binding environmental policy to control unsustainable resource exploitation. To achieve the proper balance between sustainable resource development and environmental conservation, it is necessary to create binding regulations and employ multilateral, regional ecosystem based management approaches in the region.

I. Background

In evaluating issues pertaining to the environment, it is critical to consider the degree of interdependence between the natural environment and human life. Socio-economic development must be discussed within an environmental framework that considers all of the effects resulting from human activities. Environmental degradation due to human negligence and lack of stewardship not only affects certain animals or individuals, but also has social, economic, and political repercussions for all members of society. The relationship between conservation of the environment and economic development is especially difficult to balance in the Arctic where ecosystems are facing increasing stress from climate change and related development projects. The concept of stewardship is prevalent in the discourses of Arctic states and peoples, however it is a lack of stewardship that has often defined the actions of states in this region. This chapter will commence by describing the unique and delicate nature of the Arctic environment and the pressures of climate change and resource development.

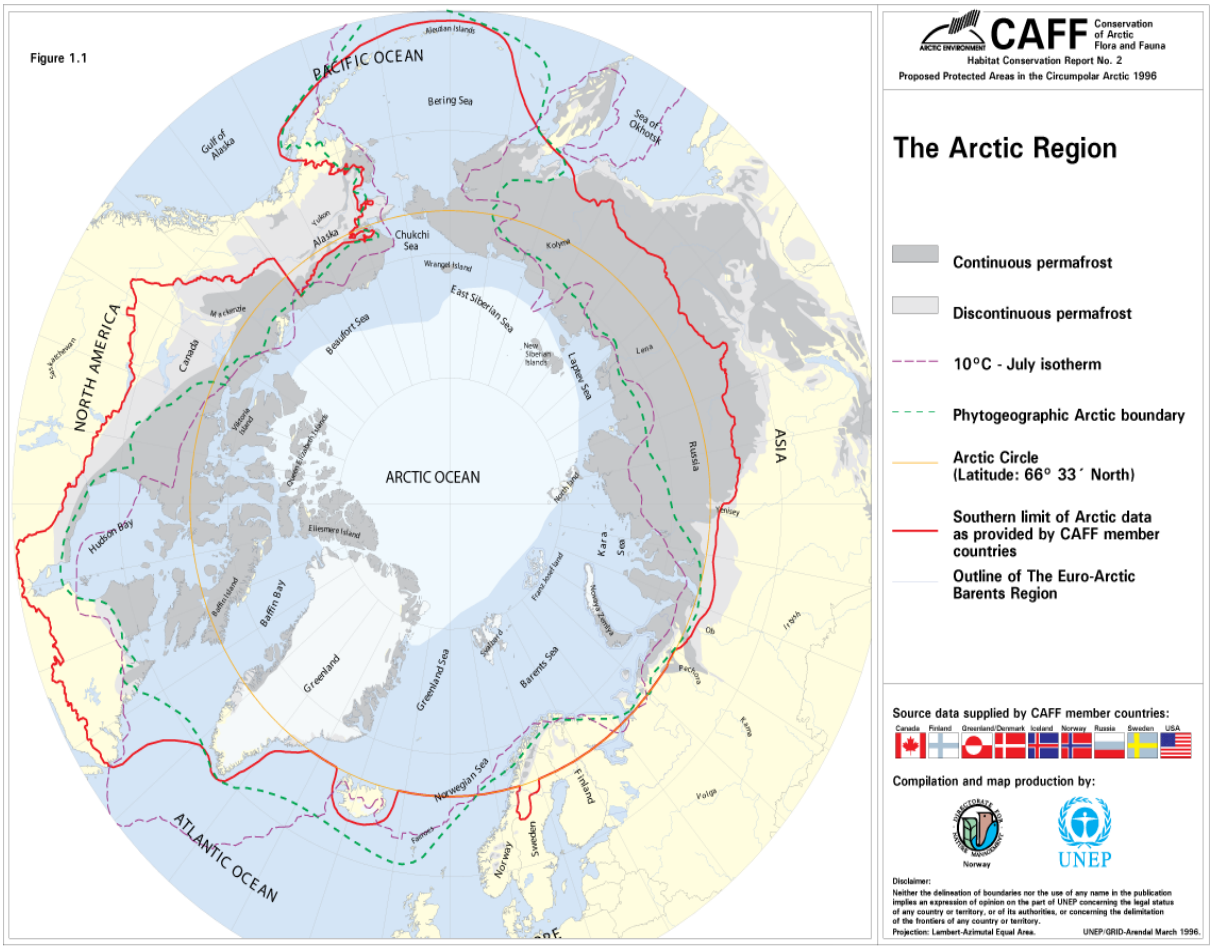
Introduction to Arctic Ecosystems

At first glance, the Arctic may seem to be a barren, frozen world, devoid of life and only valuable for its acclaimed wealth of natural resources or usefulness as a strategic, geopolitical

foot-hold. However, this perception of the Arctic fails to consider the value of the Arctic's unique biodiversity and the heritage of its four million human inhabitants. The Arctic environment is characterized by severe growth limiting conditions, drastic seasonality between its short summers and freezing winters, and unpredictable weather patterns. Due to these and other factors, the Arctic contains some of the world's most fragile and untouched ecosystems.. The plants, wildlife, and peoples that dwell in the Arctic have adapted to its freezing temperatures, dark winters, and remote location. They have been relatively isolated from the level of development and environmental degradation that has occurred elsewhere throughout the world. Each species depends on one another in the food web for survival. A threat to one species in the food web compromises the well being of all organisms as well as the humans who depend on these for their livelihood.

Icy waters surrounded by frozen tundra characterize the Arctic landscape. As depicted to Figure 1, the Arctic Ocean basin is encircled by the landmasses of North America, Greenland, and Eurasia and graced by many seas, straits, and sounds that are home to many productive marine ecosystems.

Figure 1: Map depicting Arctic boundaries and permafrost limits (UNEP/GRID-Arendal 1996).



Arctic waters are covered by ice consisting of both perennial (multi-year) and annual (yearly) ice.

The Arctic ice sheet reaches its maximum extent in April and withdraws to its minimum in September. Winter in the Arctic generally lasts nine months with temperatures ranging from below just below 0°F to - 58°F. The short Arctic summer season results in a highly productive period in which phytoplankton thrive from the sun's energy. The Arctic's marine ecosystems contain various trophic levels based on primary producers like phytoplankton and ice algae and moving through a complex food web to the top marine predators (CAFF 2002a, 190). Notwithstanding humans, the polar bear is the chief predator in the Arctic marine ecosystem and also a useful indicator species of levels of contamination that may be harder to study in species in the lower trophic levels of the food web (CAFF 2002a, 195). Some of the central species in the marine food web include arctic cod and ringed seal, which make up key food sources for many species in the web.

Arctic terrestrial ecosystems are based on shrubs, lichen, and mosses that make up the tundra. Tundra grows over a subsoil of permafrost that remains frozen throughout the year. The tundra line corresponds with an isotherm line of 10º C in July that circles the Arctic (CAFF 2002a, 14). Despite the relative remoteness and lack of biodiversity of the tundra, it is home to productive ecosystems that have far-reaching connections in the South, due in large part to migratory animals including caribou and many species of birds that spend their summers in the Arctic and winters dispersed throughout the globe. This connection ensures that changes in the balance of Arctic ecosystems will have far-reaching, unforeseen effects on global biodiversity.

Contamination in the Arctic

Due to its remoteness, the Arctic environment is relatively pristine compared to other parts of the world. However, due to air, river, and ocean currents, contaminants from the outside world that naturally coalesce in the region; the Arctic has been termed a "chemical sink" for accumulating contamination (WWF International Arctic Program 2005, 8). These chemicals are stored in polar ice and gradually release, spreading through the Arctic food web through direct contact and bioaccumulation, which affects all aspects of the environment. Some of the most common contaminants in the Arctic are persistent organic pollutants (POPs), heavy metals, and radionuclides (CAFF 2002b, 254). These long-range pollutants have not only been the result of outside industry, but of regional negligence such as Russia's history of nuclear dumping in the

Barents and Kara Seas (Kryshev and Sazykina 1995, 3). Contaminants constitute a serious threat to the health of Arctic ecosystems, however in the last century a new component has replaced these traveling pollutants as the primary environmental risk to the Arctic; this component is climate change.

Climate Change in the Arctic

Although the earth has periodically gone through periods of warming and cooling in the past, there is an international scientific consensus that over the last century, the earth experienced a warming trend that is attributable to human causes (IPCC 2007, 2). According to the Intergovernmental Panel on Climate Change (IPCC), there has been an average increase in temperature of about 0.6º C and an average increase in greenhouse gasses, such as carbon dioxide and methane, of about 35 percent since the Industrial Revolution (IPCC 2007, 2). Consequently, the current trend of global warming appears to be directly attributable to human causes, primarily the burning of fossil fuels, but also the clearing of forested land for commercial and agricultural purposes (IPCC 2007, 5). The prognosis is that these warming trends will only escalate in the future if current greenhouse gas emissions continue. However, even if drastic reductions are undertaken now, there is likely to be a persisting warming trend until temperatures hit their peak in the next few decades after which they may begin to fall once again (ACIA 2004, 22). The Arctic states, in particular the United States, are main contributors to climate change. Climate negotiations to replace the Kyoto Protocol are underway but regardless of measures undertaken to limit the human contribution to climate change, the effects of climate change will inevitably need to be addressed in the foreseeable future.

Globally, the Arctic region has experienced the most drastic and evident effects of climate change. In recent decades, average Arctic temperatures have risen at almost twice the rate as the rest of the world (ACIA 2004, 22). Climate change is altering the Arctic's landscape, ecosystems, and accessibility. Disappearing levels of Arctic sea ice, ice shelves, glaciers, snow cover, and permafrost will transform Arctic habitats and endanger the survival and livelihood of many Arctic wildlife and indigenous peoples. The consequences of climate change may be divided into primary and secondary effects. Primary effects will refer to natural consequences of climate change such as melting ice levels, while secondary effects will refer to the implications of increased human activities due to the presence of new opportunities for human exploration and development in the region.

Primary Effects of Climate Change

Ice in the Arctic is a key indicator of climate change which is used as an early warning sign for climate researchers. Arctic sea ice coverage has decreased rapidly, reaching a record low of 1.7 million square miles (4.3 million km^2 during September of 2007 (ACIS 2007, 10). This coverage is 39 percent less than the 1979 average. The Greenland ice sheet has decreased 16 percent from 1979 to 2002 (WWF 2007, 40). Glaciers throughout the Arctic have also been melting at faster rates, especially in Alaska. On land, snow cover has declined 10 percent since the 1970s, as the snow season has shortened in many areas of Siberia and Alaska (WWF 2007, 44).

With shorter ice seasons and shrinking ice cover in Arctic waters, the marine ecosystems will face escalating difficulty in surviving without adapting to these new conditions. Polar bears, arctic seals, and walruses depend on the ice as a vital part of their habitat for hunting, breeding, and resting. As ice-extent shrinks, so does the habitat for these ice-dwelling mammals. However, the melting ice will also welcome expanding populations of fish and new species of whales, such as the killer whale, whose ranges will shift with warming waters (Moore and Huntington 2008, 3). Introducing new species into the existing ecosystems may drastically change the structure of this Arctic food web. It is useful to highlight several key species in the marine food web to demonstrate the effects of climate change.

A study conducted in Canada's West Hudson Bay found a direct correlation between the reproductive activity of female polar bears and ice levels. Female polar bears hunt throughout the spring until the melting ice forces them to return to shore in late summer. During this period on land, bears must rely on fat stores to survive and sustain their litter until the following spring. The size and health of their litter is dependent on the amount of fat the mother has managed to store in reserve. In Hudson Bay, 2010 temperatures were the warmest since 1971 and the Hudson Bay experienced the lowest seasonal average of ice cover on record. Predictably most bears were off the ice 2.5 weeks earlier than in past decades (Molnar 2010, 3). Consequently, fat stores in bears were underdeveloped and the 2011 litter will likely show these effects.

Similar studies conducted on Svalbard found that during the 2007 early melting of the fjords, ringed seal reproduction was virtually non-existent in areas where typically hundreds of pups would have been born (IUCN 2009, 3). There is relatively little scientific data on the long-term consequences of melting sea ice on polar bear and ringed seal populations, but studies like

these contribute to a body of work that predicts that with melting ice, ice-obligate species such as polar bears, walruses, and ringed seals will experience declines in population and health conditions (Moore and Huntington 2008, 7). Losses in ringed seal populations directly affect indigenous peoples, such as the Inuit, who rely on it as a key part of their traditional diet (ACIA 2004, 94). Climate change will have widespread effects on indigenous traditional lifestyles in the Arctic as food webs shift. Chahary will address this further in chapter six.

Other impending consequences of long-term climate change include the vegetation shift, as the tundra line moves north (ACIA 2004, 46). Trees will begin growing at higher latitudes, introducing new species to the Arctic terrestrial ecosystems. Another growing cause for concern are the stored amounts of methane in the Arctic sub-sea permafrost, which will create a positive feedback loop[1] of climate change as the thawing permafrost releases them into the atmosphere (ACIA 2004, 86). This will add dramatically to existing greenhouse gas levels and escalate the warming process, as methane (CH_4) is a much more powerful greenhouse gas than CO_2 (ACIA 2004, 86). Much of this methane release may be offset by the growth of more productive Arctic vegetation, however tree growth is not likely to progress at the same rate as methane releases. A second positive feedback loop is formed as ice and snow cover disappears and the surface beneath is revealed, containing a much darker albedo. The darker surfaces store more heat from the sun, further warming the Arctic and propelling the melting of Arctic ice and snow (ACIA 2004, 22). These feedback loops may explain why the Arctic has warmed at a faster pace than the rest of the world. They contribute to the warming caused by greenhouse gasses in the atmosphere and ensure that warmer Arctic climate trends will continue for the foreseeable future (ACIA 2004, 22).

The effects of climate change in the Arctic will have widespread, global implications that affect weather patterns, ocean circulation, ocean acidification, sea levels, and biodiversity. On a regional scale, melting sea ice and warming temperatures will be accompanied by the secondary effects of increased economic activity in the region.

Secondary Effects of Climate Change

The secondary effects arising from the increased accessibility to the region for resource development will also significantly alter the Arctic environment. Speculation on the wealth of the region's natural resources, particularly minerals and hydrocarbons, has tantalized nations and

[1]A positive feedback loop is one that accelerates a process

companies alike for decades. However, the extreme environment and inaccessibility of the region has hindered exploitation. Fisheries will also attract increased attention as fish populations shift regions as climate change progresses (Brander 2008, 389). The onset of climate change is irrevocably altering the possibility of natural resource development as the melting ice opens up access to the Arctic and technological advances allow for exploitation, shipping, and tourism in the harsh environment. Increased natural resource development will have drastic impacts on Arctic ecosystems and peoples as development causes environmental damage, but also generates economic opportunities. *Figure 2* illustrates the opportunities for economic development but also environment damage in the field of hydrocarbon exploitation. In the long term, the development of hydrocarbons will contribute to climate change by resulting in even more greenhouse gas emissions. States should develop Arctic resource extraction in consideration of their climate change approaches. Managing responsible and sustainable resource development will be one of

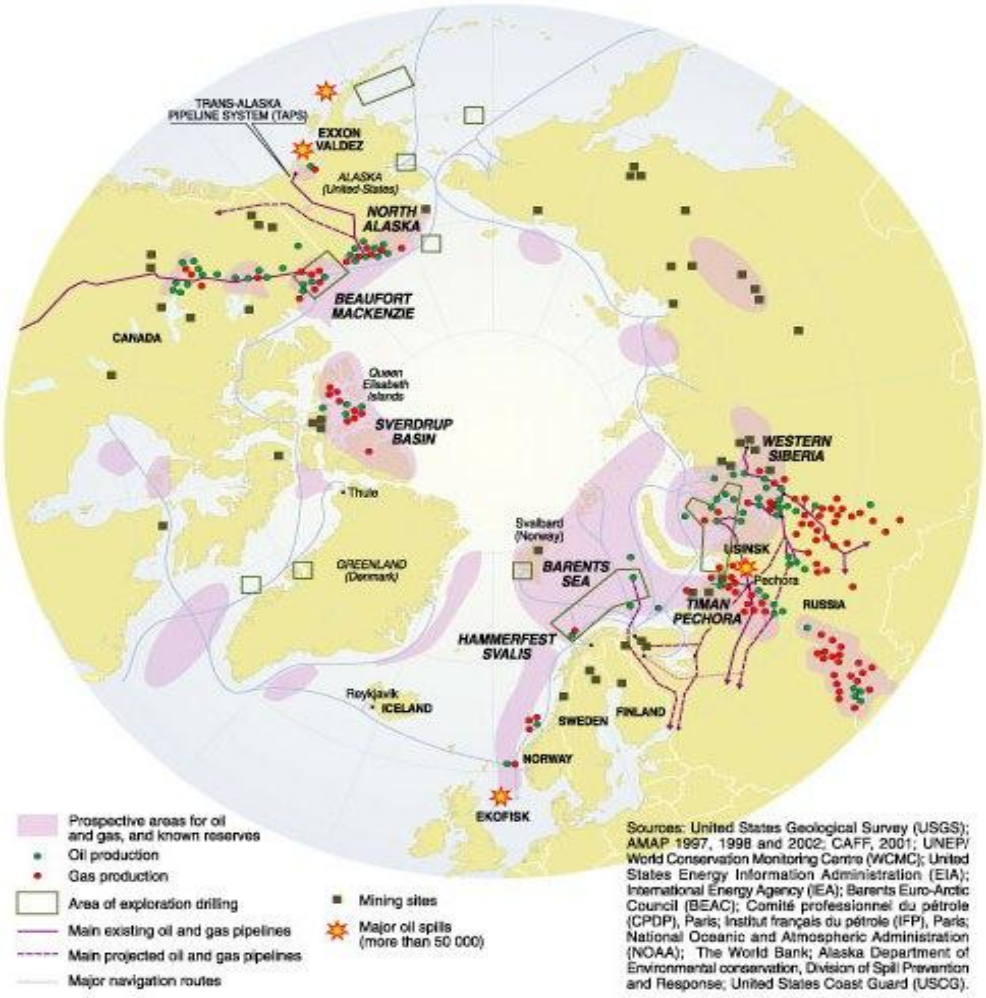


Figure 2. Map depicting current and proposed areas of industrial development in the Arctic and major oil spills in the region (Rekacewicz UNEP/GRID-Arendal 2005). Note: Post 2005 developments are not included but they have also occurred in the prospective areas.

the most significant challenges for the Arctic region. This chapter will discuss the considerations surrounding development of minerals and fisheries resources and then focus on oil and gas resource development.

The United Nations Convention on the Law of the Sea (UNCLOS) is the foundation of state territorial jurisdiction over the seas and is the basis of natural resource development in the Arctic. The Exclusive Economic Zone (EEZ) extends 200 nautical miles from the coast of states. Within the EEZ, states exercise sovereign rights over the exploration and exploitation of marine resources along with jurisdiction over marine science research and environmental protection. Furthermore, states may claim an extended continental shelf which provides rights to living and non-living resources on the seabed or in the subsoil, but not above the shelf (FAITC 2011). Choe will further examine territorial jurisdiction in chapter four.

Natural Resources in the Arctic - Minerals

The accessibility of the Arctic's valuable mineral deposits ensures that mining activity will likely compose a significant portion of natural resource development for the immediate future. The Arctic region contains coal, iron, lead, copper, nickel, zinc, sulphides, gold and diamonds (Baldursson 2003, 16). Canada's Northwest Territory is home to several diamond mining while Russia has the largest Arctic mining industry (Arctic Economics 2008). Mining poses environmental risks in the form of pollution and disturbance. The decommissioning and recovery of old mining sites remains a paramount environmental issue in the region.

The availability of fisheries, minerals, and hydrocarbons will all influence decisions on environmental protection and resource development policies; however, it is the oil and gas reserves that will motivate the most the significant portion of interest in the Arctic region. Hydrocarbon exploitation may cause the most severe, widespread, and long lasting impacts on the Arctic environment. Consequently, this chapter will retain a focus on oil and gas development.

Natural Resources in the Arctic: Oil and Gas

Since the 1970s, the Arctic regions of the United States, Norway, and Russia have exploited onshore oil and gas activities. An estimated 40 billion barrels of oil, 1136 trillion cubic feet of natural gas, and 8 billion barrels of natural gas liquids have been developed, primarily in the West Siberian Basin of Russia and on the North Slope of Alaska (Nelder 2009). Interest in natural resource development has grown exponentially as the sea ice that prevented access to the

vast majority of Arctic resources has decreased. Perhaps even more importantly, the increased accessibility of the Arctic has coincided with dramatic oil, gas, and mineral commodity price increases, but the long-term sustainability of higher prices is not certain. Not only do higher prices motivate exploration, but a certain price threshold is necessary to balance the costs of exploration, extraction, transportation, and processing of resources.

Estimates concerning reserves owe a great deal to profit-induced speculation rather than scientific data. The most frequently cited study, the Circum-Arctic Resource Appraisal from the USGS, utilized geology-based probabilistic methods to indicate the region above the Arctic Circle may hold 90 billion barrels of oil, 1,669 trillion cubic feet of natural gas, and 44 billion barrels of natural gas liquids (U.S. Department of the Interior 2008, 1). These estimates place Arctic reserves at 30 percent of the world's undiscovered gas and 13 percent of the world's undiscovered oil. Approximately 84 percent of these resources are expected to occur in offshore areas under 500 meters of water and within states' exclusive economic zones (U.S. Department of the Interior 2008, 2).

More than 70 percent of the undiscovered oil resources are estimated to occur in five geographic regions: Arctic Alaska, Amerasia Basin, East Greenland Rift Basins, East Barents Basins, and West Greenland–East Canada. More than 70 percent of the undiscovered natural gas is estimated to occur in three regions: the West Siberian Basin, the East Barents Basins, and Arctic Alaska (U.S. Department of the Interior 2008, 3). The study included only those resources believed to be recoverable using existing technology, but with the important assumptions for offshore areas that the resources would be recoverable even in the presence of permanent sea ice and oceanic water depth. Nonconventional resources, such as coal bed methane, gas hydrate, oil shale, and tar sand, were explicitly excluded from the study (U.S. Department of the Interior 2008, 3). Importantly, these estimates are based on limited geological information and excluded economic considerations, which will be the deciding factor in determining actual project feasibility.

The recent interest in Arctic resources is dependent on favorable environmental conditions, advanced technologies, limited extraction potential elsewhere, social considerations, environmental regulations, and sufficient price levels. The many factors involved with hydrocarbon exploitation make it difficult to predict future developments, but within two

decades, development can be expected to expand throughout the region (AMAP 2008, 10). Therefore, a suitable framework for development must be created now.

Environmental effects of hydrocarbon exploitation

Each stage in the hydrocarbon production process, from exploration to transportation, will pose risks to an already fragile and stressed Arctic environment. Physical disturbance from infrastructure operations and transport will have a significant effect on terrestrial habitats. The physical footprint of oil and gas activities includes land covered by gravel pads, roads, airstrips, and pipelines. Stretches of tundra have already been damaged by travel and construction of infrastructure related to oil and gas exploration and development. Arctic tundra is extremely sensitive, so that vehicle tracks may remain for decades (AMAP 2008, 22). Road and off-road vehicle tracks may impede water flow or lead to permafrost thaw through the removal of plant cover and the organic soil layer. Restoration programs have been met with varying levels of success, which demonstrates the low resilience of fragile habitats due to physical disturbances (AMAP 2008, 23). Caribou, migratory birds, wolves and bears are particularly affected by long, linear structures such as roads and pipelines (AMAP 2008, 24). Additionally, noise from development activities disorients and displaces many Arctic species that have adapted to life in a quiet environment (AMAP 2008, 4). Any development, even if conducted properly and without accidents, will have some impact on the Arctic's environment.

In addition to other industrial waste, oil drilling operations also generate drilling muds and cuttings, oil contaminated wastes and sludges, and polluted water from the drill sites. Traditionally, Arctic-based oil and gas exploration in remote areas has relied on excavations beside well sites (sumps) for temporary or permanent disposal of drilling fluids, but the thawing of permafrost is causing toxic leakage (Government of the Northwest Territories 2006, 2). Offshore wastes are supposed to be treated before they are released into the ocean, but toxicity problems remain (Bacher 2010). Not only will industrial accidents result in damage but even normal operations of projects will leave a mark on the Arctic landscape.

Oil Spills

Possible harmful incidents arising from industrial activity include pipeline oil leakages or shipping oil spills but the most potentially devastating effect of hydrocarbon extraction is the possibility of oil spills from major blowouts in the Arctic. Oil behavior and movement in ice conditions differs from those exhibited in ice-free waters. For example, spilled oil may not

spread as far in the presence of ice floes or irregularities on the ice surface, because ice cover creates natural barricades to oil movement (National Commission on BP 2010, 11). Additionally, the weathering process may take much longer due to the presence of sea ice; evaporation may be delayed by cold temperatures and will not occur at all if the oil is trapped in ice (Pew 2010b, 44). Some forms of bacteria and fungi are able to degrade petroleum hydrocarbons spilled in the marine environment, which aids in the natural clean-up process (AMAP 1998, 12). However, degradation takes more time in cold-water areas than elsewhere in the world because the metabolic rates of bacteria are slowed and the oil-degrading bacteria are relatively rare in the Arctic.

Oil seepage into the soil has considerable impacts for vegetation as many plants die immediately upon contact. Most toxic components can remain in the soil for decades and do not degrade unless exposed to the atmosphere (AMAP 2008, 23). Furthermore, oil contains many chemical compounds that are highly toxic to wildlife. Oil contamination poses risk to all trophic levels of the marine ecosystem. At the lower trophic levels, oil contamination may disrupt and inhibit phytoplankton colonies for many years, as evidenced in a study on Arctic ice scours (Pew 2010b, 56). Fish larvae and eggs are more sensitive to oil contaminants than adult fish; therefore affected fish populations can experience severe declines that persist for many years after initial contact with oil. Pacific herring populations were studied after the Exxon Valdez spill in 1989 faced severe declines and have yet to return to previous population levels in over twenty years. Arctic cod, a key connection between plankton and larger animals, would likely experience similar declines in the event of an Arctic spill, which would have severe implications for all species in marine ecosystems (Pew 2010b, 56).

Larger marine mammals may ingest toxins directly, or through a process known as bioaccumulation. This is the process by which chemicals are taken up by an organism either directly, from exposure to a contaminated medium, or by consumption of food containing the chemical (AMAP 2008, 5). Additionally, if oil comes in contact with a mammal's fur, its ability to insulate and move freely in its environment is severely hindered, which will limit its chances for survival (Pew 2010). Overall, there are many direct or indirect paths to contamination for Arctic marine wildlife and the results may persist through generations, long after the initial spill.

Oil Spill Response

Responding to oil spills remains one of the most significant challenges to natural resource development as the lack of infrastructure, sparse resident population, scarceness of baseline research on the Arctic environment, and the ineffectiveness of current spill technologies hamper response. As mentioned, the Arctic is characterized by extreme cold, varying forms and amounts of sea ice, seasonal darkness, high winds, extended periods of heavy fog, and week-long storms that approach hurricane strength (National Commission on BP 2010, 10). Consequently, the extreme climate of the Arctic can both heighten the risk of an oil spill and limit the effectiveness of oil spill response operations.

Due to the seasonality of these environmental variables, the techniques available for oil spill response and their effectiveness will be significantly different. If an oil spill occurs late in the open water season or during the fall freeze-up, oil could become encapsulated within the ice. Encapsulated oil hinders the ability to locate and isolate the oil (National Commission on BP 2010, 10). Such oil would not likely be accessible for cleanup efforts until the spring, but by that time, the oil would have significantly degraded the environment.

Additionally, oil is difficult to locate if it spreads under ice floes. Rather than relying on visual observation, responders to spills in icy conditions may have to rely on airborne remote sensing techniques or ground penetrating radar to detect oil; both methods are considered unsafe (Sørstrøm et al. 2010, 30). More research to develop effective cleaning techniques is needed.

Ice conditions, high waves, and currents can make mechanical containment and response efforts more difficult and dangerous. Sea ice can reduce the effectiveness of containment booms by altering their position or causing tears (National Commission on BP 2010, 11). Mechanical recovery methods are designed from open water conditions and their effectiveness will depend on ice conditions (Sørstrøm et al. 2010, 9). These weaknesses in response methods demonstrate the difference between current extraction activities and future Arctic developments.

Additionally, chemical dispersants will probably be ineffective in most Arctic situations. Cold temperature waters decrease dispersant capabilities as oil viscosity increases. Weather conditions, such as high winds and fog, make it difficult to accurately spray dispersants. Also, dispersants are unable to access oil under ice (Pew 2010b, 66). Their toxicity on Arctic organisms is unknown (National Commission on BP 2010, 12). Both the actual methods to address oil response and the ability to bring the methods to the Arctic are limited.

Effects on Human Populations

Natural resource development offers both positive benefits and negative effects for human populations in the Arctic. Natural resource revenue may have the potential to improve human welfare through the economic generation these projects bring to economically stagnant areas (ICC Canada 2010, 7). Projects may provide tax revenue for improved public services such as schools, but the influx of labor may cause social disruptions (AMAP 2008, 5). Further discussion of natural resource development on indigenous communities will be discussed by Miller in chapter nine.

The reliance of indigenous communities on their environment for physical and spiritual wellbeing increases their vulnerability to the aforementioned environmental impacts resulting from climate change and degradation (ICC Canada 2010, 7). Resource activities could impact hunting grounds and consumption of traditional foods may become increasingly dangerous to eat due to bioaccumulation of pollutants in the food chain from oil contamination and other pollutants (AMAP 2008, 6). Chahary will discuss food security in chapter six.

Shipping and Tourism

Arctic shipping will increase due to natural resource extraction and the emergence of shorter sea lanes. However, shipping poses additional environmental risks primarily through waste dumping and accidental oil spills (Koivurova and Molenaar 2010, 5). The complete implications of Arctic shipping will be discussed by Herke in chapter two. An additional secondary effect is the increased levels of tourism. As regions of the Arctic become free of ice, cruise ships have departed for the Arctic despite safety and environmental concerns. Tourism offers revenue for northern communities but tourist activities, particularly cruise ships, raise the possibility of environmental degradation.

Current Institutions

To a degree, the previously mentioned environmental issues and economic activities are addressed by several institutions and frameworks. The Arctic Council through its Working Groups has pioneered a forum for addressing environmental and development issues in the Arctic. The Working Groups have led in environmental research assessments in the past two decades and have shaped the policies of Arctic states. Notably, the Council produced the Arctic Climate Impact Assessment (ACIA) in 2004 and played a key role in shaping the policy document that came out of the Stockholm Convention on Persistent Organic Pollutants (POPs).

Additionally, the Arctic Council produced the 2009 Oil and Gas Guidelines which promote best practices for the development process but are not mandatory (Arctic Council 2009). CAFF has shaped conservation policies and institutions such as the Circumpolar Protected Areas Network (CPAN), which seeks to maintain the diversity of habitats throughout the Arctic. It has also developed a program to monitor circumpolar biodiversity by monitoring many key species such as caribou, arctic char, ringed seals, seabirds, and polar bears. Another multinational project, the International Polar Year (IPY 2007-2008) was a collaborative scientific program involving over 200 projects, with thousands of scientists from over 60 nations examining a wide range of physical, biological and social research topics.

An important aspect of the Arctic Council is its inclusion of representatives of all indigenous peoples in the circumpolar north. This guarantees indigenous groups a place in the discussion and treatment of environmental and resource management issues because the future of Arctic activity does not only depend on the environmental and development policies of the Arctic states, but also on the views of the Arctic's indigenous peoples. Though indigenous peoples constitute numerous ethnic and cultural groups with unique histories situated in various countries, common elements can be perceived in their approach to environmental and economic policies. As previously mentioned, the traditional indigenous way of life remains extremely dependent on the Arctic environment and resources. Consequently, indigenous communities are experiencing severe challenges caused by climate change including changing animals patterns, coastal erosion, and reduced ice cover among many other impacts (ICC Canada 2010, 10). However, indigenous communities are not passive actors in the Arctic but contribute to the dialogue surrounding the region. The Inuit Declaration on Sovereignty firmly establishes indigenous authority based upon their having lived on the land, sea and ice since time immemorial (ICC 2009). The 2010 Nuuk Declaration proclaims the right of indigenous peoples to contribute and benefit from the development process (ICC 2010). Indigenous people have strong positions on the environment and resource management that draw strength from their local knowledge of the Arctic and history of adaptation to climate change.

Other institutions are in place to regulate the various spheres of Arctic activities. These include the International Maritime Organization (IMO) which regulates shipping, the United Nations Convention of the Law of the Sea (UNCLOS) which has rules pertaining to resource development, the International Seabed Authority, which has established a framework for the

seabed that exists beyond national jurisdiction, and the United Nations Environment Program which coordinates certain environmental activities. To an extent, these institutions provide a framework in the Arctic but they were not developed to specifically address the unique characteristics of the Arctic region nor the rapid increase of development expected in the near future.

II. Need for Action

The confluence of environmental and economic factors is driving secondary climate change effects in the Arctic and placing more risk on a delicate and stressed environment. Climate change is the largest stressor facing the Arctic environment today. It carries with it not only primary effects, such as melting ice, thawing permafrost, weather changes, and shifting habitats, but also the secondary effects of increased economic activity in the region. These stressors coupled together will pose an unprecedented challenge for Arctic ecosystems and inhabitants as they attempt to adapt and survive in a changing Arctic landscape. As the region becomes increasingly accessible due to decreasing ice cover, natural resource development activities will continue to expand in the arenas of hydrocarbon exploitation, mineral extraction, shipping, fisheries, and tourism. These sectors offer the potential for economic growth, which is particularly needed in the North. However, these activities also pose serious threats to the Arctic environment and its four million human inhabitants. Consequently, policymakers and stakeholders face an extraordinarily difficult challenge in establishing policies that balance environmental protection and social sustainability with necessary economic growth.

Each member state of the Arctic Eight has released some form of an Arctic foreign policy statement. Many of these statements share similar rhetoric regarding development and environmental goals in the Arctic, but there are some key differences in emphasis and treatment of these goals. In practice, each state has shown interest in pursuing natural resource extraction while also maintaining support for international environmental standards. While each state recognizes the risks facing the Arctic due to climate change, natural resource extraction, and other human developments, they each assert an interest in hydrocarbon exploration and eventual exploitation within their respective territories. This presents a tremendous and fundamental contradiction in their Arctic policies. This contradiction, arising from pursuing economic growth while simultaneously promoting environmental protection, undermines the goals of each state because of the inherent incongruity between these pursuits.

The consequences and risks from natural resource development are evident by the Deepwater Horizon oil spill, which has drastically influenced plans for hydrocarbon exploration in the Arctic. In April 2010, an explosion on the B.P. Deepwater Horizon drilling rig in the Gulf of Mexico resulted in eleven deaths and the spewing of 4.9 million barrels of oil from into the gulf. The well was not capped for more than three months and the incident was extremely damaging to the environment and dependent industries (*New York Times* 2011). The implications of a similar spill in the Arctic will be examined later in this chapter. The failures of Deepwater Horizon demonstrate the urgent need to create sustainable natural resource management policies.

Countries have a rational and pressing need to secure energy supplies while northern communities seek sources of economic growth. Although oil and gas projects may take more than a decade to fully develop and begin production, the governance and regulatory framework must be developed now to avoid the possibility of catastrophic, far-reaching damage to an already fragile environment. Existing state policies and institutions are not able to adequately address the complexities of environmental protection and resource management; therefore, new policies, institutions, viewpoints, and multilateral frameworks must be considered to balance conservation and development, and ensure proper stewardship of the Arctic environment.

The Arctic environment is being affected by human activities occurring both within and outside its borders. To ensure a cohesive, effective plan for environmental protection, this Task Force realizes that all stressors must be addressed. However, for the efficiency of this report, the focus of this chapter will be on the policies of Arctic states and on conservation and development projects occurring within the Arctic and to evaluate the current state of this unique and threatened region.

III. Evaluation and Analysis

Conservation vs. Development in the Arctic

The aforementioned contradiction between the emphasis on natural resource development and environmental protection may be traced through the rhetoric of Arctic states' foreign policies and their recent development projects in the region. It is useful for this evaluation of conservation and resource development to compare the policies and projects of the key oil and gas producers in the Arctic. These include the United States, Russia, Norway, and Canada and to a lesser extent, Greenland (Denmark) and Iceland. These Arctic states maintain that their policy

goals of environmental protection and natural resource management may proceed in harmony and that hydrocarbon exploration and production are mutually inclusive and manageable in a sustainable way which pose minimal risk to the Arctic environment. However, nearly every stage of the production process poses significant environmental risk of degradation, much of which is attributable to a lack of knowledge of the challenges to Arctic resource development. As will be further examined, the United States and Canada are more hesitant at present to pursue offshore resources while Greenland and Iceland have begun exploring their reserves and hope to develop their resources in their future. In contrast, Russia and Norway are rapidly developing their resources and have several operations already in progress. Alongside plans for increased resource development, Arctic states have established conservation projects in the form of protected areas throughout the Arctic.

Successes and Failures of Protected Areas in the Arctic

A key method of conservation in the Arctic has been the establishment of protected areas. "The creation of protected areas is one of the most common conservation approaches worldwide.

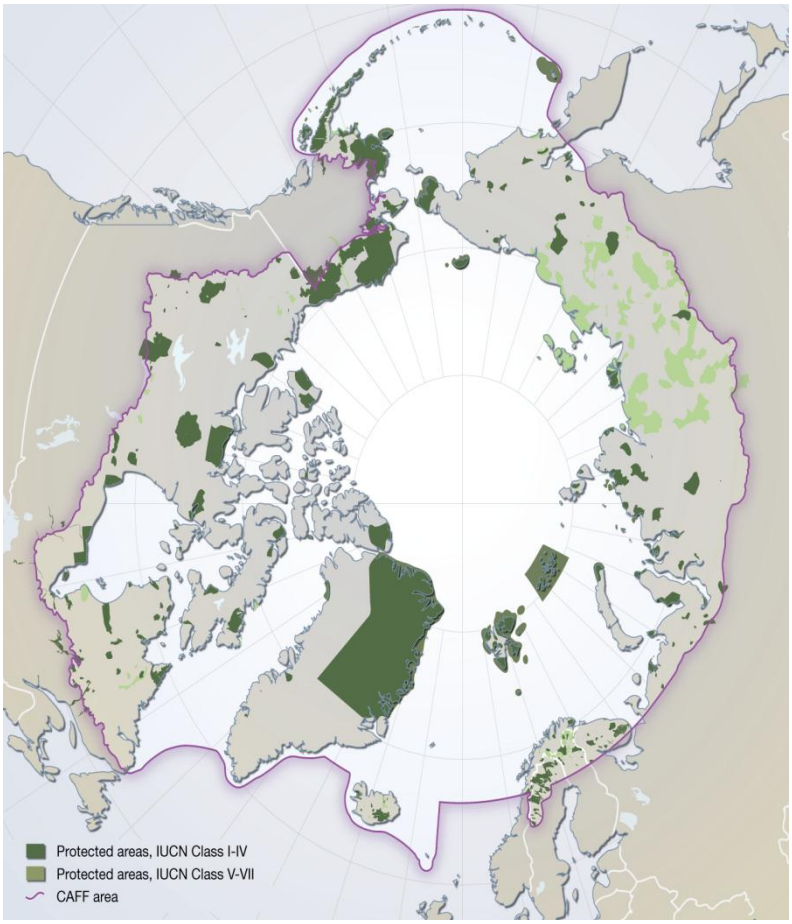


Figure 3: Protected Areas lying within the CAFF boundary of the (Hugo Ahlenius, Nordpil 2010).

Such areas include national parks, wildlife refuges, special habitat areas, sites of scientific interest, and sacred sites" (CAFF 2002a, 77). There are a certain set of values that are promoted in establishing protected areas, which include ecological, aesthetic, scientific, educational, societal, subsistence, economic, and cultural values (CAFF 2002b, 5). These areas serve to preserve natural habitats by putting limited or full restrictions on human commercial development within a bounded space. In a changing Arctic landscape, one of the most important features of protected areas is that they serve as refuges for various endangered species that may be threatened from overexploitation, climate change, and increased economic development. In this respect, protected areas serve to guarantee that the biodiversity of the Arctic survives despite the introduction of new stressors and threats to the environment. To ensure that Arctic protected areas are succeeding, their scope and efficiency must be evaluated in respect to a changing Arctic and should be restructured if necessary.

The first Arctic protected areas were created in Sweden and Alaska in the early 20th century. By 1980, 5.6 percent of the Arctic was classified under some degree of protection. As of 2009 that number had grown to 11 percent, or about 1.3 million square miles (3.5 million km^2) of which half exists in Greenland (CAFF 2010, 96). Each state's system of establishing and classifying protected areas differs according to national policy, but most adhere to the system created by the International Union for Conservation of Nature (IUCN). The IUCN set up a ranking system of one through 10 to differentiate between levels of protection, one being the highest level of complete preservation and 10 being the lowest (Lysenko et al. 2000, 38). The existing protected areas throughout the Arctic are depicted in Figure 3 in colors representing their category of protection. The Circumpolar Protected Areas Network (CPAN) was created by CAFF to evaluate the efficiency and viability protected areas throughout the circumpolar Arctic states. It has released several gap studies such as a study of Russia's protected areas, which will be addressed later in this section.

Protected areas have succeeded in being a successful model for conservation and protection of Arctic ecosystems and their biodiversity. However, there are certain shortcomings in the current status of protected areas that threaten to undermine their values and goals. An important limitation is that protected areas are often delineated by individual state borders and regulations. This is counterproductive to the efficiency of area management since the borders of Arctic ecosystems do not always coincide with state borders, but often transcend state

jurisdictions. One example of a transnational protected area is the continuous taiga forest that extends from Finland through Sweden and Norway. There exists a large, relatively continuous belt of protected area from the taiga to the mountainous northern parts of Norway and Sweden. These areas are important habitat for taiga species in the region and serve as a corridor for gene exchange, allowing recolonization of habitats in the case of local extinctions (CAFF 2002a, 82). This extending chain of protected areas may be defined as a wildlife (or habitat) corridor. Although there are protected areas spread throughout the Arctic, they are rarely connected. These corridors are essential for migrating species, threatened species, and to ensure biodiversity. The wildlife corridor would become more effective if it was extended to include the taiga area into the Russian side of the border.

Among the Arctic's protected areas, there are two types of ecosystems that are underrepresented. These are boreal forests and marine protected areas. Marine protected areas (MPAs), in particular, will become increasingly important as more traffic and exploration comes to Arctic waters. As with land protected areas, marine protected areas serve a variety of purposes, and may be "multi-use" or "no-take" MPAs. Multi-use allows for fishing and other limited development, whereas no-take zones restrict any human use (Reeves 2010, 12). No-take MPAs protect ecosystem structure, but also offer benefits to fisheries, science, and local peoples who rely on subsistence fishing. Canada's Lancaster Sound serves as an essential habitat for many marine species such as arctic cod, narwhal, beluga whales, and various seals in feeding, birthing, and migration. It is also home to many seabirds not found anywhere else in the Arctic. Canada is currently in the process of establishing its first MPA in the sound (Pew 2010). The plan was developed by both the Canadian government and the local Inuit government of Nunavut. It will be protected from ocean dumping, undersea mining, energy exploitation, and overfishing. However, Shell Oil has secured several oil and gas leases just east of Lancaster, which may conflict with the environmental values of the area (Pew 2010). This conflict between conservation projects and hydrocarbon projects is pervasive throughout the Arctic, and is the most pressing threat to Arctic protected areas.

Due to contradictory policies, Arctic protected areas often lie in close proximity to areas that have been leased for hydrocarbon exploration and production. The habitats of these protected areas may be disturbed by noise, contamination (through a variety of paths e.g. air, water, transfer through species), and unintended accidents such as oil spills or gas flares.

Therefore the areas around protected areas must be considered and the possible consequences must be thoroughly investigated before companies may be given a lease. There is an increasing trend of economic proposals for development projects, not only in Canada, but throughout the circumpolar north.

> Attitudes towards protected areas have changed. In the past, it was commonplace for governments to set aside large tracts of land in very remote areas to protect natural values. The Arctic did not attract much serious attention from industrial interests including the oil, gas, mining, forestry and transportation sectors. That is quickly changing. As a consequence, there is often pressure to open up existing protected areas to alternate uses that appear to offer greater monetary benefits and job opportunities but may not be compatible with the conservation objectives of the protected areas. (CAFF 2002b, ii)

Protected areas in the Arctic are the clearest path to conservation of fragile ecosystems in considering the next decades of climate change and increased economic activity. In order to ensure the efficiency of establishing and managing these areas, states should pursue transnational management plans, engage and respect the views of the indigenous population, and put binding limitations on economic development. International institutions such as UNEP, the IUCN, or CPAN do not possess authority to enforce standards for protected areas. Likewise state regulations are often weak in enforcing adherence to standards.

Indigenous Perspective

As in Lancaster Sound, indigenous peoples must play a role in the establishment and management of these areas. Their wealth of local knowledge and resource management guarantees their right to participate in these projects. Models must allow for traditional use of areas so that indigenous rights to subsistence activities are not forbidden by the restrictions set up by state protected areas. Joint management between states and indigenous groups should be considered, not only in Nunavut, but throughout the circumpolar north. As previously mentioned, indigenous peoples are experiencing first-hand the effects of climate change on their homeland and face increasing pressures from natural resource development.

The Inuit Circumpolar Council, comprised of Inuit from Canada, Alaska, Greenland and Russia announced the imminent finalization of a *Circumpolar Inuit Declaration on Responsible Resource Development Principles in Inuit Nunaat* which will be presented at the Arctic Council Ministerial meeting in May 2011 in Nuuk, Greenland. The declaration is expected to set out a number of Inuit principles that must guide resource development in the Arctic such as ensuring

that Inuit are primary beneficiaries of resource development, balancing risks and benefits of development, and respecting the Arctic Council's *Arctic Offshore Oil and Gas Guidelines* as minimum standards (ITK 2011). However, divisions still remain with Greenland Inuit taking a more aggressive stance than the other groups (Rogers 2011). A common position was not obtained on uranium either, but common approaches are emerging. The viewpoints of indigenous peoples must be considered in any conservation or natural resource development project that relates to their wellbeing. However, states currently possess ultimate authority over their protected areas and oil and gas leases; therefore, the policies and projects of key Arctic states must be evaluated.

Policies and Projects of the United States

The United States' 2009 Arctic Region Policy states that it is necessary to "protect the Arctic environment and conserve its biological resources and ensure that natural resource management and economic development in the region are environmentally sustainable" (U.S. President 2009). The policy recognizes the need for environmental protection of the Arctic, but also firmly establishes the U.S. objective of achieving economic development and energy security in the Arctic region. The United States seeks to address the particular challenges of sustainable development by including stakeholder input, ensuring continental shelf resources are managed in a responsible manner, and continuing cooperation with other Arctic nations (U.S. President 2009). The emphasis on natural resources in the 2009 policy as compared to the 1994 version reflects the recent emergence of viable natural resource development.

The Arctic Region Policy also expresses support for the Arctic Council's environmental guidelines and research. Additionally, the policy indicates possible interest in additional fora for informing decisions on the hydrocarbon extraction process (U.S. President 2009). However, the commitment for further international arrangements is uncertain. In pursuing its environmental goals, the United States has developed wildlife conservation management agreements, among other mechanisms. As mentioned earlier, the United States has established many national parks and wildlife refuges in its Arctic territory, the largest being the Arctic National Wildlife Refuge (ANWR) in the northeast corner of Alaska, directly south of the Beaufort Sea. Like most protected areas, this 586,720 square miles (1,520,000 km^2) of wilderness is home to many migrating caribou and bird species. Since 1977, there have been controversial plans to drill in the north coastal plain (1002 area) of ANWR, which is one of the most publicized examples of oil

and gas leasing on protected areas. For the time being, the oil and gas developments will not proceed due to significant opposition in the United States.

Chukchi and Beaufort Sea

The Chukchi and Beaufort Seas located off the northern coasts of Alaska may be significant sites of hydrocarbon exploitation and demonstrate the reoccurring themes present in natural resource development. Shell received preliminary approval to drill exploratory wells in the Chukchi during the summer of 2010 while BP is developing a site in the Beaufort (National Commission on BP 2010, 4). However, Department of Interior Secretary Salazar announced in May 2010, that the Department would postpone consideration of Shell's proposal to drill exploratory wells in the Chukchi Sea during 2010 in response to increased concerns resulting from the Deepwater Horizon oil spill in the Gulf of Mexico. BP's Beaufort project has also been delayed. According to the Department of the Interior, the decision was based on the need for further information about spill risks and spill response capabilities in the Arctic (National Commission on BP 2010, 8). At a time when technological advances, price increases, and reduced transportation costs encouraged exploitation in Arctic Alaska, the devastating consequences of the Deepwater Horizon have seriously impeded future developments.

In addition to the Department of Interior's decision, operations have faced considerable opposition from indigenous and environmental groups. A coalition of Alaska Native and environmental groups has successfully challenged the adequacy of the environmental review of the Chukchi lease (National Commission on BP 2010, 8). However, further legal challenges and regulatory delays, coupled with uncertainty over the administration's possible moratorium, have led to Shell and BP's recent announcement that further exploration will be delayed until 2012 (Sweet 2011). At the moment, activities in Alaska are uncertain and depend on the conflicting need for environmental protection and energy supplies.

There is a border dispute in the Beaufort Sea between the United States and Canada involving a 8,100 square mile (21,000 sq km) area. Previously, there was little attention given to the issue but the prospect of gas reserves has led to discussions between Ottawa and Washington, a clear demonstration of the influence natural resource development has on foreign policies. Last year, the two countries embarked on a joint mapping expedition of the ocean floor, but the expedition may not be completed until 2013 due to the presence of thick ice for much of the year. In the meantime, a bilateral "dialogue of experts" is underway, with the next meeting

scheduled for Washington in the spring (Ibbitson 2011). Developments toward a border resolution are generally viewed to be positive; however, the resolution might lead to severe environmental risk.

The Deepwater Horizon spill has led to greater environmental consideration in the Arctic. However, development is not permanently halted as demonstrated by the anticipated plans for the Beaufort and Chukchi Seas. Scientific knowledge of Arctic ecology is based on incomplete information about marine mammals, fisheries, and weather patterns which in addition to faulty modeling combines to form an inherently risky development process. Development may not occur for several years but current environmental review assessment and response plans are inadequate to sustainably manage resources. Consequently, the decision to postpone hydrocarbon exploration in Alaska's outer continental shelf is appropriate in consideration of the aforementioned risks and unavoidable environmental effects.

Policies and Projects of Canada

Canada's Arctic Foreign Policy emphasizes Canadian sovereignty over its Arctic region, but it also addresses environmental protection and natural resources. Canada possesses significant mineral deposits that comprise a significant economic focus at present (Canada 2009). The 1970 Arctic Waters Pollution Prevention Act is a significant foundation of Canadian Arctic foreign and domestic policy, which seeks to protect the waters of the Canadian archipelago by prohibiting waste disposal in the Arctic waters from passing ships (Transport Canada 1985). However, the act was also meant to strengthen Canada's position that the archipelago waters constitute internal waters. Consequently, the legitimization of the act was a main reason behind Canada joining UNCLOS. This act, through UNCLOS Article 234's provision for ice covered waters, allows Canada to exert sovereign-like jurisdiction in the pursuit of environmental protection. Thus, Canada is able to promote environmental protection in order to gain wider political leverage.

Mackenzie Valley and Beaufort Sea

One of Canada's most significant natural resource projects is the Mackenzie Gas Project, which entails the development of natural gas fields in the Beaufort Sea and Mackenzie Delta in the Northwest Territories. 1. 2 billion cubic feet of gas will be transported through a 743 mile (1,196 km) pipeline to connect to Alberta's gas system (Mackenzie Gas Project 2011). The project was first envisioned in the 1970s but was delayed due to indigenous land claims disputes

and low natural gas prices. However, in the early 2000s, the resolution of indigenous treaties and the rise in natural gas prices led to the reconsideration of the project. Nevertheless, environmental concerns, particularly issues over the impact on grizzly and caribou migration, and other regulatory delays seriously threatened the project.

In December 2010, the National Energy Board granted approval to the project after five year process which now must receive final approval from the federal cabinet. However, the recent availability of cheaper shale gas, particularly from the United States, has raised new concerns over the project's future. The development group must decide to commit to the project by 2013 and speculation remains that the $16.2 billion project will only continue if federal subsidies are guaranteed. The possibility of government financial support remains low at the moment (Weston 2011). Notably, the NEB attached 264 conditions to its approval in the areas of safety, engineering, and environmental protection, which demonstrates the unavoidable impacts of industrial activities. Such an action implies the acceptance of some degree of environmental damage.

The Mackenzie Gas Project exhibits the long timeline inherent in natural resources and the volatility of prices which contribute to the uncertainty of developments. Additionally, the Aboriginal Pipeline Group, which controls one third of the project, represents the majority of indigenous groups along the pipeline and demonstrates the desire and ability from indigenous groups to develop natural resources. Importantly, this particular project illustrates the necessity of creating a sufficient framework for development now as projects may be delayed at present only to continue when conditions are more favorable.

Similar to the United States, offshore development of hydrocarbon resources is currently under review by the NEB as a response to the Deepwater Horizon spill which has halted developing projects. The environmental review process as a whole and its recent modifications in July 2010 have also faced criticism in light of new Arctic activities. The most controversial amendment allows the Minister of the Environment to determine the scope of any assessment (Globe Net 2010). The NEB no longer conducts a "comprehensive environmental study" but now performs a more basic review known as an environmental "screening" at the time an exploratory license is issued. Environmental groups warn that by the time a full-scale review is conducted, economic considerations would outweigh environmental matters while industry points to more streamlined environmental management (Polczer et al. 2011). The current status

of Canada's environment and development regulations does not only reflect the impact of Deepwater Horizon but also exemplifies the opposing viewpoints and ongoing challenges in sustainably managing natural resources.

The U.S. and Canada share similar Arctic policies that place an emphasis on resource extraction, but also state the objective of environmental protection. However, despite evidence that oil and gas exploitation poses significant environmental risks, both countries continue with natural resource development in their respective EEZs. It is possible that the U.S. and Canada will permanently postpone drilling, but given economic considerations, it is very probable that exploration will be allowed again in the near future.

Iceland's Policy and Current Projects

Iceland views itself as a strong promoter of environmental stewardship yet it has begun exploration in the offshore Dreki oil fields and Gammur gas fields (Orkustofnun 2011). The actual estimates of possible reserves have not been released but there are concerns that Iceland does not have the technical capabilities to harness the resources. Both Norwegian companies and the Russian government have expressed interest in developing Iceland's resources (Nikolov 2010). The economic ties between countries mirror the environmental bonds in the region; developments cross borders and are influenced by actions elsewhere.

The conflicts between Iceland's simultaneous promotion of the environment and natural resource extraction is readily apparent. Ambassador Sigridur Anna Thordardottir, the Icelandic ambassador to Canada, rationalized the country's position as all nations will develop but Iceland wants to manage resources in the most responsible way. Everything must be taken into account when the decision for development is made (Thordardottir 2011). More so than most of the other Arctic states, Iceland's economy and way of life are in jeopardy from risky exploitation, but at the same time, resource development could be a significant boost to the country. Iceland will likely be at the forefront in careful consideration of the positive and negative effects of hydrocarbon exploitation.

Denmark/Greenland's Policy and Current Projects

Denmark, through its historic ties to Greenland, is a significant Arctic state undertaking natural resource development. Greenland is actively exploring the possibilities of hydrocarbon reserves. In contrast to the United States and Canada, it appears that Greenland will soon exploit these resources, which is a particular concern to Canada because environmental degradation

resulting from Greenland's projects could easily spread to Canadian waters. The fact that Greenland is promoting the same activities that are currently halted in Canada points to the need for a coordinated approach among the Arctic states. Oil has been discovered in the Disko Sea but its commercial viability has not yet been released (Wood 2010). Further drilling sites in the Baffin Sea are planned for this summer (Oil and Gas Journal 2011).

Greenland believes energy and mineral extraction will lead to the economic growth necessary for further autonomy and possible independence from Denmark. However, Denmark will fund these projects and receive a large percentage of profit from production. Nevertheless, there is environmental opposition to proposed resource extraction. Greenland must address environmental concerns in the face of an urgent need for economic growth and as such will provide insights into the future of natural resource exploitation in the Arctic.

Norway's Policy and Current Projects

Norway's Arctic policy maintains a focus on exercising authority in the region while also promoting environmental stewardship and sustainable resource development (Norway 2007). Norway places a strong emphasis on environmental protection in both its domestic and foreign polices yet hydrocarbons are a crucial part of the economy. Officials in the Norwegian embassy in Ottawa recognized the contradiction between environmental and economic objectives when they admitted the existing paradox between environmental protection and oil and gas production (Hoel 2011). Norway's North Sea fields have been major sources of gas and oil, but production has declined in the past decade. Consequently, Norway has turned to its Arctic reserves, particularly LNG (liquid natural gas) to bolster the industry and maintain the country's economy. In addition to Norway's own reserves, Norwegian energy companies are pursing developments in other regions of the Arctic drawing on their technical skills and their safety record in northern operations.

Shtokman

The Shtokman gas and condensate gas field is one of the most significant projects in Norway and Russia's Arctic. Gazprom owns the exploration and production license for the field but has entered an arrangement with the Norwegian business Statoil and the French company Total to develop the area. The Shtokman site is located in the central part of the Russian sector of the Barents Sea shelf and predicts an initial annual production of 23.7 billion cubic meters of natural gas which will increase in size to equal the annual gas output of Norway. Plans for the

project include the construction of offshore pipelines and the location of other production facilities (Gazprom 2011).

However, despite the promise of the Shtokman field, Gazprom and its partners, citing changes in the market situation, have agreed to delay pipeline gas production until 2016 from an earlier plan of 2013, and to delay the start of LNG production to 2017 from 2014 (Reuters 2011b). The Shtokman field demonstrates that the immense obstacles to energy production depend largely on market forces as well as environmental considerations.

Russia's Policies and Current Projects

Russia is at the forefront of hydrocarbon exploitation as the country continues to rely on natural resources for economic growth. Russia holds over 75 percent of known oil and over 90 percent of known gas reserves (AMAP 2008, 9). Potential oil reserves in the Russian Arctic continental shelf are estimated at 30 billion ton of oil equivalent while potential gas reserves may be 70 trillion cubic meters (U.S. Department of the Interior 2008, 3). Consequently, natural resource development retains a high priority in Russia's Arctic policy. The *Public Policy of the Russian Federation in the Arctic for the period up to 2020 and Beyond* states its interests for the use of the Arctic zone as a strategic resource base and solution for socio-economic development problems, while also pursuing conservation of the Arctic's unique ecosystems (Russia 2009). To achieve these national interests, the government encourages development of oil fields in the Arctic zone and the building of infrastructure to support these projects. Its environmental goals are focused on expanding protected and marine areas, establishing regimes of environmental management to monitor pollution, and disposing existing toxic industrial waste in several areas.

Russia has mirrored some of the conservation projects in other Arctic states. Since the early 1990s, Russia has increased its Arctic protected areas by 50 percent. Russia now has nine strict nature reserves (*Zapovedniks*), one national park, and two federal wildlife reserves in its Arctic (Lysenko et al. 2000, 23). Russia currently has plans to create five new protected areas throughout its Arctic territory. Russia's protected areas have been critiqued for their lack of comprehensive inclusion of key Arctic ecosystems, such as taiga forests and its habitat degradation in a CPAN gap assessment (Lysenko et al. 2000, 35). The country's environmental review process has also been criticized as insufficient, fragmented and motivated by political concerns (WWF Russia 2007, 2). Russia's environmental regulations have not been sufficiently

considered as Russia rapidly develops its Arctic resources. The environment faces severe threats from Russian energy interests.

Kara Sea

Russia's energy sector is experiencing rapid developments relative to other Arctic states. In January, the energy companies BP and the state-owned Rosneft announced a $ 7.8 billion partnership and share swap agreement to pursue the exploration of three license blocks spanning 50,000 miles in the Kara Sea. The reserves are roughly equivalent to those in the UK North Sea (WWF 2011). The announcement of the new partnership attracted considerable attention as the lease in the Kara Sea overlaps with the Russkaya Arktika National Park on Novaya Zemlya and the Yamalskiy Wildlife Refuge on the Yamal Peninsula (Knizhnikov 2011). Environmental organizations, most notably the World Wildlife Fund (WWF), have called the joint venture premature and have urged Russia to limit any new oil exploration drilling in the Russian Arctic until cleaner technology is available and all environmental standards are upheld (Reuters 2011a). This particular case demonstrates the variety of tension surrounding resource development in the Arctic. Locating and extracting the resources will be extremely difficult given the technical limitations and environmental hazards. Operations may only be feasible 100 days a year and cost nearly $50 USD a barrel. Consequently, BP has stated production will not begin till 2020 (Werdigier 2011). Though the WWF may call the deal "premature" and commercial production may not be in the immediate future, the energy industry upholds that it is laying the foundation for sustainable development.

In Russia, as elsewhere, a significant portion of the criticism directed towards the exploration plans was rooted in suspicion and wariness resulting from BP's Deepwater Horizon spill (Reuters 2011a). However, unlike the U.S. and Canada, the Russian government has not expressed similar hesitations to projects as evident in the approval of the BP-Rosneft exploration plans. Hence, Russia's development plans may be considered relatively impulsive in contrast to those of other Arctic states.

Inadequacies in Oil Spill Response Plans

There is recognition that development in the Arctic creates unique challenges but the probability and magnitude of environmental degradation has been minimized and even ignored by various stakeholders and policymakers. The fundamental flaws and knowledge gaps in oil spill response plans provide a striking illustration of the inadequate policies regulating the Arctic.

The Deepwater Horizon spill has demonstrated the challenge to control a well blowout even in a well-developed area of resource extraction. Even with the effort of 6,500 vessels, more than 75 percent of the oil was left to dissolve naturally or remain in the environment as residual oil, which has severe environmental consequences (National Commission on BP 2011, 10). Despite the supposedly best safety measures and advanced technologies, the incident proved existing oil spill regulations and response technologies are not adequate.

It is crucial to examine the differences between the Deepwater Horizon spill and a possible Arctic incident. The Gulf spill occurred in the temperate waters along a heavily developed coastline. In comparison, the Arctic regions, particularly in Alaska and Canada, are relatively underdeveloped (National Commission on BP 2010, 19). The near nonexistence of rails, roads, and ports will hinder the movement of personnel and equipment to the spill area. The few existing ports would only be ice-clear and accessible a few months a year, though this is expected to gradually change over time (Keener and Allen 2009, 6). The infrastructural limitations of the Arctic region are serious but often unmentioned aspects of environmental risk.

Another miscalculation in current oil spill response plans is the strategy to burn oil in open areas of ice. Firstly, this plan assumes there will be open areas of ice, which is an unfounded assumption given the rapid movement of ice floes. Additionally, these open areas are a primary production sight in the ocean so the burning of the oil will have far-reaching consequences down the food chain (Stirling 1997, 13). Current assumptions are seriously flawed and do not reflect the accurate state of the region.

The limited situational scenarios used to develop and test a plan are also insufficient. Most of the published studies on oil spills in the Arctic focus on the individual use of specific techniques rather than examining how techniques perform when used in conjunction; tests are not generally conducted in the field (Pew 2010b, 86). Furthermore, most estimates on the feasibility limits of response techniques are based on theoretical estimates only and do not incorporate the interactions between various factors such as ice coverage, visibility and wind strength (Pew 2010b, 90). More research is necessary to understand the Arctic environment and to adequately prepare for industrial accidents.

Perhaps the most fundamental flaw in developing an oil project plan is the unrealistic worst-case blowout scenarios that are used to formulate the foundation of a response plan. Worst-case discharge amounts, the maximum spill size that could occur from exploration or

production, should be calculated on the basis of the highest possible flow rates as well as all available data instead of relying on a predetermined amount, as is the current practice. Worst-case scenarios should also accurately reflect the time required to stop a spill. The Deepwater Horizon had contingency plans of a15-30 day blowout duration while it actually lasted three months (Pew 2010b, 109-111). It must be remembered that an Arctic incident will occur in an extremely more challenging and limiting environment than the devastating Deepwater Horizon incident.

Crucially, the National Commission on the BP Deepwater Horizon Oil Spill found serious and fundamental flaws in the U.S. regulatory system that facilitated the dire mistakes that led to the blowout (National Commission on BP 2011). The revelation of institutional failings calls into question any assurances on the safety of exploitation from the corporations or the government. The ongoing reforms to the regulatory agencies must be continued before development expands. Furthermore, all Arctic states assert that oil spills and other accidents could be well-managed despite the clear evidence of fundamental flaws and knowledge weaknesses which points to an imbalance in Arctic states' commitment to the environment and resource development.

Institutional Weaknesses

Existing frameworks established by state policy or international institutions are often too specific in scope or too broad in mandate to address the specific pressures from climate change and economic activities in the Arctic (Koivurova and Molenarr 2010, 5). The most significant regulatory gaps present in the international legal regime for the conservation and management of marine biodiversity include the absence of modern regulatory tools such as environmental impact assessments (EIA), Strategic Environmental Assessments (SEA), and integrated cross-sectoral protected areas along with the lack of a default regulatory mechanism for existing and emerging activities in the absence of regional regimes (Koivurova and Molenarr 2010, 13). Adequate solutions need to find a sustainable balance between development and conservation in the Arctic. To do this it is necessary to look beyond current methods of unilateral policies and nonbinding international declarations.

Current institutions create significant gaps in regulation and governance in the offshore hydrocarbon sector. The International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) does not address the unique conditions of the Arctic environment; although,

the IMO is currently developing a Polar Code to manage Arctic shipping. OSPAR Commission's regulations on managing fish stocks and environmental pollutants only apply to parts of the Arctic marine area. Perhaps, most importantly for resource activities, the Arctic Council's progressive and encompassing offshore oil and gas guidelines are non-binding. There is not even an evaluation as to whether or not they are being followed (Koivurova and Molenarr 2010, 15-17).

The combination of weak institutional regulations and individual state actions in the Arctic contributes to environmental degradation and to the mismanagement of natural resources as evidenced in the outlined projects in this chapter. Therefore, Arctic states' promotion of both environmental protection and economic growth will not be achieved in such a loose and incoherent regulatory regime. Once again, the discrepancy between states' public positions and concrete actions points to a fundamental contradiction in objectives.

Alternative Governance Models - Ecosystem Based Management

Several emerging models to manage conservation and resource management should be further considered in the Arctic. The most prominent of these is the "ecosystem based management" model (EBM). EBM may be defined as 'integrated, cross-sectoral ecosystem management.' Common elements of EBM include a holistic approach which takes due account of spatial dimensions, processes and relationships between ecosystems (Koivurova and Molenarr 2010, 42). The Arctic Council declaration in April 2009 endorses an EBM approach as the basis of joint SDWG and PAME project *Best Practices in Ecosystems-Based Oceans Management* (Koivurova and Molenarr 2010, 42). A key aspect of this approach is that EBM can be implemented in the absence of an overarching regulatory scheme, on a regional, case-specific basis. This promotes a bottom-to-top approach to managing issues pertaining to the environment and development in the region.

There are already several examples of EBM related institutions in the Arctic. OSPAR is the mechanism by which fifteen governments of the western coasts and catchments of Europe, along with the European Community, cooperate to protect the marine environment of the Northeast Atlantic. OSPAR addresses biodiversity, hazardous substances, and eutrophication among other areas (OSPAR Commission 2011). OSPAR has had success in implementing the precautionary principal and "polluter pays" principal for human activities in the region. EBM

regimes such as OSPAR are able to achieve concrete progress towards environmental stewardship.

Another prominent EBM system in the Arctic is the Barents Euro Arctic Council (BEAC), which includes participation from Denmark, Finland, Iceland, Norway, Russia, Sweden, the European Commission and three indigenous peoples, the Sámi, the Nenets and the Vepsian (BEAC 2011). The primary goal of this organization is to promote sustainable economic and social development. BEAC has achieved success in addressing matters such as nature protection, hazardous wastes, and transboundary water issues (Barents Cooperation 2010, 3). BEAC's consideration of environmental issues in addition to economic and social matters realistically reflects the interconnectedness of these issues for Arctic inhabitants.

The regional nature of EBM systems allows for the application of specific and appropriate measures that address a range of environment and economic issues in a specific region, distinguished by shared ecosystems and collective interests. Wider geopolitical concerns or contentious issues should not hinder regional EBM models, such as BEAC. Furthermore, EBM systems lay a foundation of cooperation, which may influence policies at a higher, international level. EBM models exist and function on a localized level that may address emerging concerns in a timely and more effective manner than traditional political structures that exist higher up. However, international institutions must support EBM models and states if they are too succeed.

Regional based ecosystem management systems are an effective way for Arctic states and people to responsibly manage the Arctic environment; however, a mandatory set of guidelines regulating environmental protection standards and natural resource development practices must be established to provide an underlying base for EBM and address the issues outside the range of regional approaches. Environmental considerations, in particular those related to economic activities, require a common and sufficient level of protection and conservation that is able to quickly address the rapid developments in the region. Mandatory regulations would provide the necessary level of environmental protection while also providing a secure and predictable framework for economic activities. Companies operate around the Arctic and projects require enormous investments so a foreseeable and uniform regulatory system would be an asset. Furthermore, the Arctic is undergoing extreme effects from climate change that require adaptation. Climate change is also leading to increased economic activities that pose tremendous

risks to humans and the environment. All industrial developments will impact the environment and industrial accidents could drastically degrade the environment. As it has been demonstrated, each country is proceeding with industrial developments in a different manner, and best practices have not been followed in the vast majority of situations. Mandatory regulations are needed to provide a common security baseline because environmental damage will easily transcend national borders.

The Arctic Council is the most appropriate forum to establish binding environmental and natural resources standards for several reasons. The need for environmental protection was the impetus for the creation of the Council; consequently, the Council has the best record of environmental policy shaping. Although the Arctic Council has only existed as a policy-shaping forum in the past, it will approve its first legally binding declaration in May 2011 at the biannual meeting in Nuuk (Kessler 2011). Using this declaration as precedent, it is not difficult to envision further binding declarations in the future, with respect to environmental protection and sustainable development. The Arctic Council Working Groups have produced many assessments that may be used as a basis for legislation. A possible Arctic Council declaration could expound on the 2009 Oil and Gas Guidelines to establish an environmental code, perhaps to be titled "Arctic Hydrocarbon Management Code" that is applicable for all oil and gas exploration and production in the Arctic zone. For the Arctic Council to be strengthened, the Arctic Eight must recognize joint stewardship in the Arctic and consider the environment as a shared resource. In order to achieve this, states will need to relinquish some control over their natural resources. However, in considering the long-term benefits from an intact Arctic environment, the costs of sacrificing certain economic resources are minor.

Strengthening of the Arctic Council may take some time and will not happen immediately. As documented in this Task Force's research mission to Ottawa, there is some disagreement among Arctic states as to the future role of the Arctic Council. From interviews with various representatives, it was concluded that there exits varying amounts of support for restructuring the Arctic Council among the Arctic Eight. Many state representatives expressed content with its current role and asserted that the institutions for Arctic governance already exist in the form of the IMO and UNCLOS. However, there was a general acknowledgement of the possibility of environmental regulations. As this chapter has illustrated, current institutions are not specific enough to address the unique pressures facing the Arctic environment from climate

change and increasing resource development. Measures taken by the Arctic Council may function within its existing mandate and will be able to more quickly address emerging issues.

Conclusion

Current Arctic state policies were largely constructed to assert state sovereignty over the newly available natural resources in the Arctic. These policies also stress the importance of protecting the Arctic environment, particularly regarding contamination and the impacts of climate change. These statements purported that these policy goals were mutually inclusive and would develop in stride. However, by observing conservation and development projects in the region, it is clear that there exist fundamental areas of discord between objectives. As the effects of climate change become more apparent in the Arctic and put increased stress on the fragile environment, states must decide if the exploitation of further fossil fuel resources is appropriate considering that their use will worsen climate change. If states continue to develop Arctic natural resources, appropriate actions must be undertaken to ensure a sustainable balance between conservation of the natural environment and socio-economic growth in the region. To reach these goals, this Task Force proposes the following recommendations:

VI. Recommendations

Recommendations for Arctic States and the Arctic Council

- Ecosystem based management models should be employed throughout the Arctic to address regional environmental, social, and economic issues. These models should be holistically implemented from the bottom up between the state, local governments, indigenous groups, and other stakeholders.
- In light of the impending signing of the Arctic Search and Rescue Treaty, the Arctic Council should be enabled to form binding regulations regarding the environment and resource development in the Arctic. One feasible step would be to create a mandatory "Arctic Hydrocarbon Management Code" based on the Arctic Council's 2009 Oil and Gas Guidelines.
- The Arctic Council and Arctic states must intensify and expand research programs such as the International Polar Year.
- Moratoriums on hydrocarbon exploitation should seriously be considered until adequate research has determined ecosystem responses and interactions as well as developed effective cleaning technologies.

- Arctic states should lead in addressing the causes of climate change due to the accelerated effects of climate change in the Arctic.

Conservation Specific Recommendations

Recommendations for all Arctic States

- Work cooperatively in establishing and managing protected areas. Establish cross-border, regional parks based on the natural environment instead of state borders.
- Incorporate indigenous peoples in the establishment and management of protected areas.
- Develop wildlife corridors between protected areas to foster the success of migrating species due to displacement from climate change and other economic developments; these may also transcend national borders.
- Establish regulations observing and limiting economic development near protected areas based on increased research on the effects of development.
- Increase development of marine protected areas in sensitive marine ecosystems. These may include fisheries management areas, no-shipping zones, or prohibited oil and gas exploration zones.

Recommendations for Russia

- Follow CPAN gap recommendations to include a cohesive range of protected ecosystems not limited to Arctic desert and tundra biomes.
- Consider effects of Kara Sea oil exploration and place an emphasis on preserving existing protected areas and peoples before pursuing BP-Rosneft venture.

Oil and Gas Development Recommendations

Recommendations for the Arctic States

- Mandate the incorporation of realistic worst-case scenarios in planning for adverse situations during all stages of the production process.
- Require hydrocarbons developers to maintain emergency response equipment, including well caps and vessels, near production sites.
- Increase knowledge of the impact of hydrocarbon pollution on Arctic ecosystems and of the effectiveness of oil spill response.
- Increase the development of effective cleanup methods and less environmentally degrading extraction methods.

Recommendations for the United States

- Station a Coast Guard icebreaker in the Beaufort and Chukchi Seas once active exploration and production begins.

Recommendations for Canada and Russia

- Establish a mandatory and uniform environmental review process for natural resource development projects based on best practices for environmental impact reviews and strategic environment assessments.

Chapter Two

Shipping and Commercial Maritime Activity in the Arctic

Ahnalee Herke

Abstract

Recent climate change is causing the Arctic to transform; what once was a frozen, remote area of the world is now an expanding maritime zone. As the Arctic sea ice continues to melt and shipping lanes become more accessible to maritime traffic, shipping and commercial maritime activity will increase in the Arctic. To ensure safe and organized development of the Arctic, the appropriate governance structures, such as the International Maritime Organization, the Arctic Council, and governments of the littoral Arctic states, will need to attend to unresolved logistical problems in order to avoid shipping accidents and prevent potential environmental catastrophes. Increased commercial activity in the region could improve the lives of the indigenous peoples of the Arctic. As transportation in the Arctic becomes less expensive, goods and services will become more affordable, natural resources can be transported more easily, and trade routes will be substantially shorter.

I. Background

The maritime Arctic is gaining international attention as the climate continues to warm and marine operations expand. Increasing temperatures have led to less sea ice, which allow for more navigable routes for ships in the periphery of the Arctic. The periphery of the Arctic refers to shipping lanes along the Eurasian and North American coasts as well as routes in the North Atlantic. Trans-Arctic passage, meaning passage through the center of the Arctic, will not likely be feasible in the next few decades. Despite climate change, warmer temperatures, and less sea ice, "much of the Arctic Ocean today remains fully or partially, ice-covered for most of the year" (Brigham 2010, 54). Figure 1 shows the amount of sea ice in the Arctic in 2002 as well as a projection of the estimated amount of sea ice between the years 2070-2090. Figure 1 also illustrates the three main routes around the periphery of the Arctic: the Northern Sea Route (NSR), the Arctic Bridge route, and the Northwest Passage.

The Arctic will not likely replace the Suez or Panama Canals in terms of the volume of maritime traffic in the near future because most trans-polar routes will be too hazardous to navigate for years to come (Boucher 2011, 1). Shipping in the Arctic is, and will likely continue, to be hazardous because of the unpredictable ice floes, the lack of oceanographic and

meteorological data, the seasonally persistent darkness, storms in the region, and treacherous navigating conditions.

While trans-Arctic routes may not be feasible shipping lanes in the near future, routes around the periphery of the Arctic will be. The Northern Sea Route (NSR), which is north of Russia; the Arctic Bridge, from Murmansk, Russia across the northern Atlantic to Churchill, Manitoba; and the Northwest Passage through the Canadian archipelago are all potential routes for maritime activity. The Northwest Passage is not presently a commercially viable route and so the two most important routes for shipping and the transport of natural resources are the Northern Sea Route, which is accessible year round, and the Arctic Bridge route, which is only open for four months of the year (Foust 2008). In addition to transit shipping and transporting natural resources, maritime activity in the Arctic also includes community resupply, mainly in the eastern Canadian Arctic and in eastern Russia. The types of shipping expected to increase in the Arctic "can be split into many categories: commercial vessels, including tankers and fishing vessels; vessels for recreation and tourism; scientific research vessels; icebreakers for resupply; and vessels engaged in offshore exploration" (Jensen 2007, 12). The types and frequency of shipping in the Arctic, which are dependent upon a variety of factors, will vary by region. Therefore, it would be fallacious to expect or anticipate uniform development and activity in the Arctic. Intelligent estimates of maritime activity in the Arctic anticipate the most development to occur in more frequently used areas such as the Northern Sea Route.

Northern Sea Route

The possibility of shipping in the periphery of the Arctic, particularly along the Northern Sea Route (NSR), remains an alluring prospect for many shipping companies. Of all routes in the Arctic, the Northern Sea Route, which has been open to non-Russian vessels since 1991, is the most commercially viable (AMSA 2009, 44). The NSR stretches approximately 1,512 nautical miles along the Russian Arctic coast from Novaya Zemlya to the Bering Strait (Jensen 2007, 12). In comparison, the route from Rotterdam to Tokyo via the Suez Canal is 11,192 nautical miles; "the NSR is a substantially shorter passage (35-60 percent savings in distance) for shipping between northern European ports and those of the Far East and Alaska than routes through the Suez or Panama Canals" (AMSA 2009, 44). The few shipping companies that use the Northern Sea Route save time and money on transit. Russian ships already frequent the Northern Sea Route as do some commercial European vessels. "During August and September 2009, two

German merchant ships, the heavy-lift vessels *Beluga Fraternity* and *Beluga Foresight*, sailed from Ulsan, Korea, to the Atlantic Ocean along the northern coast of Eurasia. The voyages captured global media attention and represent a significant new maritime linkage of Asian suppliers to the Russian Arctic" (Brigham 2010, 56). These German merchant ships are only two of many vessels which have made the voyage along the Northern Sea Route. The ships garnered significant attention because they prove that Arctic routes are more than a historical concept, they are a present day reality. The voyage exemplified the potential that Arctic routes have for global commercial shipping as well as for sparking more interest in transit through the Arctic.

According to the Arctic Marine Shipping Assessment 2009 Report (hereafter AMSA) year round navigation in the Northern Sea Route, between Dudinka and Murmansk, has been accessible since 1978-1979 (AMSA 2009, 44). The 2009 AMSA report estimated that 6,000 individual vessels sailed in the Arctic during the 2009 AMSA year. Of those vessels 1,600 were fishing vessels and nearly half were operating in the Bering Strait (AMSA 2009, 4).

The AMSA report gives future projections, which are provided in the following scenarios, of where and to what extent shipping and commercial maritime activity are expected to increase. First, the most traffic and marine activity will revolve around resource development and regional other than the amount of sea ice, as the critical lack of major ports, except in Norway trade in the Arctic. The AMSA report identifies the biggest limitation to shipping in the Arctic, and northwest Russia. Russia and Norway have adequate infrastructure because the two countries have been engaged in natural resource development for the last few decades. The Norwegian company Statoil began offshore drilling in the North Sea in the 1960s when oil was discovered there. Like its Scandinavian neighbor, the Russian economy is also dependent on the development of oil and natural gas resources, particularly those extracted from Western Siberia and Komi, which are shipped along the critically important Northern Sea Route (Jensen 2007, 12). Since 2008, the Northern Sea Route has been virtually ice free (Ho 2010, 713). According to some of the earliest estimates, the Arctic could be essentially ice free for a short period of time in the summer by as early as 2030. This timeline is not very surprising considering that in the past three decades, sea ice has declined 34 percent and has become visibly thinner (Brigham 2010, 54). As the Arctic sea ice continues to melt, more activity can be expected in the Arctic. To illustrate, consider the number of vessels which have sailed through the Northwest Passage; since

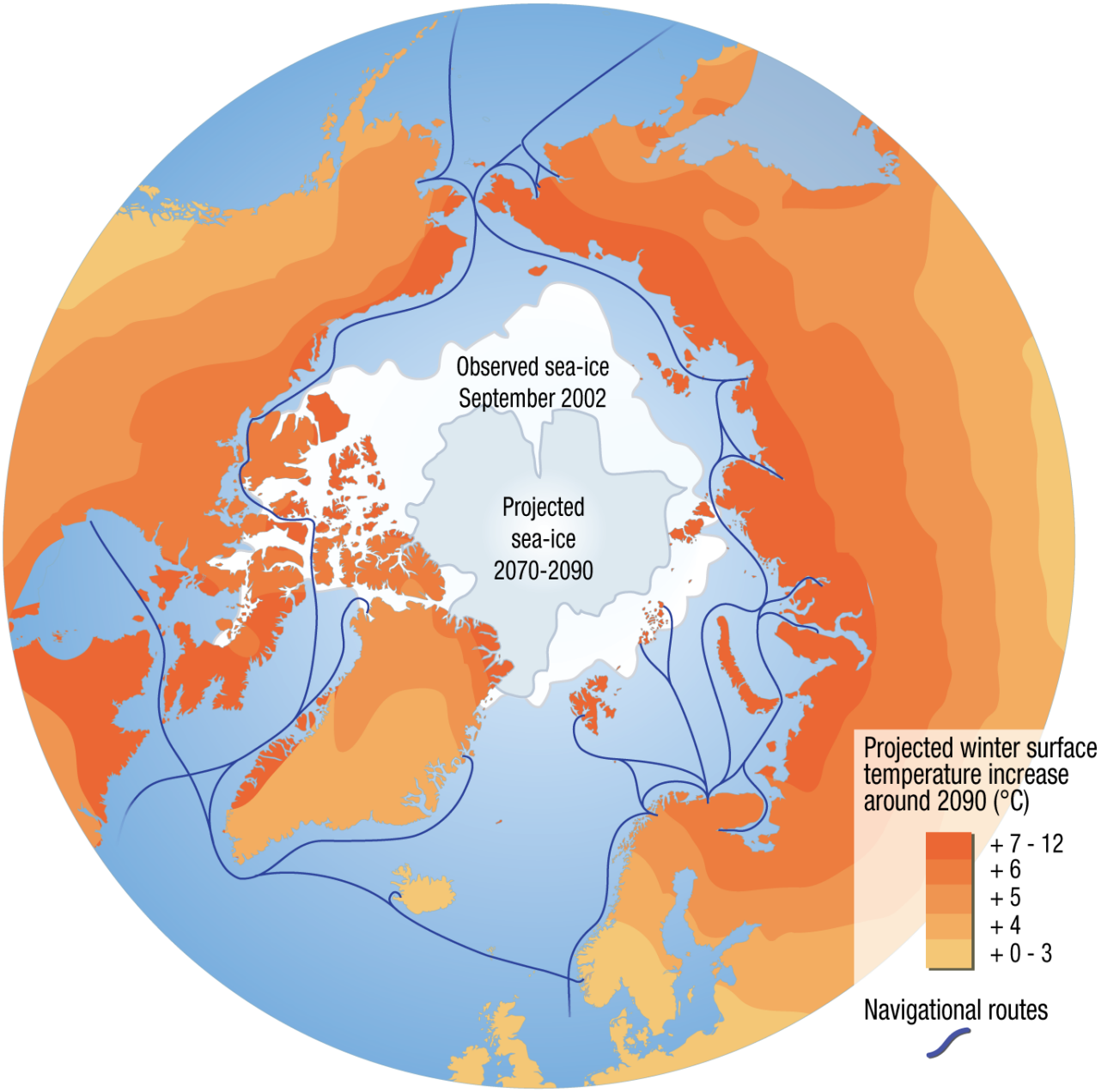


Figure 1. Recent and projected estimates in Arctic sea ice and the three main Arctic routes: the Northern Sea Route which includes multiple routes and shipping lanes along northern Russia, the Arctic Bridge route from Murmansk, Russia across the North Atlantic to Churchill, Manitoba (which on this map is depicted as two disjointed routes) and the Northwest Passage through the Canadian archipelago.
Map by Hugo Ahlenius, UNEP/GRID-Arendal

1906 there have been 135 vessels which have sailed through the Northwest Passage and sixty of them have made transit since 2000 (Brigham 2010, 54). These numbers exemplify the recent increase in maritime activity in the Arctic and indicate an increasingly urgent need to establish appropriate rules and regulations in the Arctic to govern maritime activity.

International Rules and Regulations

Shipping is an international economic maritime activity subject to international rules and regulations. The United Nations Convention on the Law of the Sea (UNCLOS) "provides a fundamental framework for the governance of Arctic marine navigation and allows coastal states the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered waters" (UN 1982). The International Maritime Organization (IMO) is "the competent UN agency, which is responsible for issues related to the global maritime industry" (AMSA 2009, 4). One of the most significant policies of the IMO is the International Code of Safety for Ships in Polar Waters (the Polar Code) which set out rules for construction, navigation, and equipment, with the aim "to provide that all ship operations in polar waters meet internationally acceptable standards" (Jensen 2007, 19). The Polar Code was created in 1997 when a sub-committee of the IMO submitted a report by a group of technical experts who developed specialized rules for ships operating in polar waters. "They sought to harmonize technical rules for polar shipping and to create recommendatory provisions" (Jensen 2007, 19). Ships and other vessels navigating in Arctic waters are expected to comply with the Polar Code. While the Polar Code is very inclusive concerning technical standards for ships, there are no standards for ice navigators, nor are there specific standards concerning the environment and ships in the Arctic (AMSA 2009, 4). In addition to the Polar Code other international standards include: the Load Line Regulations concerning overloaded vessels which aim to control the quantity of cargo on board; the Collision Regulations (COLREG) relate to marine collisions and groundings; and the 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) is an important instrument related to navigational safety (Jensen 2007, 16). Another significant set of guidelines is the IMO's *Guidelines for Ships Operating in Arctic Ice-Covered Waters* which was drafted in response to the Exxon Valdez oil spill off the coast of Alaska in 1989. It had the goal of harmonizing rudimentary regulations for shipping in the Arctic on an international level

(Jensen 2007, 16). Because the International Maritime Organization is the authority concerning maritime affairs, any maritime rules and regulations concerning shipping, whether in the Arctic or elsewhere, will be drafted and implemented by this organization.

The IMO is the most significant governance structure in the Arctic concerning shipping and maritime activity because it is the body that establishes the guidelines and standards with which ships are expected to comply. In addition to the IMO, the Arctic Council and the Inuit Circumpolar Council, among other international non-government bodies, are also stakeholders in the Arctic with a vested interest and some influence concerning what happens in the region.

The Arctic Council has nominal authority in regulating economic and maritime activity in the Arctic. As its first binding resolution, the council intends to sign into law a coordinated emergency response agreement in May 2011. The agreement will divide the Arctic into specific search and rescue areas and each Arctic state will be liable for a specific territory (Icelandic Foreign Ministry 2010). The littoral Arctic states (Norway, Russia, Canada, Denmark, Iceland, and the United States) have jurisdiction over 200 nautical miles of sea off their coasts. In these national waters ships and other international vessels are subject to the country's national maritime laws. Of the Arctic states, Canada has the most highly developed and transparent national laws regarding their coastal waters (Boucher 2011, 1).

Canada permits navigation through its Arctic waters but ships must respect Canadian regulations and controls relating to safety, security, environment and Inuit issues. In Canadian national waters, ships can be boarded, inspected, and turned away. This is in accordance with UNCLOS Article 234, which gives the right to coastal states to regulate commerce and to protect and preserve the fragile environment. Canada is the first country to pass legislation to protect Arctic waters (Boucher 2011, 1). Current Russian maritime laws include: Requirements for the Design, Equipment and Supply of Vessels Navigating the Northern Sea Route and the Law on Russia's Internal Sea Waters, Territorial Sea and Contiguous Zone of 31 July 1998 (Jensen 2007, 16). A new law for the Northern Sea Route has recently been drafted and might be developed into a federal law in the near future (Jensen 2007, 16). While Canada and Russia have some national maritime laws currently in place as shipping and maritime activity increase in the region, the number of rules and regulations can reasonably be expected to increase as well.

National Maritime Laws

In Canadian coastal waters, Transport Canada replaced a voluntary ship reporting system known as NORDREG with a mandatory system effective July 1, 2010. The mandatory system requires reports on the safety information about the vessel and its intended route. With this information, the Canadian coast guard can help direct ships along a safe route and if the vessel gets in trouble or requires assistance, the Canadian coast guard can give aid to any vessels which require it. NORDREG helps ensure the best services and information available on ice conditions, advice on routes, aid to navigation, and ice breaker support. In case of an accident, safety and environmental concerns are to be addressed as early as possible. The previous voluntary compliance with this system was 97 percent (Boucher 2011, 1). This was a unilateral action taken by the Canadian government which garnered protests from powerful international shipping companies. The Baltic and International Maritime Council (BIMCO) rebuked Ottawa authorities for neglecting to refer the proposals for adoption of ship reporting systems to the IMO. BIMCO argues that the new law oversteps its bounds because the Canadian government says they will enforce the new law up to 200 nautical miles and BIMCO contends that they only have legal jurisdiction over 12 nautical miles (Ryan 2010b, 12). The Canadian government did submit their laws to the IMO but they did not allow for debate before they were ratified. The law says that ships exceeding 300 tons must report to the Canadian coast guard prior to entering the NORDREG zone as a safety precaution. Not reporting could result in a $100,000 fine or a year in prison or both (Ryan 2010b, 12). Article 234 of UNCLOS gives the littoral Arctic states jurisdiction over their coastal waters, but there is more at stake than regulating safe passage through Arctic waters. The majority of vessel traffic along the NSR is from Russian shipping companies such as Far Eastern Shipping Company (FESCO), the Northern Shipping Company, the Murmansk Shipping Company, and the Novorissysk Shipping Company which engage in local activities such as the transport of resources, community resupply, and bilateral trade.

II. Need For Action

Shipping and commercial maritime activity is important for the well-being of indigenous communities in the Arctic, the transportation of natural resources, and the economic development of the Arctic. When the climate permits more vessels to navigate through the periphery of the Arctic, ships will need the infrastructure to resupply, make port, deliver goods and services, respond to spills, and provide aid in case there is a shipping accident. In addition to

infrastructure, communications and monitoring systems to assist ships navigating through ice floes and avoiding shallow parts of the Arctic will need to be established. Also more meteorological and oceanographic data must be collected as such information will help to prevent shipping accidents and environmental disasters associated with shipping. About ten percent of the Canadian archipelago's sea bed is mapped and if ships make passage through unmapped territory the odds of an accident increase significantly (Boucher 2011). It is difficult to avoid accidentally running aground if the ship's captain does not know where the trenches or sea mounts in the shipping lanes are.

The Inuit and other peoples inhabiting the circumpolar north should be involved in the construction of infrastructure built to accommodate shipping because it would be socially and economically beneficial for the development of their communities. Developing the Arctic would decrease shipping and transportation costs, making goods and services for the indigenous people less expensive. Developing infrastructure and monitoring and communications systems in the Arctic would also save commercial shipping companies significant amounts of money because they could bypass the longer routes offered by the Suez and Panama Canals. Infrastructure would also be used to accommodate natural resource extraction in the Arctic (refer to Bryan and Grossman in chapter one). The best course of action is to develop quality infrastructure that will prevent any environmental catastrophes. Safety should be the main priority regarding any economic and development activity in the Arctic. In the case that there would be an oil spill in the Arctic, it would take the Arctic environment a significantly longer time to recover than the Gulf of Mexico and littoral Louisiana did after the British Petroleum oil spill in the spring of 2010. "While reduction of sea ice may be an advantage for the marketplaces of Western Europe, Asia and North America, policies need to be designed to limit the potential impacts on the Arctic environment. With less sea ice, the navigable season will be extended, companies will seek new routes and more vessels may be expected to navigate" thereby increasing the likelihood of causing environmental damage to the environment (Jensen 2007, 13). The following analyses will identity the challenges of shipping in the Arctic and provide a current assessment of maritime activity in the region. Additionally, it will evaluate how the rate of sustainable infrastructure development is working in concert with coordinated shipping regulations to provide a framework necessary for governing maritime shipping in the Arctic.

III. Evaluation & Analysis

The expected influx in shipping and commercial maritime activity will likely be along the Northern Sea Route, which in fact has several routes across the northern Russian border.

> Several marine route distances are notable: from Murmansk to the Bering Strait is 3,074 nautical miles; and the Northern Sea Route from Kara Gate to the Bering Strait is 2,551 nautical miles. The Dudinka to Murmansk marine route that is maintained year round is 1,343 nautical miles, while it is approximately 500 nautical miles between the offshore region of the Pechora Sea (site of new oil terminals) in the southeast corner of the Barents Sea and Murmansk. Compared with the Canadian Arctic, the Russian maritime Arctic has many more viable ports located along the length of the NSR. (AMSA 2009, 23)

Russia has sufficient infrastructure to accommodate shipping because it has been operating along the Northern Sea Route for the last 75 years. Russia has had ample time to develop Arctic maritime technology; in fact, two year-round Arctic marine transportation systems were fully operational during 2009 in the Barents and Kara seas (Brigham 2010, 55).

The Northern Sea Route stretching from the Kara Gate in the west to the Bering Strait in the east "was highly developed by the Soviet Union as an important national waterway, peaking in 1987 with 331 vessels on 1,306 voyages. The western end of the NSR (Kara Sea) has been maintained for year-round navigation since 1978-79 with ships sailing between Murmansk and Dudinka on a regular basis" (AMSA 2009, 44). Along the NSR, **"**the main northern Russian terminals engaged in commercial shipping are Archangelsk, Murmansk, Vitino and Varandey. In the foreseeable future, also the ports of Dikson and Prirazlomnoye will contribute to increased transport" (Jensen 2007, 12). Additional primary NSR ports from west to east include: Amderma, Dikson, Yamburg (Ob' Gulf), Dudinka (north Yenisei River), Igarka (south Yenisei River), Khatanga (Khatanga River on the Laptev Sea), Tiksi (Tiksi Gulf near the Lena River), Zeleny Mys (Kolyma River) and Pevek (AMSA 2009, 23). The busiest ports along the Northern Sea Route are those which are in close proximity to natural resource sites or are strategically located along waterways, mainly rivers, which are used for community resupply in the Russian Arctic.

Maritime transport across the route has been extensive; the peak was 6.6 million tons in 1987 mainly due to the extraction and transportation of regional exports of natural resources and to a lesser extent transporting cargo to communities along the Siberian coast. The most current estimate on the volume of shipping, in 2007, was 2.13 million tons of goods and transportation of hydrocarbons within the Barents Sea and the White Sea was 8.5 million tons in 2006 (Ho

2010, 713). Before 2008, only Russian ships used the Northern Sea Route but in the last few years increasing numbers of merchant ships, mainly European transport vessels, have used the Northern Sea Route also (Ho 2010, 713; Brigham 2010, 54). The 2007 projection for the year 2010 was that the shipment of gas and oil could increase up to 5.5 million tons and by 2020 these shipments could be as big as 12.8 million tons (Ho 2010, 713). Some experts, such as Dr. Lawson Brigham, speculate that larger container ships and tanker companies, which understand the complexities of Arctic navigation, will not use the Arctic routes more than is necessary because unpredictable ice floes could be very costly and too risky to navigate (Brigham 2010, 54). To aide in navigating the ice floes and breaking the ice, ships making passage along the Northern Sea Route require convoy escort by Russian nuclear powered ice-breakers, but even with the aid of ice-breakers the shipping lanes in the Arctic can be too risky for frequent navigation.

Natural Resource Extraction

A large sector of shipping and maritime activity in the Arctic is associated with natural resource extraction, primarily petroleum, natural gas, and minerals. To date, most natural resource extraction has been conducted onshore in the Russian, Canadian, and U.S. Arctic. The largest sites for offshore natural resource extraction are oil drilling sites in the Kara Sea, Barents Sea, and off the coast of Norway in the Norwegian Sea. A significant site in this area of the Arctic is Shtokman Field and Bryan and Grossman provide further discussion in chapter one. Russia's port of Murmansk, which is ice-free year round, is a leading transfer point of natural resources extracted from the Arctic sea bed. Murmansk is also a port which processes crude oil shipments from Arkangelsk, Vitino, Indiga, Varandey, Prirazlomnoye, Dikson, and Obskaya Guba, nickel, copper, and platinoids from Dudinka (from the Norilsk nickel mine) and timber from Arkangelsk and Igarka (Monko 2007, 16). Even though oil is the most popular of natural resources in the Arctic, minerals are also very lucrative and commercially viable commodities.

The export of metals has added to the volumes of sea transportation on the NSR and over the next few years, forecasts indicate that future tanker trade in Northwestern Russia will increase substantially (Jensen 2007, 12). The Norilsk nickel mine in Russia is the world's largest nickel and palladium mine; the extracted resources are shipped via the Northern Sea Route (AMSA 2009, 76). Aside from nickel, prominent natural resources eligible for mass transport

across the Northern Sea Route are: lead, zinc, diamonds, gold, chromium, aluminum, and copper among others.

Since maritime traffic is expected to increase in terms of transit, tourism, and community resupply, the infrastructure in the Arctic will need to be improved. Current Arctic infrastructure is not developed enough to accommodate a significant increase in Arctic maritime activity. The AMSA report identifies the following as critical for Arctic development: lack of emergency response, lack of infrastructure, lack of hydrographic data, need for meteorological and oceanographic data, and serious limitations on communication are all areas that need improvement. The biggest threat concerning shipping in the Arctic is an oil spill and therefore the proper preventive measures and safety precautions should be taken to ensure that does not happen (AMSA 2009, 7). Given that an increase in shipping and commercial maritime activity in the Arctic is inevitable, clearly delineating the stakeholders, as well as what is at stake is critical for a sustainable and successful course of development in the Arctic.

While natural resource extraction will be the main staple of maritime activity in the western NSR, exporting these raw materials to the large consumer driven markets of North America is something proponents of the Arctic Bridge advocate. The Arctic Bridge is a relatively new and not yet fully developed route from Murmansk, Russia to Churchill, Manitoba, Canada, which could be a commercially viable route during the ice free summer months (Foust 2008). The Arctic Bridge route has been successfully tried before; in 2007 a Russian freighter delivered thousands of tons of fertilizer to Churchill, Man., before loading a shipment of Canadian wheat bound for Europe (Foust 2008). In light of a successful transport to Churchill, some believe it could be the next commercially important port in the Arctic.

> Churchill is Canada's only Arctic deep-water seaport; a crucial shipping point for goods between North America, Europe and Asia. As part of an Arctic Bridge, Churchill is ready for its role on the global stage. Connecting to Murmansk, an ice-free seaport in the extreme northwest of Russia, Churchill could become an end point for the shortest shipping route between North America and rapidly developing Eurasian markets, such as Russia, China and India. Shipping via the Churchill-to-Murmansk Arctic Bridge is nine days faster than the St. Lawrence Seaway passage-- a huge competitive advantage. (Berk 2007)

However, the port and transportation routes in the Canadian Arctic are not without their critics. “Concerning safe shipping conditions, there is a need for better communication between ship and

shore, among ships and especially between ship and ice-breaker, as well as improved navigational charts and training of the operators" (Jensen 2007, 12). Regional shipping companies involved in community resupply will also benefit from improved infrastructure.

Community Resupply

Community resupply in the Canadian Arctic is mainly conducted by ships using sealifts which have a lower cost and larger capacity to provide foodstuffs, fuel, building materials, vehicles and other goods to remote Inuit communities than aircrafts. "Many commercial shipping companies operate in the eastern Arctic; these include Nunavut Sealink and Supply Inc. (NSSI), Nunavut Eastern Arctic Shipping (NEAS), Northern Transportation Company Limited (NTCL), and the Woodward Group" (Public Safety Canada 2010). One of the most prominent regional shipping companies in the eastern Canadian Arctic is the Nunavut Eastern Arctic Shipping company (NEAS) which prides itself as being "a reliable economic link between Canada's Arctic and the world" (NEAS 2010). Headquartered in Iqaluit, these ice class vessels sail under the Canadian flag and offer "a local Inuit alternative to traditional shipping services" (NEAS 2010). The Inuit people own the vessels are shareholders in the company from which they receive dividends and are committed to the socio-economic development of their communities (Paquin 2010, 2). A sustainable rate of socio-economic development is vitally important for the Inuit in Nunavut because "recent years have witnessed considerable population growth in Arctic settlements. The native communities of northern Canada have among the fastest rates of population growth in the world, some sixteen percent per decade" (Jensen 2007, 12). Without the adequate infrastructure to receive goods and services the Inuit populations will develop into communities with high rates of poverty which could be difficult to overcome in the future.

To meet the needs of the Inuit and promote sustainable economic development, the President and Chief Executive Officer of the Nunavut Eastern Arctic Shipping company, Suzanne Paquin, addressed the opportunities and challenges presented by the lack of infrastructure in Nunavut in a presentation at the Northern Lights Conference in Montreal in 2010. To solve the infrastructure deficit, Paquin uses the phrase "big needs need realism", which illustrates the crucial concepts needed for a successful plan of action for developing infrastructure (Paquin 2010, 6). "Build it and they will come" strategies do not work for intermodal supply chains and infrastructure development; demand and priorities, not politics, must drive project planning (Paquin 2010, 6). *Figure 2* shows all of the Inuit communities to

which the Nunavut Eastern Arctic Shipping company delivers goods, services and supplies. In an effort to involve Inuit more in the economic development of the eastern Canadian Arctic, the Nunavut Eastern Arctic Shipping company offers training, employment and promotion opportunities for local Inuit who work for NEAS (Paquin 2010, 2). The main vessels operated by NEAS have a cargo capacity which allows transport of deadweight of 4860 metric tons and they transport nearly every type of consumer good demanded by the local Inuit (NEAS 2010).

In addition to the NEAS's investment in the Canadian Arctic, the Canadian governmental agency Indian and Northern Affairs Canada (INAC), is also investing in Inuit communities in Nunavut. In May 2010 INAC "announced over $2 million in funding for policing infrastructure improvements for the Inuit communities of the Kativik Regional Government. This funding will benefit the following 14 communities: Akulivik, Aupaluk, Inukjuak, Ivujuvik, Kangiqsualujiuaq, Kangiqsujuaq, Kangirsuk, Kuujuuaq, Kuujjuarapik, Puvirnituq, Quaqtaq, Salluit, Tasiujaq, and Umiujaq" (Public Safety Canada 2010). The funding from the Canadian government will also be invested in the construction of seven harbor facilities in the Canadian Arctic. These ports are intended to help the indigenous communities and improve economic development (Kozij 2010).

The Canadian government "wants to ensure that development happens in a sustainable way and that Northerners benefit directly from economic growth" (Public Safety Canada 2011). Outside the eastern Canadian Arctic, in the Mackenzie River Valley, communities along the river such as Fort Providence, Jean Marie River, Fort Simpson, Wrigley, Tulita, Norman Wells, Fort Good Hope, and Tsilgehtchic, also stand to benefit from government investments in infrastructure and the extended barge season along the Mackenzie River (Westlake 2011). The Northern Transport Company Limited (NTCL) "is the largest marine operator for the Mackenzie River Watershed (including the Mackenzie River and Great Slave Lake), the Arctic coast and islands, and Alaska. Utilizing a fleet of tugs and dual-purpose barges, NTCL's principal concerns are bulk petroleum products and dry cargo for communities, defence installations, and oil and gas exploration sites across the North." (Transport Canada 2010).

Canada's largest current challenge is to develop its infrastructure. In the words of Peter Woodward, Vice President of Woodward Group, "there are virtually no ports and no docks" in the Canadian archipelago, which makes delivering shipments of goods very difficult (Ryan 2010a, 8). Community resupply shipments sail up to sites of the community and drop containers off into the sea, there are no docks and no cranes to unload the containers off of the ships. The

lack of much needed infrastructure is a terrible problem which must be remedied; "sovereignty may be a big issue but supply chains and infrastructure remain very inadequate" in the Canadian Arctic (Ryan 2010a, 8).

Infrastructure in some parts of the Canadian Arctic is being developed and it is not surprising to note that the largest investments to develop infrastructure happen to be where natural resources have been discovered and extraction projects are being developed. One of the most current newsworthy developments is the Mary River Project. Iron ore was discovered on Baffin Island near the Mary River in the 1960s but only recently has the climate allowed for the possibility of extracting the mineral. "Construction of the full-scale operation is slated to commence in the summer of 2010 with anticipated first commercial shipments in 2014" (Stern 2011). The iron ore, which will be processed into steel, will be shipped over the Arctic Bridge to Rotterdam; the anticipated amount of iron ore at the Mary River site is so vast that shipments are expected to leave for Rotterdam every three days (Savoie and Arteau 2011).

Another port receiving investments and funding from the Canadian government to develop its natural resource extracting capabilities is New Brunswick. New Brunswick is gearing up to ship cargo to China via the Northwest Passage. The deep water port of Belledune is fortifying its infrastructure with CAD $80 million. The port was originally built in 1968 to "address shipping needs" of minerals mined in the Arctic, to date this includes ore, zinc, lead, copper, and silver ore. The largest amount of mineral mined in New Brunswick is iron ore (Williams 2010, 29). The port of Nova Scotia is not far behind in terms of development as it has received foreign investments from a New Jersey based firm Maher Terminals to develop a new deep water container terminal. Maher Terminals has staked $350 million in the port of Nova Scotia in order to "capitalize on the forecast strong increase in future trade" (Ryan 2010, 1).

Conclusion

Similar investments to those made in Nova Scotia and New Brunswick can be expected to become more prevalent in the near future. The future development of shipping in the Arctic Ocean is undoubtedly in its infancy. As the sea ice melts and the Arctic becomes increasingly accessible, more instrumental investors located far from the Arctic will have more incentive to invest in the infrastructure necessary to accommodate shipping. A correlation can be expected to exist between the investments made by mining companies in natural resource sites and the investments made by shipping companies and regional and national governments in nearby ports.

In addition to the practical economic development of the region, rules and regulations to govern such activity will inevitably follow. Economic and commercial developments in the Arctic have been and should logically continue to be, gradual, slow, and predictable. Thus far, the regional international organizations such as the Arctic Council and the Inuit Circumpolar Council have successfully coordinated their efforts and policies to allow for sustainable, peaceful development. As positive as the current state of affairs in the Arctic is, there is always room for improvement. The following are a list of recommendations for the Arctic Council, the International Maritime Organization and the littoral Arctic states. The recommendations are not extensive, since too much forcefully guided and restrictive development would pose more of an impediment to a natural rate of economic development than if left to its own devices. It is strongly advised that the following recommendations be considered as they will likely make the manner of economic development more peaceful, organized, and sustainable. The goal of these recommendations is to make shipping in the Arctic more safe, coordinated, and systematic.

Figure 2. The Inuit communities to which the Nunavut Eastern Arctic Shipping Co. delivers goods, services, and supplies.
Map by www.neas.ca

IV. Recommendations

The following recommendations are directed to any parties interested in economic development in the maritime Arctic. These recommendations are intended to be relatively specific, yet broad enough to be applicable in multiple contexts; most likely a coordinated effort will be required in order to successfully achieve any of the following.

- The littoral Arctic states and foreign investors interested in the economic development of the Arctic, such as international shipping companies and mining companies, should continue to invest in, and improve, Arctic marine infrastructure as needed.
- The littoral Arctic states, the International Maritime Organization and the Arctic Council should enhance environmental monitoring for shipping; this includes gathering meteorological and oceanographic data as well as data on sea ice formation. Additionally efforts to map the Arctic sea bed should continue because such information is critical in preventing shipping accidents.
- International shipping companies interested in transporting through the Arctic should continue to develop training programs for mariners in the Arctic- the NEAS offers an excellent example of training programs which international shipping companies could follow.
- The littoral Arctic States should develop waterways management regimes which would be capable of implementing vessel traffic control systems in the Arctic; such systems would help maintain more orderly maritime activity in the region.
- The International Maritime Organization should strengthen shipping standards and regulations for ice navigators in order to increase the safety of Arctic shipping vessels.
- The International Maritime Organization and the littoral Arctic states should improve communications systems for vessels in the Arctic.
- The International Maritime Organization, the Arctic Council, and the littoral Arctic States should develop safety and environmental standards in the Arctic.

Chapter Three

The Northwest Passage: Emerging Governance Efforts in a Changing Arctic

Zeina Hamed and Lauren Hruska

Abstract

This section addresses the debate over the legal status of the Northwest Passage. A climate change induced "Arctic melt" is occurring in which the perennial, or multi-year, ice in the Arctic region is diminishing at an unprecedented rate. This is leading to the emergence of new shipping passages, such as the Northwest Passage, previously thought to be too treacherous to traverse. Some scientists and scholars studying the Northwest Passage now contend that this archipelago will become fully navigable in the coming decade. The United States and Canada, in conjunction with the government of Nunavut, have come forward to assert their right to governance capabilities in the Passage. At the heart of the debate lie issues involving environmental, human, and national security. These Arctic powers need to develop a framework for governance over the Passage as its potential for navigability approaches. It is vital that these legal structures reflect and involve the Inuit perspective, as these peoples possess the most knowledge, capability, and inherent relationship to the future state of the Northwest Passage.

I. Background

A Conventional Overview of the Northwest Passage

The Northwest Passage, illustrated in *Figure 1* below, consists of several different routes through Canada's Arctic archipelago and offers a more expedient transit around North America to Asia. For hundreds of years, European explorers have sought out a route that embodies this capability. Historically, the Northwest Passage was first discovered in the fifteenth century and finally traversed in the twentieth century. It took three years for Norwegian explorer, Roald Amundsen, to complete the first successful transit of the Passage – lasting from 1903 to 1906. Thereafter in 1942, Canadian Captain Henry Larsen completed the voyage in only two years. His return in 1944 was "the first transit completed in just one season" (Elliot-Meisel 2009, 207). In the coming years, climate change and the resulting loss of sea-ice may contribute to an opening up of the Passage. Thus, "the potential of the Northwest Passage as a major shipping route [will grow] in direct correlation to global climate change effects," making this geographic area a highly debated point of interest amongst Arctic nations (Krafft 2009, 537).

Figure 1. A Geographical Account of the Northwest Passage. Line shows pathway of prospective strait, which passes directly through Canada's Nunavut Territory.
Map by Arthropolis Arctic Maps (http://www.athropolis.com/map9.html)

Climate Change

Melting ice from climate change is resulting in a complete restructuring of the Arctic ecosystem and therefore, its Arctic archipelagos. In recent years, multi-year ice has become scarcer in the Northwest Passage. "Each new summer breaks the previous year's record…in the last 23 years, 41 percent of this hard, multiyear ice has vanished" (Borgerson 2008, 2). Because of this decomposition of perennial ice (therefore contributing to an "Arctic melt"), it is projected that the region will become similar to the Baltic Sea and will therefore become fully navigable on a year round basis. In his book, *Who Owns the Arctic*, Michael Byers adds,

> As early as December 2007, Wieslaw Maslowski of the US Naval Postgraduate School was warning that a seasonally ice-free Arctic Ocean was possible by 2013. His prediction was obtained by adding the factor of heat absorbed by open ocean water into models based on data from 1979 – 2004. The dark water revealed by melting ice not only absorbs huge amounts of solar energy, it retains that energy, delaying the formation of the next winter's ice. (Byers 2009, 39)

That being said, in terms of the Northwest Passage, the effects of climate change will become extremely significant. Due to the alarming rate at which the sea-ice is melting in the Canadian

Arctic archipelago, there has been a great deal of international attention given to the Northwest Passage and its increasing potential in the coming years.

A Developing Interest

As mentioned before, "the Northwest Passage offers a shipping route between East Asia and the Atlantic Seaboard that is 7,000 km shorter than the current one through the Panama Canal, saving time, fuel and transit fees" (Byers 2009, 40). A number of international actors have come forward to express an interest in the Northwest Passage. The prospect of a shorter route from the Atlantic Ocean to Asia offers the possibility of saving several thousands of miles and several days of transit between major trading blocs (U.S. Library of Congress 2010, 13). This is of significant interest to the international community, in addition to Arctic nations. If the Northwest Passage becomes a viable shipping route, this will particularly impact China, Japan, and South Korea, who have already begun production on ice-strengthened ships and are actively engaged in research in the Arctic. Most critically, however, these appealing and newly emerging sea routes have uncovered an inconsistency in international opinion regarding who warrants the right to navigate through them. It is most relevant to address those claims of Canada (and the territory of Nunavut) and the United States. Canada asserts that the Northwest Passage constitutes internal waters, whereas the United States, and many other actors, including the European Union disagree and assert that the Northwest Passage is an international strait.

United States Claim

An international strait is defined under international law as a waterway that connects two high seas and also has a history of international transit. The main argument for which the United States and the European Union assert that the Northwest Passage is an international strait is due to the fact that the Northwest Passage connects two high seas (U.S. Library of Congress 2010, 11). The 2009 Presidential Arctic Policy Directive clearly states,

> Freedom of the seas is a top national priority. The Northwest Passage is a strait used for international navigation, and the Northern Sea Route includes straits used for international navigation; the regime of transit passage applies to passage through those straits. Preserving our rights and duties relating to navigation and overflight in the Arctic region supports our ability to exercise these rights throughout the world, including those strategic straits. (NSPD-66 2009)

The United States and other states base their position on freedom of navigation. Freedom of the seas has long been a cornerstone of United States foreign policy. Therefore, any acceptance of

the Canadian claim of internal waters to the Northwest Passage will set a worldwide precedent and encourage other states to assert sovereignty over waters that are currently considered to be international by law (Huebert 2008, 16). For example, a specific country of concern is Iran, which would be likely to assert greater national control over the Strait of Hormuz (Huebert 2008, 16). Due to the potential negative implications facing the United States, it remains steadfast to the international strait claim. If this strait is deemed internal waters to Canada, then all ships and transportation will be subject to Canada's surveillance, regulation, and control (U.S. Library of Congress 2010, 11).

Canada's Claim

Canada's claim to ownership can be categorized as inherent in nature and largely historic. "Canada's historic claim to the Northwest Passage relies partly on the three centuries of British exploration that begin with Frobisher in 1576 and ended with dozens of rescue expeditions sent after the Franklin expedition in the 1850's" (Byers 2009, 49). These explorers mapped out most of the Arctic archipelago and the official hand-off came when the British government transferred the title over the archipelago, which excluded Greenland, to Canada in 1880 (Byers 2009, 49). In order to consolidate this title in the early twentieth century, Canada adopted legislating on whaling, sending out annual Royal Canadian Mounted Police (RCMP) patrols and in 1926, designated most of the archipelago as an "Arctic Islands Preserve" - a measure that was meant to protect wildlife and the Inuit who lived there (Byers 2009, 49).

Secondly, one of Canada's strongest claims over the Northwest Passage lies in the longstanding presence of indigenous peoples in the region. The Inuit have occupied Canada for millennia, basing their livelihood on hunting, fishing, and traveling in the area (Byers 2009, 50). When Stephen Harper outlined his own vision for the North he said, "sovereignty over one's territory is not a theoretical concept. It is earned and retained by being present, by having planes in the air, ships in the sea and, most importantly, boots on the ground," (Flemming 2008, 7). In his proclamation, Harper essentially points out the fact that the Inuit make up the majority of "Arctic Canadians", who are essentially a "maritime people". The Inuit, who are Canadian citizens, have long given credibility, not to speak of legal support, to Canada's claim over the previously frozen waters of the Northwest Passage. It is important to remember that the islands, i.e. the landmasses, in the archipelago that make up the geographic context for the Northwest Passage are geographically Canadian territory. Great Britain ceded the ownership of these

islands to Canada in 1880 and no country, except for Denmark with regard to Hans Island, has ever disputed Canada's claim over them (Flemming 2008, 7). Therefore, the nature of the Northwest Passage debate is derived from a right to navigation in the region rather than a right to ownership of the region.

Franklyn Griffiths is a prominent Canadian expert on Arctic issues whose research and policy interests center on the idea of international security affairs, particularly in the Northwest Passage. In the piece, *Canada's Arctic Interests and Responsibilities*, Griffiths puts forth a testament toward Canadian control over the Northwest Passage, one that provides a succinct overview of general Canadian opinion on the topic. Canadian sovereignty in the Northwest Passage is inherently tied to the indigenous peoples of the region, whose livelihood is directly connected to the fate of the Passage. It is argued by most Canadians that, "the fabled Northwest Passage is synonymous with Nunavut…Anything that touches the passage touches us," (Griffiths et al. 2008, 3). The aforementioned perspective is intrinsically linked to the significance of the indigenous voice regarding the debate over the legal status.

Inuit Connections

In 2009, the Inuit Circumpolar Council (ICC) released a document titled *Circumpolar Inuit Declaration on Arctic Sovereignty.* The document, which does not specifically mention the Northwest Passage, calls for Inuit involvement in policy formation by Arctic states. This can be applied to the unsolved issues regarding the Northwest Passage. The document states that "Inuit consent, expertise and perspectives are critical to progress on international issues involving the Arctic" (ICC 2009). In other words, the central Inuit argument revolves around the value of their unique Arctic knowledge. In terms of the Northwest Passage, this means that the inhabitants of the Arctic region are likely to be most qualified to shed light upon certain aspects of climate change in the Arctic. Therefore, Inuit expertise could serve as an aid to Canada, in terms of security, safety, and governance capabilities in the Passage. Simultaneously, the Inuit agree that is necessary for them to "[work] with Arctic states and others to build partnerships in which the rights, roles and responsibilities of Inuit are fully recognized and accommodated" (ICC 2009). The territory of Nunavut, which is geographically and culturally linked to the status of the Northwest Passage, is therefore a crucial factor in the discussion of the contested Arctic archipelago.

II. Need for Action

Until recent years, the Northwest Passage was frozen and inaccessible and therefore, of little global interest. At present, with the rapidly melting sea-ice, the knowledge that the Passage may become navigable on a year-round basis has sparked international attention and the debate over the legal status has come to the forefront of the Arctic discussion. Despite the recent attention surrounding the Northwest Passage, it is widely suggested that the Passage's legal status has little value in relation to the ability to navigate it. Various experts on the subject of Arctic governance reiterated this notion. Joel Plouffe, a researcher at the University of Québec, discussed that that the Northwest Passage is not on the forefront of the United States or Canadian agenda. Since many argue that the Law of the Sea framework is sufficient, there may not be urgency for negotiations just yet (Plouffe 2011). Taking into account opinions such as Plouffe's, the idea of establishing the legal status of the Northwest Passage is not necessary at this time. That being said, the actors involved must prepare themselves for whatever the future of the Northwest Passage will be. Furthermore, through strengthening current laws or creating new ones, there must be an established sense of urgency for addressing environmental, human, and national security considerations in the region.

This strengthening of legal framework requires an increased cooperation between indigenous Arctic groups, Canada, and the United States. The prospect of a drastically increased level of maritime traffic means that infrastructure issues in the region must be examined. At present, there is a complete lack of infrastructure in the territory of Nunavut, which the Northwest Passage runs through, and therefore there are no domestic shipping capabilities in the region. The challenges facing indigenous Arctic groups, Canada (Nunavut in particular), and the United States regarding the prospective viability of the Northwest Passage, must be addressed now so that proper governance is in place once the Northwest Passage becomes more easily navigable . These challenges are discussed in greater detail in the following analysis.

III. Evaluation/Analysis

Canada's History as an Arctic Steward

Canada has a lengthy history in actively seeking protection over their Arctic waters. The greatest accomplishment to date is the creation and implementation of the Arctic Waters Pollution Prevention Act (AWPPA). AWPPA was enacted in 1970 to protect the marine environment and preserve the traditional way of life for the Inuit people (Canada Senate 2009,

23). Previously, the AWPPA applied to shipping up to a distance of 100 nautical miles from the nearest Canadian land north of 60 degrees (Canada Senate 2009, 23). The Act lays out regulations, which forbid the discharge of fluids or solid wastes into Arctic waters, setting design requirements for vessels, and prescribing Shipping Safety Control Zones within which ships must meet specific standards (Canada Senate 2009, 23). AWPPA later received international validation when Article 234, known as the "Arctic exception," was included in the UN Law of the Sea Convention (Canada Senate 2009, 23). Article 234 allows coastal states to enforce non-discriminatory, science-based regulations relating to marine pollution prevention and control within EEZs up to 200 nautical miles; further discussion about the UN Convention on the Law of the Sea is provided by Choe in chapter four. This is applicable where "particularly severe climate conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance" (Canada Senate 2009, 23). Since the 1970's, Canada has had AWPPA updated with input from the International Maritime Organization (IMO). Furthermore, Canada was influential in spearheading efforts within the IMO to create and adopt "Arctic Shipping Guidelines" that reflect those of the Canadian regime (Lalonde 2008, 13).

Canada also possesses a history of being committed to facilitating navigation through the Northwest Passage by reputable companies (Lalonde 2008, 13). This was first apparent on October 24th, 1969 when Prime Minister Trudeau declared in the House of Commons "to close off those waters and to deny passage to all foreign vessels in the name of Canadian sovereignty …would be as senseless as placing barriers across the entrance of Halifax and Vancouver harbors" (Lalonde 2008, 14). In a statement in 1970, responding to a U.S. diplomatic note, the government reiterated "its determination to open up the Northwest Passage to safe navigation for shipping of all nations, subject, however, to necessary conditions required to protect the delicate ecological balance of the Canadian Arctic" (Lalonde 2008, 14). Based on Canada's former actions regarding an established level of regulation in the Arctic, it seems that the state would be in favor of a continued effort to bolster managing systems, specifically in the Northwest Passage.

Canadian Capabilities in the Northwest Passage

Northern Canada Vessel Traffic Services (NORDREG) is Canada's maritime registration system in the Arctic. It was created in 1977 under the AWPPA and applies to all ships larger

than 300 tons. Registration used to be voluntary, but as of July 1, 2010, NORDREG was made mandatory (Byers 2009, 70). Thus far, NORDREG has served as Canada's primary maritime tracking system. Canada also has RADARSAT-2, which is a remote sensing satellite; the satellite has been in polar orbit 800 km above the earth's surface since December 2007, and it produces images so fine that one can discern individual hydro-transmission cables. The satellite's usefulness for Arctic surveillance was demonstrated within weeks of its launch and after revealing its imagery, showed a ship tracking through the ice in the Beaufort Sea. An airplane was sent to investigate and discovered that it was a Russian icebreaker (Byers 2009, 66). Couser further discusses RADARSAT-2 and its implications for Arctic security in chapter five.

Legislative Challenges in the Northwest Passage

Search and rescue capabilities in the Arctic have long been a major issue for Canada and the United States. That being said, a search and rescue treaty that calls for greater sharing and coordination between the Arctic Council's eight members was negotiated in December of 2010 (Molle 2011, 1). The text of the treaty is not public currently, but a statement from the Icelandic foreign ministry said the accord will provide "a coordinated emergency response scheme for the Arctic ocean and airspace, and the new agreement will divide the Arctic into specific search and rescue areas, each Arctic state being liable for specific territory" (Molle 2011, 1).

With regards to UNCLOS and Article 234, there are still problems to be resolved with respect to the Northwest Passage. Article 234 does not apply to sovereign immune vessels – state or government operated ships, including submarines (Lalonde 2008, 12). Article 234 also restricts the types of law that can be adopted by the coastal state to those for the "control [of] marine pollution from vessels" (Lalonde 2008, 13). In terms of the language of Article 234, there is a certain level of ambiguity, which makes it somewhat difficult to understand ; for example, Lancaster Sound, an entrance to the Northwest Passage in the East, hosts a critical period of time where the waters become mating grounds for several types of whales (Lalonde 2009, 13-14). It is unclear whether Article 234 enables Canada to restrict navigation in this area under these circumstances and it does not mention the right of "over flight", which exists in the airspace above an international strait (Lalonde 2008, 14). In the case of the high seas, an area beyond national jurisdiction, concerned states have no other option but to adhere to weak international regimes and trust in the good faith of different actors involved (Lalonde 2008, 14). The Northwest Passage presents another option; the current and future challenges posed by climate

change can be effectively met through the application of Canada's domestic system, which includes the legal authority to enforce Canadian environmental, criminal, and immigration laws and sanction any violations (Lalonde 2008, 14). From a U.S. perspective, the issue of the status of the Northwest Passage in international law should not dissuade Canada from taking action to create laws or policies that detract from Canada's stewardship (Griffiths 2008, 18).

Popular Canadian Misconceptions Regarding American Indifference

Despite the differing opinions on the legal status of the Northwest Passage, this does not indicate that the United States is indifferent to the risk of pollution in the Arctic (Griffiths 2008, 17). There is U.S. acceptance of article 234, in the negotiation of the Arctic Cooperation Agreement of 1988 and the State Department went on record that U.S. commercial vessels will conform to Canada's AWPPA (Griffiths 2008, 18). U.S. merchant ships in transit through the Northwest Passage may be expected to conform to AWPPA and commercial vessels that are United States-owned or carrying U.S. cargo and are unlikely to challenge any reasonable application of Canadian regulations (Griffiths 2008, 18). If they did, however, they would be unable to rely on the U.S. government, which does not oppose Canada on the matter and even gives effect to Canadian legislation (Griffiths 2008, 18). Lastly, U.S. endorsement of IMO Arctic guidelines must be considered (Griffiths 2008, 18).

Past Canadian and U.S. Cooperation and the Need for Increased Collaboration

Despite Canada's efforts to protect their Arctic ecosystem and United States' recognition of these actions, the ice continues to melt and more has to be done to prepare both countries for the potential usage of the Northwest Passage. Additionally, both nations need to assess how to effectively protect the fragile Arctic ecosystem of which Canada and the United States both have coastlines. An essential element to Canada and the United States successfully preparing themselves for challenges they face currently (and in the future) can be enriched by collaboration with one another. One of the key aspects of this long-standing commitment to cooperation lies in the 1988 Arctic Co-operation Agreement, in which two parties "agreed to disagree" and then proceeded to set out a regime, which governed transits by American icebreakers engaged in research (Lalonde 2008, 10). Also, in February 2008, a model negotiation exercise between Canadian and American non-governmental experts occurred in Ottawa. Again, this meeting exemplifies the ability for the two countries to work together and achieve their own objectives, without losing political "face" or sacrificing the interests of the Northern peoples (Lalonde 2008,

10). For years, Canada and the United States have relied on legal ambiguity through agreeing to disagree over the issue of the Northwest Passage, however, the rapid recession of ice demands action from both nations. The shipping season will continue to lengthen in the Northwest Passage and whether the legal ambiguity can continue to serve both nations is debatable. Genuine concern and interest for the future of the Northwest Passage does exist in the United States. US officials, Admiral Thad Allen, Commandant of the US Coast Guard; Commander James Kraska, oceans policy adviser to the Joint Chiefs of Staff; and Mead Treadwell, Chair of the US Arctic Research Commission have all expressed interest in Canada-U.S. Arctic waters cooperation that is inconsistent with popular Canadian conceptions of the inflexible U.S. opposition (Griffiths 2008, 15). Specifically, Admiral Allen is strongly in favor of extending Canada-U.S. cooperation in North Pacific oil spill response and search and rescue into the Arctic. He poignantly stated, "now is the time to look for international coordinating mechanisms and establish governance models that can help us all develop whatever is going to go on in the Arctic in terms of policy, presence and national interests in a way that benefits us all in a world that we share together" (Griffiths 2008, 16).

Kraska holds steadfast that the Northwest Passage is an international strait, however, he would not override the Canadian view; instead he speaks of opportunities for Canada to "attract support for appropriate measures, to protect the Arctic ecosystem, ensure Canadian security and sovereignty, and promote safe navigation through designated routes through the vast northern expanse" (Griffiths 2008, 16). He also proposes that Canada perhaps consider an IMO-led multilateral straits management model, such as the one used for the Straits of Malacca and Singapore (Griffiths 2008, 16). Treadwell favors not just an IMO-multilateral approach but an Arctic regime similar to one the United States and Canada share in the St. Lawrence Seaway and the Great Lakes, "where coordinated investment and joint action has made operational issues across national borders virtually seamless" (Griffiths 2008, 16). Franklyn Griffiths offers a comprehensive suggestion that,

> The Arctic interaction of Canada and the United States is marked by a steady elaboration of agree-to-disagree, in which we proceed not to settle but to set aside our disagreement in favor of coordinated action without prejudice to our positions in law. We (Canada) take the initiative, the United States responds. As to engaging the United States, Canada needs to act on commonalities that have been slighted in mutual leeriness that's arisen from our dispute over the Northwest Passage. Fully aware of the Arctic region's opening to cooperation as well as conflict, Canada and the United States ought to recognize and

> base their collaboration on unexploited opportunities for joint stewardship in Arctic North America. (Griffiths 2008, 16)

Because the future role of the Northwest Passage is not yet determined, it is necessary that the United States and Canada are prepared in the coming years. Both countries must stay informed regarding the ongoing changes in the Arctic. In doing so, it is vital that both nations have the ability to effectively navigate the region. As of now, both nations lack the capacity to safely travel around the archipelago on a year round basis and therefore, an advanced level of heavy polar icebreaking abilities must be addressed.

Deteriorating Icebreaking Capabilities for Canada and the United States

Polar icebreakers are a fundamental means of security, shipping, and governance efforts in the Arctic. This machinery has the ability to: conduct and support Canadian and U.S. scientific research in the Arctic, defend Canadian and U.S. sovereignty by maintaining a presence in the region, and monitor sea traffic in the Arctic including ships bound for Canada and the United States (U.S. Library of Congress 2010, 31). As of late, the U.S. Coast Guard's two heavy polar icebreakers have exceeded their 30-year service lives and only one (which is marginally useful) remains. That being said, the United States currently has no operational heavy polar icebreakers (U.S. Library of Congress 2010, 31). Admiral Allen largely believes that the Coast Guard must bolster icebreaking capabilities in the region. On July 16, 2008, he said, "today, our nation is at a crossroads with Coast Guard domestic and international icebreaking capabilities. We have important decisions to make…and I believe we must address our icebreaking needs now," (U.S. Library of Congress 2010, 31). Similarly, Canada faces related challenges in regards to a weakening level of icebreaking capabilities in the Arctic region. The Standing Senate Committee on Fisheries and Oceans suggests that, "new vessels – heavy icebreakers capable of operating year-round in the Arctic Archipelago and on the extended continental shelf – are needed to safeguard the values and environmental, security, and economic interests of Canadians" (Canada Senate 2009, 17). Although Canada currently possesses seven icebreakers – two 'heavy', four 'medium', and one 'light', the country's icebreaking fleet is aging and therefore quickly losing the ability to effectively navigate through the Arctic archipelago. In February 2007, the Auditor General of Canada announced that the estimated "useful life of an icebreaker was 30 years old and that Canada's icebreakers would be between 40 and 48 years old when they reach their currently scheduled replacement date" (Canada Senate 2009, 50). Therefore, at present, the

Canadian Coast Guard possesses a "limited capacity to navigate in Canada's Arctic", due to the changing environment in the region (Canada Senate 2009, 50). Furthermore, the report states, "as sea ice recedes and navigation increases, greater icebreaking capability will be required…. [Therefore] in the future, Canada will need heavy icebreakers capable of operating year-round in the Archipelago and on the extended continental shelf" (Canada Senate 2009, 50). Taking this into account, Canada's remaining icebreakers are only useful for a minimum amount of scientific research, due to their weakening level of capabilities (Canada Senate 2009, 48). As a result, there is a significant need for investment in at least one more state of the art heavy icebreaker to operate in the Arctic (Canada Senate 2009, 47).

There are many options for future management strategies of the Northwest Passage, however, there is a more critical need for Canada to simply continue to engage the United States in Arctic matters. The continued collaboration efforts in research and mapping of the extended continental shelf and in the Beaufort Sea strengthen and enforce the importance of working in cooperation and handling conflicts by involving one another. The health and vitality of the Arctic environment and its indigenous people should be of the utmost concern for both Canada and the United States and thus a holistic Arctic approach is essential when discussing matters in the Northwest Passage. As of right now, there is knowledge that the ice is melting and continues to melt at an alarming rate and that the Northwest Passage may become navigable in the coming years, however, the legal status of the Northwest Passage does not have to be determined right now. With this information, Canada, with the support of the United States, should continue to enact legislation regarding the protection of their Arctic archipelago, where the routes of the Northwest Passage lie. Despite Canada's history as an Arctic steward, they have not worked in enough collaboration with Nunavut, the territory in which the coastline of the Arctic and the Arctic archipelago are located. Before Canada continues to enact laws regarding their Arctic archipelago, the nation must first focus on the domestic aspect in order to correct the failures of governance over the territory of Nunavut. An investment and strengthening of Nunavut should be Canada's first priority when considering the future of the Northwest Passage.

Nunavut's Crucial Role

Despite various land claims agreements and a strong emphasis on the human dimension (which Miller and Chahary discuss in chapters nine and six respectively) in Canada's Arctic policy, the government of Canada has been largely unsuccessful in achieving an integrated

approach in Arctic legislative efforts. Canada's principle claim to sovereignty in the Northwest Passage is based on the thousands of years of Inuit usage and occupancy in the archipelago. The Canadian claim to sovereignty may be considered contradictory since Canada's policies on environmental protection have not been effectively carried out in Nunavut, the main territory and coastline for the Northwest Passage. Former Nunavut Premier Paul Okalik eloquently sums up the situation,

> The fabled Northwest Passage is virtually synonymous with Nunavut. Anything that touches the Passage touches us. Any discussion of Northern sovereignty and security must begin from this point and recognize continuous Inuit use and occupation of our traditional territory. Northerners are the embodiment of Canada's Arctic sovereignty. We are its human dimension. This idea is not new. It has been the basis of Canada's argument internationally. The historic activities of Inuit are the essence of the sovereignty claim. The continued Inuit presence is actively engaged in managing and exercising jurisdiction through Nunavut. It is now time to build capacity in the North and create a vision of Arctic stewardship in which Nunavummiut play a significant role. A Nunavut that is thriving cannot help but be recognized as validating our northern claim. (Okalik 2008, 3)

Under the 2003 Nunavut Land Claims Agreement (NLCA), the hunting and fishing rights of the Inuit in the Northwest Passage (their rights in relation to the operation of various co-management boards) were defined geographically to coincide with the seaward extent of Canada's 12-mile limit (Canada Senate 2009, 33). John Merritt, Senior Policy Advisor of Inuit Tapiriit Kanatami (ITK) informed the Committee on Oceans and Fisheries that the NLCA maintains a very high integration between land and marine areas and between terrestrial wildlife and fish management, however, he feels that federal policy often focuses on Canada's three territories as land-only entities (Canada Senate 2009, 33). The development of an integrated approach in Canada is a challenge due to the vast size of the northern region and typically issues tend to cut across a number of government departments and agencies, each having its own jurisdictional responsibilities, powers, and agendas (Canada Senate 2009, 33). The Canadian federal government has failed to fully implement the NLCA and more specifically, Article 15. In terms of marine activity not related to harvesting rights, Article 15 of the NLCA calls for the establishment of a Marine Council, which would pool together the capacities of three co-management boards, the Nunavut Wildlife Management Board (NWMB), the Nunavut Water Board (NWB), and the Nunavut Impact Review Board (NIRB), in conjunction with local public authorities, such as the Department of Environmental Sustainability of Nunavut and the Nunavut

Planning Commission to effectively mediate disputes in marine areas and guide maritime activity (Inuit of the Nunavut Settlement Area and the Government of Canada, 1993). The Council has not yet been formed, although a 2009 workshop on the NLCA, run by the Nunavut Planning Commission, expressed a commitment by the Government of Nunavut to work with the Canadian Marine Advisory Council (CMAC) toward full implementation of Article 15 of the NLCA (Paul Quassa, 2009). In Griffiths' opinion, the marine council could become the key Canadian forum for priority setting and analytical input into the federal government policy on High Arctic issues (Griffiths 2008, 26). Additionally, Griffiths suggests that the marine council could serve as the domestic Canadian equivalent of the Arctic Council, establishing priorities for Canadian action in the archipelago (Griffiths 2008, 26). Mary Simon, President of ITK, also discusses the crucial Inuit role,

> Inuit are patriotic Canadians, and we believe that Canada must have an adequate military presence and surveillance capacity in the Arctic. That said, an effective sovereignty and security program in the Arctic should be multi-pronged, and investments in that program, where possible, should be multi-purpose. For example, an Arctic based commercial fishing fleet, with appropriate port and harbor infrastructure, could bolster Canadian use of Arctic waters while creating stronger communities and badly needed jobs for the Inuit. The Nunavut Land Claims Agreement calls for a Nunavut Marine Council to coordinate planning and regulation of waters within the Arctic Archipelago – implementing this feature of the Agreement would both enhance sovereignty at a practical level and show good faith in honoring land claims rights (Globe and Mail 2007).

Nunavut features two-thirds of Canada's coastline, yet lacks basic port infrastructure (Okalik 2008, 7). The Canadian Navy patrols the Arctic every summer and without a deep-sea port in Nunavut, they must take fuel from passing oil tankers (Okalik 2008, 7). Therefore, Canada does not have the ability to independently patrol the Northwest Passage (Okalik 2008, 7). Paul Okalik, former premier of Nunavut, asserts that much of the current discussion centers on sovereignty and strategies around a military presence, surveillance, and enforcement, however, Okalik advocates it must also be about building the human and infrastructure capacity so that Nunavummiut can play a significant role (Okalik 2008, 7). Nunavut requires significant investment in coastline infrastructure, particularly ports and roads that are paid for by the federal government in all parts of Canada, but are significantly lacking in Nunavut (Okalik 2008, 7).

The president of Nunavut Tunnagvik Inc., Cathy Towtongie, said that Ottawa must help Inuit prepare for the potential reality of shipping through Canada's Arctic waters (Windeyer 2011). Towtongie also said that the lack of basic marine infrastructure makes it impossible to

respond to spills or shipping accidents, while hampering the ability of hunters to travel or protect their boats from damage (Windeyer 2011). Negative effects, environmental and otherwise, associated with the prospect of commercial shipping through the Northwest Passage range from catastrophic maritime disasters to the more routine threat of leaks and discharge of bilge water from ships plying Arctic waters, according to Towtongie (Windeyer 2011). Recently, Ottawa has put up money for one small craft harbor in Nunavut, at Pangnirtung, but the reality is that municipal and territorial plans stagnate without action and no progress or improvement is achieved and the closest port able to handle any major marine incidents is St. John's (Windeyer 2011). Towtongie said that Nunavut is not prepared and it is time to convene a conference to create a marine transportation strategy for Nunavut (Windeyer 2011). Towtongie calls for the federal and territorial governments to commit to stable, long-term funding for infrastructure, and consider public-private partnerships to get projects built, she added that if there is increased transportation in the High Arctic then the Canadian government needs Inuit (Windeyer 2011). She argues that "Inuit are recognized for their sovereignty in the Arctic. There's no question about it. It's not negotiable" (Windeyer 2011). Current Nunavut Premier Eva Aariak said Nunavut and Greenland view the potential rise in trans-Arctic shipping with concern and that they need to be consulted on maritime policy by national governments and the Arctic Council (Windeyer 2011).

Preparing for the future and potential increased activity in the Northwest Passage, due to dramatic loss of sea ice, requires Canada to prepare themselves in a holistic Arctic approach. The current debate about the legal status of the Northwest Passage should continue to be side-stepped in efforts of the Canadian government to protect their Arctic waters and coastlines. Continued cooperation with the United States is key in attempts to become an effective steward of the Arctic. Above all else, the Canadian federal government must work in strong partnership with the government of Nunavut and the Inuit of Canada, of whom their knowledge is invaluable. The federal government must fully implement the Nunavut Land Claims Agreements to bring about the creation of the Nunavut Marine Council, a crucial advising body for the government of Nunavut and for the federal Canadian government in terms of the best possible policies to be implemented in the Arctic. The Canadian government must increase investments and funding to Nunavut, so that this territory, which features two-thirds of the Canadian coastline and the Arctic archipelago can effectively prepare for the future usage of the Northwest Passage.

Whatever the future holds in terms of the Northwest Passage is inextricably linked to Nunavut, who will be directly affected by any increase of activity from maritime traffic and currently the Canadian government has failed to take certain steps to strengthen, empower and fund Nunavut to prepare for this likelihood.

IV. Recommendations

In light of the unknown future of the Northwest Passage, cooperation and preparation amongst Canada, the government of Nunavut and the United States is essential to avoid potential threats to human, environmental and national security. This Task Force proposes the following set of recommendations:

- Canada must increase investments and actions to support, engage and sustain the Northern communities.
- Canada must fully implement the Nunavut Land Claims Agreement.
- Canada must implement funding and support for Article 15 of the Nunavut Land Claims Agreement: the creation of the Nunavut Marine Council.
- Canada, in collaboration with the government of Nunavut, must begin to build basic infrastructure in the territory, specifically building one or more ports.
- The United States and Canada must continue researching the effects of climate change in the Arctic to determine the potential and future usage of the Northwest Passage.
- The United States must make an effort to openly endorse proposed Canadian regulatory standards in the Northwest Passage; regardless of legal disputes.
- Canada must engage the United States in their Arctic efforts to bolster awareness about the current lack of infrastructure in the Northwest Passage.
- By 2013, Canada must invest in at least one icebreaker to strengthen navigation, security, and research capabilities in the Northwest Passage.
- By 2013, The United States must invest in at least one icebreaker to strengthen navigation, security, and research capabilities in the Northwest Passage.
- Canada and the United States must continue, and increase, their cooperation in dealing with Arctic matters.

Chapter Four

Delimitation of the Lomonosov Ridge

Jeung Hwa (Victoria) Choe

Abstract

Within three years, Russia, Canada, and Denmark will be submitting their reports on the Lomonosov Ridge to the Commission on the Limits of the Continental Shelf. As these reports are made public, they will reveal whether there are any maritime disputes over the Lomonosov Ridge as well as how these disputes will be resolved. It is essential that prior to these submissions: the littoral Arctic states cooperate and form an understanding on the Lomonosov Ridge, the baselines—methods used to measure the breadth of the territorial sea—and delimitation methods in maritime disputes in order for the Arctic region to remain a peaceful zone. Therefore, this chapter recommends that the littoral states form a multilateral body specifically for the Arctic region to resolve issues pertaining to maritime disputes on the extended continental shelf.

I. Background

Political, financial, and media attention on the Lomonosov Ridge has emphasized the conflict of jurisdiction over energy resources and ownership of the North Pole. According to the U.S. Geological Survey assessment, the Arctic may contain "as much as 83 billion barrels of oil and 44 trillion cubic metres of natural gas" (Byers 2009, 89). While most of the energy resources are within 200 nautical miles from the continents that are already delimited by the Arctic states, climate change effects in the Arctic have increased investments in offshore drilling. As illustrated in Figure 1A the Lomonosov Ridge is located in the Arctic Ocean. Starting from north of the Lincoln Sea, the Lomonosov Ridge passes near the North Pole and across the Siberian continental margin (Jackson 2010, 11). Therefore, a state that is able to present evidence that the Lomonosov Ridge is its natural prolongation of the continent will gain jurisdiction over the resources in its extended continental shelf (ECS).

Russia, Canada, and Denmark are working to submit their reports to the Commission. The next three years will be crucial in shaping the basis for communication among Arctic littoral states on delimitations of the ECS. Therefore, this chapter provides background information on the United Nations Convention on Law of the Sea (UNCLOS), the Commission on the Limits of the Continental Shelf, the report submitted by Russia to the Commission in 2001, informal delimitations on the Lomonosov Ridge, and the delimitation methods used by littoral Arctic

states. Additionally, this paper will evaluate current relations among these Arctic states and argue that it is time they discuss the delimitation of the Ridge.

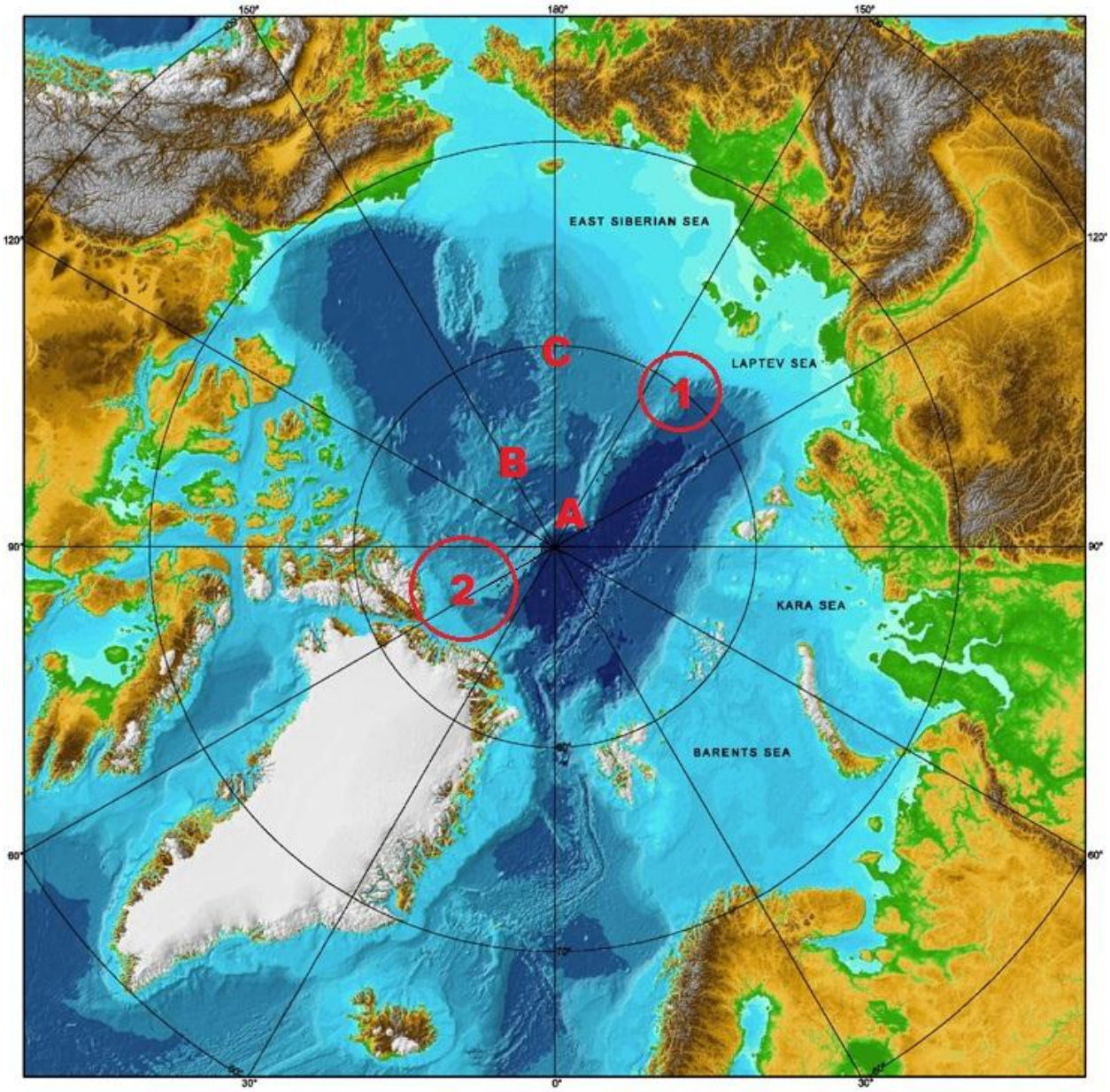


Figure 1. Bathymetric map of the Arctic Ocean. A: Lomonosov Ridge. B: Alpha Ridge. C: Mendeleev Ridge. Circle 1: Russia Federation proving natural prolongation off of Siberia. Circle 2: Canada and Denmark proving natural prolongation off of North American Continent.
Map by the National Geophysical Data Center.

The United Nations Convention on Law of the Sea (UNCLOS)

Interests in jurisdiction and control of the ECS began with the Truman Proclamation in 1945. The Proclamation extended the United States' jurisdiction over the submerged lands and subsoil of the outer continental shelf. This Outer Continental Shelf Lands Act "affirmed the United States' exclusive jurisdiction over its continental shelf resources" (U.S. President 1945, 66). Because of the rising interest in the natural resources in the subsoil and the sea bed of the continental shelf, the United Nations Conference on the Law of the Sea was held in Geneva from February to April in 1958. However, the first Conference on the Continental Shelf failed to "specify the maximum permissible breadth of the territorial sea" (Rajabov 2009, 423). In order to address this issue, the 1982 Convention on Law of the Sea (UNCLOS) was adopted after eleven sessions and the Third United Nations Conference in 1973. Part VI of UNCLOS establishes legal definitions for continental shelves. In Article 76, the continental shelf is defined as

> the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance. (UN 1982, 53)

In order for the littoral states to establish delimitation of the ECS, UNCLOS provides guidelines to measure the breadth of the territorial sea[2]. A line can be delineated by the outermost fixed points, where the thickness of sedimentary rocks is at least one percent of the shortest distance from such a point to the foot of the continental slope. Alternatively, a line can also be delineated by fixed points not more than 60 nautical miles from the foot of the continental slope. The foot of the continental slope is determined as the maximum point of change in the gradient at its base (UN 1982, 53). The delineation of the ECS cannot "exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobaths, which is a line connecting the depth of 2,500 metres" (UN 1982, 53).

[2] Article 76, paragraph four is used to measure the breadth of the territorial sea.

Interestingly, Article 76 allows states to choose alternative methods to measure baselines and delineation of the ECS.

The Commission on the Limits of the Continental Shelf

In order for a littoral state to establish the delimitation of its ECS, it is necessary to submit scientific and technical data to the Commission on the Limits of the Continental Shelf (CLCS). The submission must be within 10 years of the ratification of UNCLOS for each littoral state (UN 1982, 146). The Commission makes recommendations to littoral states in order to establish the delimitation of the ECS, but final decisions on the limits are established by a littoral state based on the recommendations. The limits established by a littoral state "shall be final and binding" (UN 1982, 54). As stated previously, the main function of the Commission is to make recommendations to littoral states on their submission of data and other materials concerning the ECS. The Commission consists of 21 members who are elected for a five-year term. The members of the Commission are experts in the field of geology, geophysics or hydrography, elected by states party to UNCLOS (UN 1982, 145). According to Article 8 of ANNEX II in UNCLOS, if a littoral state disagrees with the recommendations made by the Commission, then a littoral state can submit a revised or new submission to the Commission (UN 1982, 147). An important aspect of the submission process is that the Commission does not "prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts" (UN 1982, 147). This prolongs the submission process until maritime disputes are resolved by states and a revised report is submitted to the Commission.

Russia's submission to the Commission

Contrary to popular belief, the Commission neither rejected nor accepted the submission made by Russia. Russia is currently the only state that has submitted a report to the Commission on the delimitation of the Lomonosov Ridge. Because Russia ratified UNCLOS on April 11, 1997 it had until 2007 to submit its report. On December 20, 2001, Russia made a submission through the Secretary-General of the United Nations to the Commission, pursuant to Article 76, paragraph eight, of UNCLOS. This submission was made public and circulated among the members of UNCLOS. Canada responded on January 24, 2002, stating that "Canada is not in a position to determine whether it agrees with the Russia's Arctic continental shelf submission

without the provision of further supporting data to analyze and that Canada's inability to comment at this point should not be interpreted as either agreement or acquiescence by Canada to the Russian Federation's submission" (UN 2002A). Similarly, Denmark replied to the Commission on February 5, 2002 stating that more data and assessment is required by Denmark and therefore it is "not able to form an opinion on the Russian submission" (UN 2002B). Denmark clearly specified that their opinion is not in agreement or disagreement with Russia's submission. On the other hand, the United States replied to the Commission on February 28, 2002 expressing that the "submission has major flaws as it relates to the continental shelf claim in the Arctic" (UN 2002D). Specifically, the United States expressed that Russia "utilizes the boundary embodied in the Maritime Boundary Agreement between the United States of America and the Union of the Soviet Socialist Republics (signed on June 1, 1990)" (UN 2002D). According to the United States, the Lomonosov Ridge is a "freestanding feature in the deep, oceanic part of the Arctic Ocean basin, and not a natural component of the continental margins of either Russia or any other State" (UN 2002D). Currently, the United States claims that Russia, Canada, and Denmark do not have any legal jurisdiction over the Lomonosov Ridge or the Alpha and Mendeleev Ridges (Figure 1B and 1C respectively) because it is not a natural prolongation of any state.

After the report was submitted by Russia, the Commission held its tenth session to consider the submission. The Subcommission[3] was elected to examine the scientific elements of the submission made by Russia (UN 2002C, 7). The recommendations made by the Commission were in four areas: the Barents Sea, the Bering Sea, the Sea of Okhotsk, and the Central Arctic Ocean. The Commission recommended Russia to send charts and coordinates of the delimitation lines as soon as there is an agreement on the delimitation boundary with Norway in the Barents Sea and with the United States in the Bering Sea. Second, to submit a partial submission regarding the Sea of Okhotsk including the agreements made with Japan. Finally, to "make a revised submission in respect of its extended continental shelf in [the Central Arctic Ocean] based on the findings contained in the recommendations" (UN 2002C, 10). Originally, Russia was supposed to submit revisions and a partial submission to the Commission by 2007, but

3 The Subcommission: Alexandre Tagore Medeiros de Albuquerque from Brazil, Lawrence Folajimi Awosika from Nigeria, Galo Carrera Hurtado from Mexico, Peter F. Croker from Ireland, Karl H. F. Hinz from Germany, Iain C. Lamont from New Zealand and Yong-Ahn Park from Republic of Korea. The Subcommission elected Mr. Carrera as its Chairman, Mr. Hinz Vice-Chairman and Mr. Croker as Rapporteur.

because the scientific and technical guidelines were not formed by the Commission until after the May 13, 1999, the deadline was pushed back until 2009.

Informal Delimitation of the Lomonosov Ridge

Denmark, Canada, Russia, and the United States have not agreed upon the delimitation of the Lomonosov Ridge. Russia gained worldwide attention in August 2007 when Artur Chilingarov led a team in two mini submarines to the ocean floor under the North Pole and planted a titanium Russian flag on the seabed. Even though it was a political stunt that did not have any legal outcomes, according to Chilingarov it has stimulated other countries to study the polar region (Parfitt 2009, 1383). Russia's report establishes jurisdiction over the Lomonosov Ridge, Mendeleev, and the North Pole that is around 1.2 million square kilometers (Lovett 2007). Similarly, Russia's Minister of Natural Resources, Yury Trutnev, stated that "the analysis of samples taken from the ridge showed that the Lomonosov Ridge is part of the structural continuation of the Siberian continental platform, and the North Pole belongs to Russia" (Rajabov 2009, 427). However, Russia is not the only littoral state that is claiming Lomonosov Ridge as its natural prolongation. Studies in Canada illustrate that "Canada's margin areas in the eastern Arctic are based on the Alpha and Lomonosov Ridge" (McDorman 2009, 181). The Canadian Foreign Minister Lawrence Cannon stated that "there are territories which belong to us and where our continental shelf is to be extended, for example the Lomonosov Ridge, which is an extension of our territory" (Staalesen 2010). Equally important, Denmark is laying claim to the North Pole through the delimitation of the Lomonosov Ridge (Fillingham 2009, 3). Science Minister Helge Sander of Denmark announced that "the preliminary investigations suggested that the disputed Lomonosov Ridge is a geological extension of the northern coast of Greenland" (Rajabov 2009, 427). In order to better understand the seabed and reduce research costs, on June 27, 2005 Canada and Denmark signed Memorandum of Understanding (MOU). They will collaborate on undersea data collection and conduct surveys on North of Ellesmere Island and Greenland (Loukacheva 2008, 196). In the following year, Canada and Denmark announced that "the results of survey work, jointly done between Canada and Denmark, demonstrate that the Lomonosov Ridge is attached to the North American and Greenland plates" (McDorman 2009, 183). While Denmark, Canada, and Russia delineate certain part of the Lomonosov Ridge to either gain jurisdiction over resources or the North Pole itself, the United States expressed that the Lomonosov Ridge is "not a natural component of the continental margins of either Russia or

any other State" (UN 2002). The delimitation of the Lomonosov Ridge will remain up in the air until Russia and Canada submit their report to the Commission in 2013 and Denmark in 2014.

The Delineation of the Maritime Dispute

Despite Arctic states attempting to resolve disputes in a peaceful manner, the main difficulty in resolving maritime disputes in the Arctic region is conflicting methods of delineation. As illustrated in the submission made by Russia, various delimitation lines were used: the meridian line, outer limit of the 200 nautical mile zone, 60 nautical miles from the foot of the slope, and the one percent sediment thickness rule (McDorman 2009, 177). The meridian line is used in order to delineate maritime boundaries in the Arctic along the meridian that meets at the North Pole. Russia and Canada have been strong proponents for using the meridian line (Colson 2003, 97). On the other hand, the United States has been in favor of using the median line to delineate maritime boundaries in the Arctic. The median line is equidistant between delineation of littoral states. Since UNCLOS does not oversee areas of maritime disputes, Arctic littoral states can choose to use the meridian and median line either alone or interchangeably in order to delimit their ECS.

UNCLOS provides different settlement procedures that littoral states can choose from to decide how to delimit overlapping areas of the Lomonosov Ridge. UNCLOS gives freedom to littoral states that have maritime disputes to attempt peaceful agreement and settlement of those conflicts before challenging a dispute in the International Court of Justice, the International Tribunal for the Law of the Sea, or an arbitral tribunal (Matz-Lück 2009, 254). On May 28, 2008 five littoral states[4] bordering the Arctic Ocean met in Ilulissat, Greenland to sign the Ilulissat Declaration, which stated that "[they] remain committed to this [UNCLOS] legal framework and to the orderly settlement of any possible overlapping claims… We therefore see no need to develop a new comprehensive international legal regime to govern the Arctic Ocean" (The Ilulissat Declaration 2008, 1). Recognizing these discrepancies means that now is the time for Arctic states to discuss the Lomonosov Ridge and its delimitation in order to ensure that multilateral agreements will be carried out in a peaceful manner.

4 Five littoral states bordering the Arctic Ocean (A-5)—Canada, Denmark, Norway, Russia, and the United States of America.

II. Need for Action

The media depicts the Arctic region as an area of conflict and competition; however, statements such as the "Arctic melt" and the rush for resources are alarmist (Riddel-Dixon 2008, 41). At present, the Lomonosov Ridge is not under the jurisdiction of Russia, Canada, or Denmark. Since Russia is the only state that has submitted the report to the Commission on the delimitation of the Lomonosov Ridge, it is still unclear whether or not the Lomonosov Ridge will become a future maritime dispute. However, Russia will be submitting revisions and a partial submission to the Commission by April 11, 2013. At the same time, Canada will be submitting its report to the Commission by December 7, 2013 to show evidence that will help determine the delimitation of the ECS. The following year, Denmark will submit its report to the Commission by November 15, 2014. Within the next three years, the submissions made by Russia, Canada, and Denmark will be made public and it will be clear where there are locations of dispute regarding the Ridge. Therefore, it is essential to address the delimitation of the Lomonosov Ridge now in order to ensure that bilateral agreements will be carried out in a peaceful manner among Arctic littoral states. Otherwise, the overlapping claims in the Lomonosov Ridge will increase tensions among the Arctic Five (A-5) and become increasingly costly to resolve.

Since most of the scientific data is not made public, it is difficult to know whether there will be overlapping delimitation of the Lomonosov Ridge. However, it is clear that both Canada and Denmark are working closely together to have an understanding on the Ridge before submitting the report to the Commission in 2013 and 2014 (Henningsen 2011). Viktor Paselov, the leader of the Arctic expeditions of the VNIIOkeangeologia has stated that "the five countries bordering the Arctic Ocean do not have conflicting positions about the continental nature of the Lomonosov Ridge" (Staalesen 2011) and so it is essential that states in addition to Canada and Denmark work towards multilateral cooperation on the Lomonsov Ridge. It is essential that Denmark, Canada, and Russia have an understanding of the delimitation of the Lomonosov Ridge, prior to submitting their report to the Commission. Despite Canada and Denmark's close cooperation on understanding the delimitation, any overlapping areas between Russia, Canada and Denmark will require revision or a new submission to the Commission (UN 2002C, 148). It took Russia 12 years to prepare for resubmission to the Commission. If Canada, Denmark, and Russia cooperate and have an understanding then it "would dramatically increase the chance of the UN Commission endorsing [their] claims" (Byers 2009, 96). This would not only strengthen

governance among the Arctic states, but also reduce the time and money spent on extensive expeditions to collect further evidence for the Commission. The federal government of Canada has allocated CAD $20 million for the Arctic seabed mapping (Byers 2009, 95). Russia's three-month Arctic expedition is estimated to cost about CAD$6.5 million (*Earth Times* 2010). With the weak global economy and the nearing deadlines for Canada, Denmark, and Russia to submit their report, it is now time for the Arctic states to discuss the Lomonosov Ridge and its delimitations.

III. Evaluation & Analysis

The United States: A non-party to UNCLOS

UNCLOS of 1982 was ratified by 158 states and all of the Arctic states bordering the Arctic Ocean have done so except the United States. Even though in 2004 the U.S. Senate Foreign Relations Committee recommended the ratification of UNCLOS, the U.S. remains as a non-party to the Convention (Crawford 2008, 9). However, the United States "can and does exercise exclusive jurisdiction over the resources of the continental margin adjacent to its 200-n. mile zones, where a physical margin exists, consistent with the international law of the sea" (McDorman 2009, 164). There are ongoing debates as to why the United States has not ratified UNCLOS. Some state that the ratification has been blocked because "the treaty would infringe on American sovereignty" (Smith 2007, 5). Others argue that the United States is unwilling to ratify UNCLOS because it "would require [the United States] to pay the International Seabed Authority a fee for mining rights and… [that] the ratification would hinder the U.S. Navy's ability to seize weapons-related material on the high seas" (Rajabov 2009, 436). Currently, the United States is unable to initiate a settlement of any disputes and does not have any rights to be a third party state since it has not yet ratified UNCLOS. As Russia, Canada, and Denmark try to settle the delimitation disputes in the Lomonosov Ridge, the United States will not have any weight to intervene. In addition, the United States is waiting for Russia to ratify the United States and the Soviet Union 1990 Maritime Delimitation agreement. The ratification of UNCLOS by the United States could encourage Russia to ratify the 1990 Maritime Delimitation agreement, which will give jurisdiction to the United States over the delimited area. Therefore, it is essential for the United States to ratify UNCLOS so it can participate in peaceful multilateral negotiations on ECS delineations.

UNCLOS and the CLCS

While UNCLOS provides important rights and obligations concerning the delimitation of the ECS, it allows states to interpret the Convention, decide baselines, and delimitation lines. Granting states this authority ultimately complicates the delimitation process. UNCLOS Part XV Article 279 states that "States Parties shall settle any dispute between them concerning the interpretation or application of this Convention by peaceful means" (UN 2002C, 129). This allows littoral states to choose and use a combination of approaches to extend their jurisdiction over the ECS. Russia used several combinations in order to delimit its extended continental shelf when submitting its report to the Commission in 2001: the meridian line was used in the area between Russia and Norway, the outer limit was based on the 200 nautical miles zone, the 60 nautical miles from the foot of the slope method was used, and the one percent sediment thickness rule was also used (McDorman 2009, 177). At the same time, Canada has chosen to employ only the 60 nautical miles from the foot of the slope method to indicate delimitation of its ECS (McDorman 2009, 181). Different baselines chosen by the Arctic states will further complicate the bilateral agreement process. In addition, there are difficulties in determining definitions for "the thickness of sedimentary rocks, the foot of the continental slope, the 2,500 meter isobaths, and distinguishing among submarine ridges, oceanic ridges, and submarine elevations that are natural components of the continental margin" (McDorman 2009, 169). Without a common understanding of methods to measure the breadth of the territorial sea, tensions among Arctic states will heighten as additional maritime disputes result due to these discrepancies. This is because in bilateral delimitation the question is, "which state gets to use which part of the foot of the continental slope, or the 2,500 meter isobaths, or the 350 nautical miles limit to support its bilateral boundary position" (Colson 2003, 103). The next step is for littoral states to decide whether the meridian or the median line will be used in maritime disputes, especially in the Lomonosov Ridge.

Maritime disputes go unresolved for decades because states disagree on the lines used for delimitation of the territory. The first challenge for Russia, Canada, and Denmark is to show evidence that the Lomonosov Ridge is a natural prolongation. As illustrated in Figure 1 Circle 1, depicts the region where Russia is seeking evidence that the Lomonosov Ridge is a natural prolongation of the Siberian continental shelf. At the same time, Figure 1 Circle 2 illustrates the region where Canada and Denmark are gathering evidence to the Commission that the

Lomonosov Ridge is a natural prolongation to the North American continent. The second challenge will be to agree on delimitation methods to delineate the ECS of the Lomonosov Ridge. Prior to Russia, Canada, and Denmark submitting their reports to the Commission, it is necessary to have an understanding on baselines, methods of measurements for the breadth of the territorial sea, and delimitation lines for the Commission to accept the delimitation of the ECS and settle maritime disputes by peaceful means.

Norway and Russia 2010 Maritime Delimitation

Norway and Russia's recently resolved maritime dispute in the Barents Sea should serve as model for dispute resolution among Arctic states. Beginning in 1957, the dispute between Norway and Russia mainly focused on different delimitation lines, with Norway favoring the median line and Russian favoring the meridian line (Smith 2007, 6). However, on April 27, 2010, Norway and Russia resolved the dispute by equally dividing between the median and meridian lines drawn by Norway and Russia (Gibbs 2010). Instead of choosing either the meridian line (sector) or the median line (equidistant), both countries were able to go set aside their differences and arrive at a mutually agreeable solution. The successful settling of the Barents Sea dispute illustrates why Minister Counselor of Norway, Jo Sletbak, characterizes the Arctic region in international relations as "high north and low tension" (Sletbak 2011). Since the sharing of knowledge is very crucial for Arctic governance, cooperation among Arctic states and actors is essential.

If the littoral states in the Arctic can learn from the delimitation of the maritime dispute between Norway and Russia, future maritime disputes will not have to take 40 years to resolve. Therefore, the settlement of maritime disputes needs to take place before littoral states submit reports to the Commission. Even though in Ilulissat Declaration the A-5 stated that there is "no need to develop a new comprehensive international legal regime to govern the Arctic Ocean", creation of a multilateral body would ease the process of delineating ECS in the Arctic region (Ilulissat Declaration 2008, 1). A multilateral body could be created specifically for the Arctic littoral states to oversee maritime disputes on delineating ECS. Modeling UNCLOS, the multilateral body could be called as the Arctic Convention on the Extended Continental Shelf (ACECS). This multilateral body would provide a place to exchange information, negotiate delimitation lines, define methods to measure the breadth of the territorial sea, and come to an understanding of the Lomonosov Ridge prior to submitting any report to the Commission

(Gunitskiy 2008, 268). ACECS would not only help secure the interests of the A-5, but also provide solutions to Arctic maritime disputes.

IV. Recommendations

Maritime disputes in the Arctic region need to be resolved in a peaceful manner. In order to ensure peaceful cooperation among the Arctic littoral states, increase knowledge of the extended continental shelves (ECS), and reduce the costs of expeditions for seabed mapping, the recommendations to the A-5 are as follows:

- The United States must ratify the United Nations Convention on Law of the Sea of 1982.
- Russia, Canada, and Denmark must establish understanding on the Lomonosov Ridge by sharing scientific data collected from previous expeditions.
- The establishment of the multilateral body (ACECS) by Russia, Canada, Denmark, Norway, and the United States within the period 2011-2013.
- The newly established ACECS must:
    - Choose baselines to be used in bilateral agreements for maritime disputes in the Arctic region.
    - Define methods to measure breadth of the territorial sea in the Arctic region.
    - Decide which delimitation methods will be used in maritime disputes in the Arctic region.
    - provide a place for exchange of information and negotiation for future maritime disputes in the Arctic region.
    - Engage scientists to work together on mapping of the seabed in the Arctic region.

Chapter Five

Re-evaluating the Role of Arctic Security

Griffith Couser

Abstract

As the Arctic opens to resource development, shipping, and increased international participation, the security of the region has become an issue of critical importance to Arctic states. Increasing military attention to the region creates a situation of tension and distrust, while leaving states without the ability to carry out essential functions for the maintenance of stability. To rectify this, it is essential that security cooperation be pursued between all Arctic states to strengthen existing capability in public security and to reduce tension and unnecessary militarization. The Arctic Council should be brought in to discuss security issues in an Arctic context, receive input on the subject from indigenous groups, and assess the impacts of a military presence in the region.

I. Background

Security in the Arctic is one of the many policy issues coming to the fore as the region undergoes rapid transitions due to climate change. As with other challenges, a failure to address security in a comprehensive and inclusive manner threatens the stability and prosperity of the Arctic region. The North American Aerospace Defense Command (NORAD), the International Ice Patrol, and the Barents Euro-Arctic Council are examples of cooperative agreements already established to promote the sort of cooperation required for effective stewardship of the region. At the same time, national policies are being drafted by Arctic states, which pursue differing degrees of military involvement in the region. Without a larger framework to address national security needs, Arctic states are moving forward unilaterally with military deployments. To quote US Navy Admiral James Stavridis, "the cascading interests and broad implications stemming from the effects of climate change should cause today's global leaders to pause, take stock, and unify their efforts to ensure the Arctic remains a zone of cooperation – rather than proceed down the icy slope towards a zone of competition, or worse, a zone of conflict" (Stavridis 2010, ix). As the region transforms over the coming years, security will be a rising concern among all stakeholders. What is lacking is a forum for security dialogue and multilateral cooperation to maintain the peace and stability that exists today.

The decreasing ice cover in the Arctic Ocean, the increasing feasibility of resource extraction, and the desirability of the area as a major shipping route all contribute to the

temptation for a more active military presence. Energy, socio-economic development, and the environment are given high priority in national strategies, yet security is approached in widely differing ways between Arctic states. The Arctic Council was not designed to address security concerns in its mandate, leaving no high level forum in which to coordinate and communicate about security policy in the Arctic. This background will focus on how the policies and strategies of Arctic states and other actors address the issue of security in the Arctic region.

The United States recently put out an Arctic Policy in 2009 during the final days of the Bush Administration which featured national security as the number one priority. The first policy outlined in this document is to "meet national security and homeland security needs relevant to the Arctic region", and strengthen international institutions "for cooperation among the eight Arctic nations" (U.S. President 2009). It also states that it "is prepared to operate either independently or in conjunction with other states to safeguard these interests" (U.S. President 2009). The United States has been referred to as the "reluctant Arctic power" which "refuses to take its circumpolar responsibilities seriously (Huebert 2009, 8). This critique is based on its reluctance to join the Arctic Council (Huebert 2009, 8), its 14 year gap in the release of a new Arctic policy statement, and its continued inaction on the ratification of UNCLOS, the international regime which all Arctic states have agreed to use to resolve maritime boundary and continental shelf disputes. The US has maintained a military presence in the region, dating back to World War II when Alaska was threatened by a Japanese invasion. In the Cold War period, American submarines regularly traveled beneath the ice and U.S. troops in the Yukon, during the war's early years, even outnumbered Canadian residents (Arteau 2011). The U.S. also invested in military infrastructure in the region, building a long line of radar stations called the Distant Early Warning line, stretching from western Alaska to eastern Greenland, and to this day, the U.S. continues to operate the Thule air base in northwestern Greenland. It is generally assumed that U.S. submarines continue to make regular transits across the Arctic as well (Bachand 2011). Along with Russia, this gives the U.S. the most robust military capability in the Arctic, even if it is bound by reluctance.

With forty percent of its territory lying above the Arctic Circle, the priority Canada places on the Arctic region as a whole is far greater than that of the United States (Canada 2010). Much of Canada's Arctic is bound by Inuit land claims, and Nunavut, its largest and northernmost territory, is inhabited primarily by Inuit who provide the human presence that is the

foundation for Canadian sovereignty in the area (Canada 2010). Canada has paid particular attention to Arctic developments and released the Statement on Canada's Arctic Foreign Policy in 2010. Built on four pillars, the first and foremost of these is exercising Canada's sovereignty over its Arctic territory, followed by socio-economic development, environmental protection, and the devolution of governance. Stephen Harper, the Canadian Prime Minister, has focused "almost exclusively on military solutions to Arctic security challenges" (Byers 2010, 18). He makes regular summer visits to the area and has authorized a large military spending program to increase the role of Canadian forces in the region (Byers 2010, 64). Canada still receives U.S. funding and hosts U.S. facilities in the "High North" to bolster its defense capacity in the area, and much of the surveillance is done through the joint US-Canadian North American Aerospace Defense Command (NORAD) which, in addition to monitoring all air traffic over the U.S. and Canada, began maritime monitoring in 2006. Harper's calls for increased presence in the area have thus far given few results, though establishing a visible presence in the Arctic continues to be a high priority (Byers 2010, 18).

Denmark's claim to the Arctic is through the self-governing territory of Greenland where Denmark maintains various federal responsibilities such as foreign policy and defense. Greenland's self-government currently has the option to hold a referendum for independence, though the Danish foreign ministry speculates that Greenlanders will appreciate the services Denmark provides which an island of 55,000 people would find difficult to run themselves (Henningsen 2011). Most of Denmark's preliminary Arctic policy statements emphasize this relationship, and while security is not forgotten, cooperation is the main theme; "The Arctic may turn …into an international conflict zone, but also consolidate its present character as a low tension region. As a minor player, Denmark's fundamental interest is to promote cooperation and prevent tension in the Arctic" (Peterson 2009, 36). The Danish security strategy emphasizes the role of providing vital community services such as coastal patrols and community resupply, though it has also said that "sovereignty control around Greenland will become an increasingly important task for the Danish Navy and Air Force," signaling a desire to increase its military presence beyond its current responsibilities (Peterson 2009, 71),

Several themes appear repeatedly in the Norway strategy, especially cooperation with Russia, which marks Norway's strategy as the only one that repeatedly emphasizes bilateral relations on a variety of issues. Another central theme in the Norwegian strategy is the

increasing presence of the Norwegian Armed Forces and their role in safeguarding Norway's interests in the Arctic Ocean (Norway 2007). To this end, Norway has purchased a new multipurpose icebreaker, several dozen F-35's fighter jets from the U.S., and several stealth capable patrol ships as it modernizes its armed forces (Committee on National Defence 2010, 10). In a sign of the shifting emphasis on northern military security, "Norway has already moved its military operations centre from a southern location near Stavenger to Reitan in the north of the country" (Rutten 2010, 6). On the other hand, due to an international treaty the island of Svalbard is a demilitarized zone (Spitsbergen Treaty, 1920), which limits Norway's ability to fully militarize their territory in the Arctic. Norway has not been uncooperative, either. In 2010 it signed an agreement with Russia resolving a 40-year old maritime border dispute in the Barents Sea.

Russia is one of the world's top energy producers, and its Arctic strategy places a firm emphasis on the development of oil and gas fields in Russia's Arctic, which Russia desires to turn into a "strategic resource base" (Russia 2009). Russian Arctic policy is designed specifically to strengthen the state and promote national interests, using the military to ensure "favorable operating conditions" in the Arctic, which requires the maintenance and training of combat troops (Russia 2009). Russian military forces have long been stationed in the Russian Arctic, and the North Sea Fleet is based in the largest Arctic city in the world, Murmansk. Russia is perceived as taking aggressive action in the last few years, including the resumption of long range bomber patrols over the Arctic, naval patrols near the Norwegian Svalbard archipelago, and the well-publicized event when, "In August 2007, a Russian submersible on a research expedition deposited an encased Russian Federation flag on the seabed of the presumed site of the North Pole" (U.S. Library of Congress 2010, 11). Surveillance and a "common information space" for Arctic monitoring and control also factor heavily into the Russian strategy (Russia 2009). Promoting peace and cooperation is also mentioned. Russia has a long diplomatic history with the other Arctic nations and reaffirms time and again its commitment to international law (Russia 2009). One Russian embassy official stated clearly that stability is key, tension benefits no one, and that Russia perceives no conventional threat to itself (Avdoshin 2011). Russian cooperation includes joint search and rescue cooperation with Canada and Norway (Fawcett 2011), close cooperation with the Canadian and U.S. Coast Guards (Avdoshin 2011), and the aforementioned agreement on the Barents Sea with Norway.

Iceland's Arctic strategy places special emphasis on education and climate change, with security not taking a high priority. It advocates for de-militarization of the Arctic, something not explicitly stated by the official documents of any other country (Thordardottir 2011). Iceland may find de-militarization of the Arctic the easiest to implement, due to its lack of any national armed forces. Currently all military security capability is invested in foreign militaries under the auspices of NATO, and it was in the Icelandic capitol that the NATO conference discussing the High North was held (Scheffer 2009).

Finland has come out with its Arctic policy as well, and while the country does not have a direct link to the Arctic Ocean it nevertheless articulates interests in a wide variety of areas. Surprisingly, Finland's official statement never mentions security or the role of the military (Finland 2010). Meanwhile Sweden has not released a formal policy, but in statements made by the Swedish Minister of Foreign Affairs the primary objective was cooperation between Arctic nations, and increasing the scientific understanding of the area. Again, security and military matters were left out completely (Freivalds 2004).

In 2009 the Inuit also released a statement, the Circumpolar Inuit Declaration on Sovereignty in the Arctic, a signal of their increasing involvement in international Arctic affairs. In the declaration, military issues are not discussed; rather it is a statement affirming the right of indigenous people to have an equal and meaningful seat at the table when high-level Arctic decisions are made. Mary Simon, president of the Inuit Tapiriit Kanatami (ITK), also commented that "the Inuit have never really been against a military presence in the Arctic", but emphasized that "along with the building of military infrastructure in the region we also need to build sustainable communities" (Committee on National Defense 2010, 15). The Inuit are not in a position of agency when it comes to militarizing the Arctic, however their role in discussing security matters cannot be overlooked.

The Inuit had been a nomadic people until the United States stepped up its military presence across the Arctic of North America. As the U.S. military built bases, radar installations and airstrips, Inuit communities began to coalesce around these sites, where they hoped to find wage labor (Aatami, 8). This is still the case in places like Thule in Greenland and Eielson Air Base in Fairbanks, where numerous Inuit live. The idea of human security deserves special mention in any discussion of security, and the Inuit are the embodiment of human security in the Arctic. This will be further discussed by Chahary in chapter six.

The North Atlantic Treaty Organization (NATO) is also looking to the north as its members assess the impacts of the climate change driven transformations taking place. NATO's membership includes four of the Arctic 5, and six of the eight Arctic Council member states, but has not yet released an Arctic-specific policy and has no Arctic-specific groups in which such issues can be addressed. NATO's secretary general addressed Arctic security in a speech in Reykjavik in 2009, identifying it as an area in which the alliance "has a contribution to make" (Scheffer 2009). Despite this, NATO's Strategic Concept, which came out in November 2010, did not mention the Arctic at all. In an echo of the 2009 speech, it mentioned its desire to cooperate with Russia and reaffirmed its commitment to maintaining the sovereignty of all member states (NATO 2010). NATO has no desire to be the arbiter of disputes in the Arctic, but has volunteered that it could be a useful forum for its Arctic members to discuss security issues (Scheffer 2009). Though unplanned, this leaves NATO as the preeminent forum for security dialogue among its Arctic member states, since the other high level forum, the Arctic Council, has a mandate that specifically excludes security discussions.

When the Ottawa Declaration, which formally created the Arctic Council was signed in 1996, discussion of security issues was specifically left out, while the Ilulissat Declaration signed in 2008 by the United States, Canada, Denmark, Norway, and Russia left out the term "peace" as an area of common interest (Berkman 2010, 58). Having all states with territory in the Arctic, six indigenous groups as Permanent Participants, and a variety of NGOs and outside states as observers, the Arctic Council is the most inclusive, high-level forum for Arctic issues existing today. Its mandate has so far been restricted to environmental issues, though a search and rescue treaty was recently drafted as well. This has left each Arctic state to craft a security policy focusing on the security of its own slice of the Arctic, rather than on the security of the region as a whole, and what interaction it might have with its new northern neighbors. It is worth noting that every policy examined has come out in the last two years, highlighting emerging nature of the issue.

II. Need for Action

Arctic scholar Franklyn Griffiths has stated that "Arctic political development presents us all with a choice between, on the one hand, enhanced regional security and intensified international Arctic assistance including new funds for cooperative stewardship, and, on the other, the risk of growing discord, increased potential for NATO involvement and diminished

common security in the region (Griffiths 2009, 12). Building on this, there is the fact that the military is able to contribute to the Arctic in few positive ways. In environmental protection and socio-economic development, military assets are of little use. There are opportunities for a productive role in search and rescue, servicing of remote communities, border security, safe transit, and disaster response. Search and rescue is described as "the military's most important function in the Arctic" (Byers 2010, 67). These, however, are roles best suited for a country's coast guard, and are ripe for cross-border cooperation to help make these activities more effective and efficient without resorting to costly and suspicion-arousing deployments.

It is no secret that the Arctic ice is melting quickly, with estimates that the Arctic could be ice-free as early as 2013, with more conservative estimates going to 2030 (Berkman 2010, 29). In that timeframe, the Arctic will transform from a frozen and largely disregarded ocean into a hotbed of economic activity. As the number of people and infrastructure in the area increases, the possibility of conflict breaking out must be eliminated. The lack of a common understanding and approach to Arctic security in the various national strategies points to a problem in Arctic relations. A lack of harmony and communication about security issues in the Arctic can lead to increased tensions in the region. In order to foster the prosperity of the region, new dialogues must take place involving all interested parties. It is unwise to wait until the different Arctic states have deployed military assets to the region to begin talking about ways to reduce them, especially since disparities in power will inevitably breed suspicion and resentment about the good will of the more well-armed states.

Despite desiring a military presence, many Arctic states are nonetheless ill-prepared to deal with non-traditional threats in the Arctic. Canada lags behind most Arctic countries in its ability to police and protect its Arctic space. A 2010 public opinion survey conducted by the Munk School of Global Affairs at the University of Toronto found that 92 percent of respondents rated disaster response in the Arctic as important, while only 11 percent rated the current capacity to do so as sufficient. Similarly, gaps of 52 percent and 45 percent were found in importance vs. capacity to respond to emergencies and international threats, respectively (Munk 2010, 27). This finding is further corroborated by Michael Byers' observation that "Canada is poorly equipped to police its northern waters" (Byers 2010, 62). Joel Plouffe, a scholar on Arctic geopolitics, notes that northern Scandinavia and northwest Russia are the most developed Arctic areas, and that Canada should refrain from being so internationally assertive before it can even

control its own Arctic Archipelago (Plouffe 2011). Denmark has lamented that "search and rescue capability in Greenland… which can be mobilized in case of major shipwrecks in Arctic waters… is almost lacking today" (Peterson 2009, 70).

This lack of capacity points to a much larger problem than conventional military build-up, and one that must be rectified before activity in the Arctic becomes too prolific. Without proper tools to handle a serious incident the Arctic states risk the lives of their citizens, the Arctic environment, and the opportunity for commercial benefit that comes from a low-risk environment. Not only that, but States which do not possess well developed Arctic infrastructure risk undermining their relative positions in the region when they find themselves unable to fully participate in the development and utilization of the resources in the area.

III. Evaluation and Analysis

It is at this point that the concept of security must be broken down slightly, into the realms of public security, military security, and human security. Public security entails the ability to respond to civilian and natural threats, such as natural disasters, illegal border crossing, shipping code enforcement, ect. Military security is the ability to respond to state threats, namely the military of another country. If it is widely acknowledged that there is no conventional military threat in the Arctic, it is worth questioning of what use military assets in the Arctic can be. It is certainly the prerogative of states to control their national defense as they see fit, but it is also up to them as responsible international actors to promote stability and peace in the Arctic. In this vein, military assets should be used to fulfill roles that help strengthen the stability of the area rather than detract from it. Thus public security should be the primary focus of any military action in the region. Using the United States as an example, "the US Navy is not a law enforcement agency, they don't deal with fisheries, they don't deal with customs, they don't deal with any of that. The Coast Guard does" (Caron 2010). Another aspect of security is human security, what Bjorn Rutten defines as a community's ability to "promote socio-economic development; protect the environment; provide health services; provide public safety and security; and establish effective governance" (Rutten 2010, 22). This will be covered in depth in chapters six through nine. In this chapter, it is worth connecting human security to military and public security, as each impacts the other.

Military Security

First and foremost, Arctic states need to reevaluate military deployment to the Arctic in light of its various effects on the region as a whole. It is worth repeating, from several sources, the lack of any conventional threat in the Arctic. Griffiths tells us, "indeed, when we look at the map and consider the full extent of settled and law-governed extensions of national jurisdiction, the Arctic is largely bereft of a physical basis for international violence" (Griffiths 2009, 6). Norwegian officials concur, saying that despite their proximity to Russia "there is no military threat, no potential for conflict in the Arctic. High North, low tension" (Hoel 2011). The Canadian and Russian officials also do not seem overly concerned of any military threat (Huebert 2009, 34, Avdoshin 2011). NATO has also said that the region is moving towards further cooperation (NATO Research Workshop 2010, 4).

It is also worth discussing what military assets should not be used for. In the deployments by Norway and Canada, there runs the danger of military build-up simply for the sake of demonstrating presence. This concept of stationing military assets up north simply to demonstrate control over territory is counter-productive to the security of the region, and in fact fails to accomplish its original goal. Canada's first pillar of its Arctic Strategy seems to emphasize the concept of presence for the sake of presence. In referring to the military programs being funded in the north it states, "this increased Canadian capacity demonstrates Canada's presence in the region" (Canada 2010). Yet no military presence at all is required to assert Canadian sovereignty in the area. Canadian disputes will not be solved or aided with military assets; "the problem of sovereignty over archipelago waters is … a legal, political and economic problem. It is not a military problem. It cannot be solved by any amount of surveillance or patrol activity in these channels by Canadian forces" (Lackenbauer 2009, 14). Similarly, in speaking about non-traditional security, Robert Huebert says "greater security did not come from military action. Instead, international cooperation occurred at both the individual and state levels" (Huebert 2009, 4). Presence for the sake of presence leads to speculation from other states as well. In speaking about Norway's northern military focus and modernization, the Committee on National Defence has suggested that "even if Norwegian officials do not see an immediate military threat in the North they are spending as if they are expecting one to develop" (Committee on National Defence 2010, 10). These sorts of statements only serve to escalate tensions, especially in the absence of a deeper security dialogue in the region. In light of every

Arctic nation's commitment to international law, and their good relations with one another, military presence for the sake of presence serves no practical purpose and must be avoided.

Nevertheless, military war fighting assets will also have to be taken into consideration. Russia's North Fleet is stationed in the Arctic, and missile defense silos at Fort Greely in Alaska ensure that the United States and Russia, the two largest military powers in the Arctic, will continue to regard the region as strategically important. The U.S. Naval Roadmap for the Arctic also identified the Navy's overriding desire to increase operating capacity in the area and uphold the principle of freedom of navigation (U.S. Navy 2009). It has been stated that "the efforts by various militaries to increase and demonstrate their Arctic operating capabilities are predominantly viewed as a symptom of military due diligence" (Rutten 2010, ii). This does not mean there should be no efforts to harmonize and cooperate between militaries of the Arctic states. On the contrary, cooperation is key to maintaining a peaceful region.

Military exercises already take place in the Arctic, one of which is Operation Nanook, carried out by the Canadian Forces. While a Canadian operation, it also has the participation of the United States and Denmark (Rutten 2010, 10). Such exercises are fundamental to the spirit of lowering tensions, increasing cooperation, and increasing "interoperability between the U.S. and Canadian navies, and among circumpolar nations" (U.S. Library of Congress 2010, 39). It would be an excellent idea for Canada to invite Russian and Norwegian participation in the exercise in the future. The United States puts on an exercise, Northern Edge, which would benefit from similar participation. There continues to be limited military capacity in the Arctic, and since countries will continue to put on exercises and develop capability in the North, every country would benefit from increased collaboration. Practices such as sending observers to military exercises and promoting joint training among special forces learning to operate in Arctic conditions all help increase the effectiveness of such operations, lower tensions through information sharing, and help with interoperability in case a real crisis emerges.

Such military cooperation would benefit highly from dialogue on the issue. Peace in the region as a whole should be upheld via a collective multinational body, rather than national militaries with national interests. Such a body does not currently exist, and this lack of an open forum for security dialogue and consensus prevents developments towards peace and cooperation in the region from moving forward. One such organization, NATO, could potentially play this role, but there are several drawbacks to its active participation.

NATO, as the preeminent military alliance in the world, could be instrumental in working out security arrangements among its Arctic member states. Former Secretary General Jaap de Hoop Scheffer has suggested that "NATO provides a forum where four of the Arctic coastal states can inform, discuss, and share, any concerns that they may have" (Scheffer 2009). This echoed the current Secretary General Rasmussen who said "I think it is within the natural scope of work for NATO to be the forum for consultation and discussion on [selected Arctic] issues" (U.S. Library of Congress 2010, 35). NATO is a military security alliance, and "there is a tendency in NATO to inch toward a role in the Arctic in the event this part of the world becomes more conflictual and alliance interests need a stronger defence" (Griffiths 2009, 22). This is an important point - the alliance's only finds a real role when an area is in conflict. The Arctic is currently at peace, and the collective defense clause – NATO's *raison d'etre* – is unaffected by Arctic developments, leaving few reasons to invite the alliance into a deeper role in the region. Scheffer's proposal that "NATO needs to identify where the Alliance, with its unique competencies, can add value" (Scheffer 2009) is duly warranted, and the alliance should be encouraged to formulate an Arctic strategy. NATO has an interest in taking a more passive role in Arctic security, since "the four NATO members… of the Five could be viewed as excluding non-Arctic members of the alliance in a "regionalization" of the organization (Griffiths 2009, 9). That is to say, placing too high of an emphasis on the Arctic risks marginalizing the more southerly members of the alliance.

In formulating an Arctic strategy, NATO must take into account Russia, which is the largest Arctic state by area and population and one of the two largest military powers in the region. It must be included in any regional discussions, following the NATO principle as stated in the 2010 Strategic Concept that "NATO-Russia cooperation is of strategic importance as it contributes to creating a common space of peace, stability and security. NATO poses no threat to Russia. On the contrary: we want to see a true strategic partnership between NATO and Russia, and we will act accordingly, with the expectation of reciprocity from Russia" (NATO 2010). Without including Russia NATO involvement risks increasing tensions and fracturing the security environment of the region. It is also important that NATO not be seen as "expanding" into the Arctic, something Russia would surely object to, but rather that NATO is a coordinating body for the security interests of its Arctic member states, who desire full Russian participation.

Public Security

Search and rescue is one area in which enhanced cooperation between Arctic state militaries is not only possible, but critical for the region as it becomes utilized more. A NOAA report recently concluded that "there is a clear need for emergency response equipment for SAR [search and rescue] and pollution response throughout the Arctic" (U.S. Library of Congress 2010, 24). Unfortunately, "the United States currently has no operational heavy polar icebreakers" (U.S. Library of Congress 2010, 31), while Canada has one which is out of date (Huebert 2009, 18). Norway recently built an icebreaker for research purposes (Hoel 2011). Russia currently operates an aging fleet of twelve icebreakers, many of them nuclear powered. This gives Russia a decided advantage when it comes to operating in the icy Arctic, and in fact "Russia has taken the lead within the [Arctic] Council for developing a plan for international cooperation in search-and-rescue activities in the region" (U.S. Library of Congress 2010, 34). The limited capacity of the other Arctic states does not allow other them to carry out search and rescue operations in their own territory let alone cooperate on an international level to provide such services beyond their territorial waters. Compounding the problem of a lack of icebreakers is a lack of infrastructure to go with them. For instance, the headquarters responsible for Canadian search and rescue in the Arctic is located in southern Ontario. The United States seems especially unprepared: "given the location of current U.S. Coast Guard operating bases, it could take Coast Guard aircraft several hours, and Coast Guard cutters a few or several days, to reach a ship in distress in Arctic waters" (U.S. Library of Congress 2010, 32). With the impending passage of the Arctic Council's Search and Rescue Treaty, it is doubtful that the United States can fulfill its obligations with its current capabilities.

Border security is another legitimate use of military assets, and an area of critical concern for the Coast Guard. Border security is identified by the Russians and Canadians specifically as threats that are emerging as the Arctic becomes more navigable. The Russians have brought up the issue at a recent meeting of the Arctic Five, and are currently creating a border security unit to operate in the Arctic (Avdoshin 2011). Canada fears the infiltration of terrorists, criminals and illegal immigrants through its northern territories (Rutten 2010, 18), and there have been several incidents already of people attempting to enter Canada illegally through northern towns (Byers 2010, 18). It is important to note, however, that the incidents reported were all stopped by the Royal Canadian Mounted Police (RCMP) rather than the Coast Guard. This signals the need for

land-based security, something which can be addressed by existing policing institutions in Arctic countries, rather than being framed as a new Arctic issue. The United States, too, has one line in the 2009 Directive that states; "develop greater capabilities and capacity, as necessary, to protect United States air, land, and sea borders in the Arctic region" (U.S. President 2009), a desire which, just like search and rescue, will be almost impossible to attain without improving the infrastructure and Coast Guard capacity in the north.

Border security is especially problematic along the long stretches of coastline possessed by the Arctic countries. It is impossible to ask Coast Guards to patrol the entire Arctic shoreline of North America and Eurasia, and as activity in the area increases it will become increasingly difficult to monitor every single vessel and individual that travels through the Arctic. Should a vessel be identified as a security risk, monitoring systems must be available to track it and allow for effective interception by Coast Guard forces if required. Canadian and Danish officials have already emphasized the need for increased surveillance (Henningsen 2011, Huebert 2009, 28), yet no country currently possesses a system of comprehensive and detailed surveillance of the sort needed to effectively police their coastlines (Russia 2009, U.S. Library of Congress 2010, 44).

Surveillance systems already exist, one of the most prominent among them being NORAD, the US/Canada joint air defense system. Officials at Foreign Affairs and International Trade Canada have expressed the desire to see NORAD coordinate Arctic security organizations, be active in deflecting terrorists, step up marine monitoring, and coordinate defense, police, and security (Fawcett 2011). The expansion of NORAD's capabilities to the Arctic would be a valuable asset in border security. The Canadian RADARSAT-2 and Constellation polar satellites should be integrated into current surveillance mechanisms, as the primary barrier to satellite monitoring currently is the lack of satellites in high latitude orbits (Huebert 2009, 27). NORAD only covers North America, and if security is to be considered as a whole the European countries will have to be included in monitoring. Russia is already working on a surveillance system for its Arctic, which includes both satellite imagery and communications links to help it police its Arctic waters (Russia 2009). Ideally through the Russian system and NORAD, both the North Sea route and the Northwest Passage could be monitored. With effective and expedient sharing of data, all countries could utilize this joint monitoring system to identify potential threats and dangers in a timely fashion.

Disaster response is one additional area in which the Coast Guard must be involved, and along with search and rescue it is the most important area in which to foster cooperation. As is explained in the chapter 1, an oil spill within the Arctic is far more hazardous than it would be in southern latitudes, and the trans-national character of spills makes it essential for a coordinated regional response. As energy extraction and shipping in the region increases, disaster preparedness is essential since, "even under the most stringent control systems, some tanker spills, pipeline leaks, and other accidents are likely to occur from equipment leaks or human error" (U.S. Library of Congress 2010, 23). The 2010 Munk survey found that only 11 percent of Canadians felt that Canada was well equipped to deal with a disaster in the Arctic, and when one considers the lack of icebreakers among both Canada and the United States, this sentiment seems reasonable (Munk 2010, 27). Without adequate response to an oil spill or other natural disaster, the communities of the Arctic are at an increased risk, isolated as they are from services further south.

Human Security

As stated previously, the U.S. presence in the Canadian north has had a heavy impact on indigenous communities. Many communities settled at, and are still located around bases and installations built during the Cold War (Arteau 2011). The military thus is inadvertently impacting the human security of these people while attempting to promote national security. Radar installations throughout the Arctic, abandoned by the United States, still require clean up and affect the ability of communities to protect their environment (Arteau 2011). Similarly, the crash of a U.S. bomber holding nuclear material at Thule Air Base in Greenland polluted the environment, requiring the removal of over 1.6 million gallons of ice and snow (Strategic Air Command 1968, 55). Inuit have always focused more on the human dimension of sovereignty, simply meaning that "along with the building of military infrastructure in the region we also need to build sustainable communities" (Committee on National Defense 2010, 15). Reiterating this, Quebec MP Claude Bachand has said "military training up north can only be accomplished with the manpower and support of northern communities" (Bachand 2010). Echoing this statement, one Canadian MP has said "No plan to increase Canada's presence in the Arctic can go without collaborating with the people who have made the Arctic their home" (LeBlanc 2010).

The effects of military installations in northern communities is not fully understood, and it is hard to identify the effects as entirely good or bad when one considers the employment

opportunities, social and cultural impacts, environmental degradation, and infrastructure that comes with military bases. This needs to be understood though, especially to empower indigenous groups to make informed decisions when governments ask (or don't ask) to use their land for increased military presence. The Arctic Council is an appropriate forum for indigenous groups and states to come together to discuss these issues, and a new Working Group within the Council would provide a thorough and inclusive assessment on the human impact of the militarization of the region.

Conclusion

In all three areas of security, the Arctic Council can play a constructive role. Currently, the major barrier to opening the Arctic Council to discussions of security is United States' opposition. Still, the United States has shown signs of a shift in its position, and if it acquiesces to a broadening of the Arctic Council's mandate, security dialogue could find a home there. Over half of the public in every Arctic Council member state supports the expansion of the Council's role to include military security (Munk 2010, 47). An official at the Russian Embassy in Canada said that a broadening of the mandate could occur, so long as the Council was restructured and better organized to handle a larger responsibility. Canadian officials have said that putting peace and security on the agenda is essential to keep the Council relevant in coming years (Fawcett 2011). Norway favors a strengthening of the Council, as does Iceland, with the establishment of a permanent secretariat and additional funding (Hoel 2011, Thordardottir 2011). This shows a willingness to increase the role of the Arctic Council by most member states.

U.S. officials, on the other hand, have asked what the United States has to gain from strengthening the Arctic Council. If the Arctic Council was allowed to discuss security matters, it would produce a strong, multilateral foundation for the pursuit of peace and stability in the region. It is not enough to simply look after the security of one slice of the Arctic when one of the defining features of the region is its trans-national character. Again though, security must be broken down into public security and military security. The United States desperately needs the support of its Arctic neighbors to effectively prepare and respond to the public security challenges which will arise in the coming years. In the realm of military security, while the Arctic Council cannot and should not formulate military treaties and national defense policy, it can still act as a venue for discussion on military activity in the area and appropriate responses, moderated by all Arctic nations as well as the Permanent Participants. Peace must be held as a

common interest of all Arctic states and people in order to make sure the transformation occurring in the Arctic ends with a stable, productive, and healthy region rather than one marred by tension, nationalism, degradation and conflict.

IV. Recommendations

Primary Recommendations:

- All Arctic states must assess the practical value of any military deployments to the region to avoid the stationing of assets simply to indicate a state's presence. Limit military deployments to those which serve an active role in increasing public security and development, such as ships and reconnaissance aircraft that can be used for resupply, search and rescue, and enforcement of shipping and environmental standards.
- The United States must increase U.S. Coast Guard funding to allow it to fully execute its mandate in the Arctic and meet future challenges, focusing on immediate acquisition of new icebreakers and supporting infrastructure in Alaska.
- The U.S. Coast Guard must increase cooperation with the Coast Guards of other Arctic states, including involvement in joint search and rescue operations, training, vessel interdiction, and inspection and border security.
- The North American Aerospace Defense Command must initiate real-time information sharing between Arctic states by establishing high level contacts between NORAD and other regional monitoring organizations. This includes assessing the feasibility of integrating NORAD's surveillance capacity with other Arctic monitoring systems such as the Canadian RADARSAT-2 and Russian GLONASS satellite systems.
- Arctic Council member states must broaden the Council's mandate as it is restructured in coming years to include peace-related issues, and officially identify peace and stability of the region as a common interest within the Arctic Council. Specifically, by creating a Working Group on the impacts of military equipment and infrastructure on the environment and indigenous communities.

Following Recommendations:

- Increase military confidence building measures in the Arctic by inviting other Arctic nations, via the Arctic Council, to participate in and observe military exercises that happen in the Arctic region. Increase joint training missions between Arctic military elements, especially special forces training.

- NATO member states should encourage the Alliance to formulate an Arctic strategy which puts the Alliance as more of a passive safeguard in the region than an active presence. This must be done with the full participation of Russia.
- Place as a high priority solving ongoing territorial disputes both marine and land via international law in a respectful and expedient manner which gives benefit to all countries involved and demonstrates the strong spirit of cooperation and compromise in the Arctic.

Chapter Six

Food Security in the Arctic: Canada and Alaska

Monica Chahary

Abstract

Food security is one of the most important components of human security in the Arctic. Inuit in Canada and Alaska have lived in the Arctic since time immemorial and exercised their rights over the lands to hunt traditional foods for subsistence. Many of these foods, such as seal, fish, caribou, and beluga, are being threatened today by harmful contaminants that are being carried to the Arctic at increased rates, due to human-induced climate change. As persistent organic pollutants, mercury, and other toxins contaminate these animals, the health of Inuit populations becomes threatened. With climate change transforming the Arctic environment, the potential for increased economic development in the Arctic is also threatening the future habitat of these animals. Along with threats to traditional and country foods, there is great concern over access, availability, and affordability of imported foods. These issues, in the context of food security, relate directly to cultural tradition and community. The urgency to address concerns related to food security is greater than ever before as the effects of pollutants from around the world are compounding other challenges to Inuit communities posed by climate change.

I. Background

Human Dimension & Food Security

The notion of food security is certainly not the first thing that comes to mind when considering the effects of climate change, greenhouse gas emissions, and pollutants in the Arctic region. So far, this Task Force report has evaluated climate change and related challenges to governance in areas receiving widespread media attention in chapters 1-5: the environment and natural resources, commercial shipping, the Northwest Passage, and security concerns. However, another component to security, that is less discussed but immensely important, is the human dimension. According to the International Human Dimension Programme (IHDP) on Global Environmental Change, human security is one of the only concepts that highlights what is at stake in relation to climate change, biodiversity loss, land cover changes, and degradation of marine ecosystems (IHDP 2009). In assessing the human dimension of Arctic issues, one of the most relevant aspects and areas of concern is food security. Considering that food security is a missing piece in many Arctic policy discussions, this chapter will address issues involving food security for indigenous populations in the Arctic, with a specific focus on Inuit populations in Canada and the United States and will conclude with offering policy recommendations.

The United Nations' Food and Agriculture Organization first introduced the concept of food security in 1974 amid a food crisis, affecting numerous developing countries (United Nations 1974). The definition was initially given a limited meaning, referring to the availability of food supply to meet the needs of populations (United Nations 1974). In later years, the definition expanded to include more than just the notion of food availability; in 1996, the World Food Summit established a definition that has since been readily adopted in many academic discussions surrounding food security. The World Food Summit defines food security to be the point at which "all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO 1996). The definition's inclusion of "food preference" is particularly important for this chapter as "Inuit people's food security does not solely rest on their capacity to acquire healthy market food" (Theriault 2009, 237). In other words, choice is important, and the Inuit consider traditional foods such as caribou, seal, and fish favorable to their health (Lambden et al. 2007, 314).

In 2004, the Arctic Climate Impact Assessment (ACIA 2004) became one of the first reports to emphasize the impacts of climate change on animal herds, such as caribou, and the impacts these changes will have on the food security for the peoples who depend on them for food (ACIA 2004, 73). Food security issues regarding traditional foods, such as caribou, and seal, mainly concern whether they are safe and free of contaminants, while issues surrounding non-traditional foods focus on their healthiness, affordability, and accessibility. The importance of country foods, also known as "traditional foods", will be emphasized in relation to cultural significance, along with the various challenges that exist in accessing healthy and affordable, "non-traditional" market food (Furgal and Rochette 2007, 3).

According to Mary Simon, President of the Canadian national Inuit Tapiriit Kanatami (ITK), eating what is hunted is at the very core of what it means to be Inuit (Simon 2004a). Simon affirms that when Inuit can no longer hunt on the sea-ice and eat what they hunt, they will cease to exist as a people (Simon 2004a). Whether or not one chooses to agree with this statement, it is hard to argue against the fact that traditional hunting, fishing, and gathering practices in the Arctic have long been a huge part of cultural subsistence practices for the Inuit. According to Simon, "human-induced climate change is undermining the ecosystem upon which

Inuit depend for their physical and cultural survival" (Simon 2004a). This threat to traditional foods is a threat on Inuit culture.

Furthermore, the threat that contaminants pose for Inuit cultural integrity and food security relates directly to their sovereignty and rights as indigenous peoples in the Arctic. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) outlines various rights that relate to sovereignty and self-determination (U.N. General Assembly 2007). Many of the articles outlined in the UNDRIP are referenced in the Circumpolar Inuit Declaration on Arctic Sovereignty, which will be further analyzed later in this chapter. Article 29 of the UNDRIP states that indigenous peoples have the right to conservation and protection of their own environment, which relates directly to issues surrounding contaminants and pollution effecting traditional food consumption in the Arctic (U.N. General Assembly 2007). More generally, Article 11 of the UNDRIP points to rights relating to the ability to practice and revitalize cultural traditions and customs, which can be further related to the overall concern of human security in the Arctic (U.N. General Assembly 2007).

Threats to Traditional Food

Over the last decade, persistent organic pollutants (POPs) and other toxic substances affecting the Arctic food chain, and ultimately Inuit populations, have greatly threatened food security (Theriault 2009, 225). Figure 1 illustrates how some of these contaminants and pollutants move around the world and later exchange with different systems in the Arctic. As mentioned, POPs are of critical importance in discussing contaminants issues in the Arctic. More specifically, POPs are carbon-based organic chemical substances that possess particular properties that, when released into the environment, pose toxic threats to both humans and animals (Stockholm Convention 2008).

Today, these pollutants are found in people and animals living as far north as the Arctic, despite being thousands of miles away from where these pollutants have predominately originated (Stockholm Convention 2008). Studies on contaminants and their effects on traditional food resources in the Arctic date back to the 1980s. In one pivotal study completed in 1987, the amount of PCBs (polychlorinated biphenyls) and pesticides in the breast milk of Arctic mothers was found to be up to ten times more than that of the mothers in some of Canada's largest cities in the south (Cone 2005, 31). Marla Cone details the historical significance of these tests and points to the fact that decades went by with the knowledge that these contaminants

existed in the north and were having adverse effects on Inuit peoples' health (Cone 2005, 39). However, in more recent years, these issues have gained greater attention. The Stockholm Convention in 2001 is of particular importance in the conversations surrounding contaminants, toxins, and general pollution of the Arctic, as it is an international initiative aimed at combating growing, worldwide concerns over POPs (Fenge and Downie 2003, 22). This treaty was created to help protect human health and the environment from chemicals that have become globally distributed such as the POPs that have accumulated in the fatty tissue of humans and wildlife (Stockholm Convention 2008). Inuit traditionally consume many of these animals, and exposure to these contaminants, from animals that are hunted or fished, can later lead to adverse effects on health (Stockholm Convention 2008).

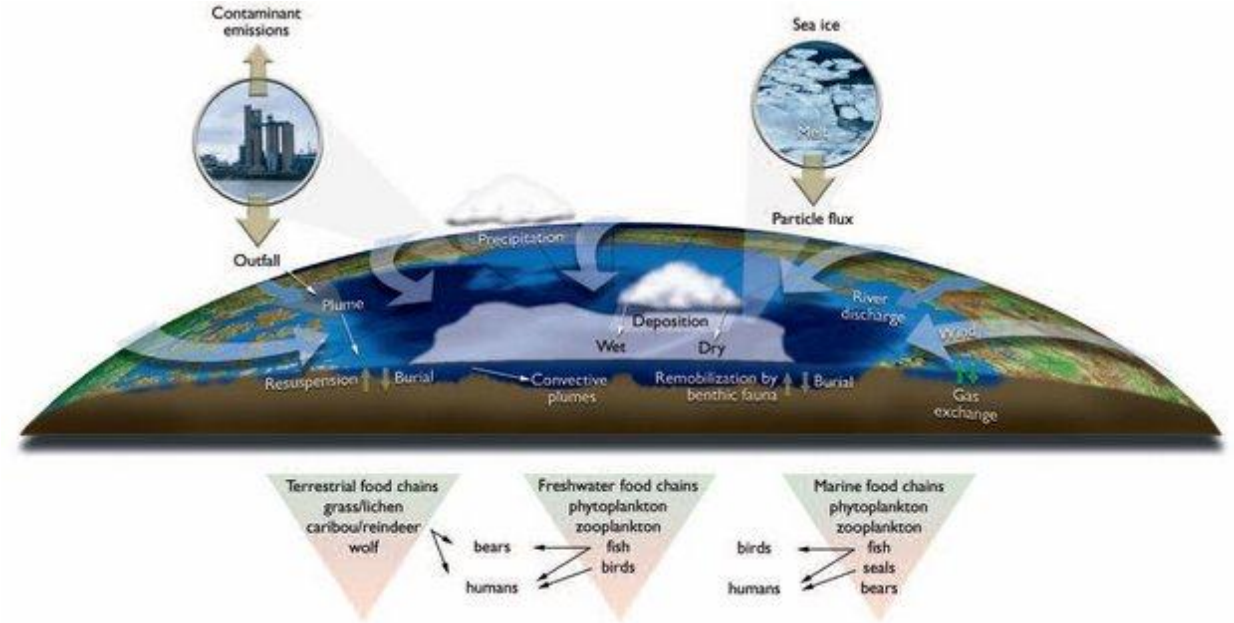


Figure 1. AMAP 1998 Assessment Report: Arctic Pollution Issues.
Image by Arctic Monitoring and Assessment Programme (27 February 2011)

The issues surrounding POPs cannot be mentioned without making note of Inuit leader Sheila Watt-Cloutier; an Inuit activist in the fight towards a POPs-free world (Fenge and Downie 2003, 256). The threat to Inuit country food and way of life drove Watt-Cloutier to pursue this issue on a global scale. As former president of the Inuit Circumpolar Council, Watt-Cloutier turned heads on the international level representing a 150,000 world-wide Inuit population as she sought international support through the United Nations for her cause (Fenge and Downie 2003, 258). The Stockholm Convention's success is in part due to Watt-Cloutier's work in raising awareness about the effects pollutants and contaminants coming from around the world are

having on the Arctic. Today, she remains hopeful in the notion that the convention will eventually make eating country foods safe once again (Fenge and Downie 2003, 267). This is important for Inuit, since not only are traditional foods nutritionally beneficial, they are often preferred over non-traditional foods and remain a significant cultural staple of the Inuit diet (Berkes 2005, 27-32).

Market Food in the North: Food Insecurity

Northerners, in recent years, have been increasingly exposed to imported foods, or market foods, which have their own set of health concerns. Issues regarding accessibility, affordability, and availability of market foods are also of significant concern (Duhaime and Bernard 2008, 133). With high transportation costs, market foods remain expensive, and fresh produce is more susceptible to spoilage due to the time it takes for it to reach Arctic communities (Duhaime and Bernard 2008, 124). Regardless, a large majority of total calorie intake for many northerners comes from market foods (Duhaime and Bernard 2008, 77).

Consumption of imported foods often goes hand-in-hand with nutritional deficiencies among some northern Canadian communities as a result of many of these foods not providing a healthy source of nutrients (Duhaime and Bernard2008, 77). One of the most significant problems arising with increased consumption of market food has been a rise in obesity and diabetes, which Selling further discusses in chapter seven of this Task Force report (Duhaime and Bernard 2008, 89). This is linked directly to a more sedentary lifestyle and generally an increased intake of carbohydrates from market foods (Duhaime and Bernard 2008, 89).

In Canada, the cost of food in the North is sometimes as much as 80 percent more expensive than in the South, according to recent estimates provided by Indian and Northern Affairs of Canada (INAC 2011). Recently, the price of food in the Arctic has gained national attention. CBC News reported on the recent changes in costs with the implementation of the new Nutrition North Program (introduced last year); commercial grocery stores in the Canadian Arctic have been observed as charging as much as CAD $38 for a bottle of cranberry cocktail, CAD $29 for a can of Cheez Whiz, and CAD $77 for a bag of breaded chicken (CBC News 2011). These high costs have to do with a lack of infrastructure and the cost of transporting food. Most food is transported by air, but as Herke discusses in chapter two and as Hamed and Hruska discuss in chapter three, maritime shipping through ice-free waterways is increasingly becoming a possibility (Duhaime and Bernard 2008, 90).

The Nutrition North Program is replacing the Food Mail Program, which is a federally funded initiative that helped offset some of the high costs of transportation for roughly the past two decades (Duhaime and Bernard 2008, 90). According to Mary Simon, the new program promises to trim spending by removing the Canada Post as an unnecessary middleman. The goal is to redirect more funds towards improving access, cost effectiveness, and quality of food (Simon 2010b). The Nutrition North subsidy instead goes to retailers, which in turn negotiate their own freight rates with airlines (Simon 2010b). Retailers are then expected to pass on savings from the subsidy to consumers. Whether these initiatives will be fully realized is something that has yet to be observed as the program's final stages of implementation will take place later on this year.

Key Players in Arctic Policy

Each Arctic Council member state holds a unique position and interest in the circumpolar world and has or is scheduled to release an Arctic policy statement by the end of 2011. The Permanent Participants on the Council represent the interests of six different indigenous groups, with the largest being the Inuit Circumpolar Council (ICC), which represents Inuit in Alaska, Canada, Greenland, and Russia. The ICC will be a key player in analysis for this paper as it stands as one of the largest voices, in terms of representation and capacity, among the Permanent Participants on the Arctic Council. The Inuit Tapiriit Kanatami (ITK) is the national voice for Inuit in Canada and is a central focus of this chapter as Mary Simon is a leading figure today in discussions surrounding food security. ITK does not have a position on the Arctic Council, but they are important players in Inuit rights activism. The Arctic policies of the United States and Canada will be the main focus of analysis in this chapter, along with further introduction and analysis to how other Arctic policies and indigenous groups relate to the various concerns discussed. Multiple declarations will also be assessed through the lenses of human security and eventually linked back to the importance of food security in the Arctic.

In the proceeding analysis of these Arctic policies and declarations, an emphasis will also be made on Arctic sovereignty and the Inuit right to self-determination. Particularly in the case of Alaska, this goes hand-in-hand with their sovereign right to be able to continue to exercise their traditional hunting, fishing, and gathering practices without fear of harming their health due to contaminants that have reached the Arctic from other areas of the world. The right to these lands and proper nutrition will be argued as being an integral part of retaining cultural

sovereignty and cultural integrity, which all fall under the overarching issue of food security in the Arctic.

II. Need for Action

Persistent organic pollutants and other toxic contaminants like mercury are a huge threat to the environment and ecosystems of the Arctic. The concerns are even greater as they are compounded by the threats of climate change and melting ice. Today, for example, the threats associated with melting permafrost and structural instability throughout communities is a serious reality (INAC 2011).

Traditional food remains a significant part of Inuit cultural integrity and the threat of POPs and other toxins, which are compounded in the changing Arctic environment, need to be taken into greater consideration in discussions on food security in the North. As a result of this threat to food security, Inuit culture is at stake on two different fronts. Not only are traditional foods such as fish, caribou, and seal now a potential health threat due to contaminants, but challenges regarding access, availability and affordability of market foods exist as well. The need for governments to address and begin dealing with these issues is greater than ever before.

The Arctic is an example of what could happen elsewhere in the world because the effects of climate change compound the effects of contaminants on human security and more specifically, food security. There continues to be a need for action in terms of educating the rest of the world about the Arctic and the effects of pollution originating in the South. This need in drawing awareness around the world is perhaps best expressed in the following excerpt from a 2004 speech given by Mary Simon at an event in New York City:

> Some might dismiss our concerns saying: "the Arctic is far away and few people live there." That would be immensely short-sighted as well as callous. The Arctic is of vital importance in the global debate on how to deal with climate change. That's because the Arctic is the barometer of the globe's environmental health. You can take the pulse of the world in the Arctic. Inuit, the people who live farther north than anyone else, are the canary in the global coal mine. (Simon 2004a)

Southerners in the United States and Canada, as well as elsewhere, need to realize that their actions, in terms of pollution, are affecting the lives and health of people thousands of miles away. The need for putting a human face to climate change is critical in today's world. Working to protect those individuals that are suffering, from the effects of human induced climate change, needs to be among the top priorities for all Arctic policy makers.

III. Evaluation & Analysis

Policies in the Arctic: Human Dimension

Each member state on the Arctic Council today either has a current Arctic policy, or is scheduled to release one later this year. It is important to evaluate how much consideration is given to the "human dimension" in shaping each nation's Arctic policy. However, given the Canadian and U.S. focus of this chapter, these particular policies will be examined in greater detail. The Circumpolar Inuit Declaration on Arctic Sovereignty and the Nuuk 2010 Declaration will also be analyzed in this section, as they capture what matters most to the Inuit.

With the Inuit making up the majority of indigenous inhabitants of the Arctic in the United States and Canada, there are other indigenous groups, the Sami being perhaps the most well-known that have organized and asserted their rights in their respective nations. The Sami are an indigenous group of peoples living in the far north throughout Scandinavia and parts of Russia. Although Sweden's Arctic policy has not yet been released, Norway and Finland both give significant mention to the cultural protection and strengthening of the rights of the Sami people (Finland 2010, 32; Norway 2009, 42). According to Norwegian representatives, the Sami are consulted in decisions being made that would affect the areas where they live (Hoel and Sletbak 2011). Similarly, the Sami exercise their sovereignty through the governance of their own Sami Parliament, established in 1987 (Hoel and Sletbak 2011). Despite this information not being directly related to previous discussions specifically focused on the Inuit, it is important to analyze in comparison to the United States and Canadian Arctic policies.

In 2000, Canada came out with a document entitled, The Northern Dimension of Canada's Foreign Policy. This particular policy was heavily focused on the "human dimension" in the Arctic, via the promotion of human security of northerners (Canada 2000, 2). Their concern is evident in the very first line of the policy statement: "both the tradition of transnational co-operation and the new emphasis on human security are particularly applicable to the shaping of the Northern Dimension of Canada's Foreign Policy" (Canada 2000, 1). Among their top four objectives, the top objective listed was that of enhancing the "security and prosperity of Canadians, especially northerners and Aboriginal peoples" (Canada 2000, 2). A decade later, with a new policy entitled Statement on Canada's Arctic Foreign Policy, human security is even less of a focus than it was before. Instead, Canada emphasizes that exercising sovereignty over Canada's North is their number one Arctic priority (Canada 2010, 2).

However, Canada's current Arctic policy does not forget to mention the importance of their sovereignty being based on the presence of Inuit. This is emphasized in the beginning section of Canada's policy:

> Canada has a rich history in the North, and Canada's sovereignty is the foundation for realizing the full potential of Canada's North, including its human dimension. This foundation is solid: Canada's Arctic sovereignty is long-standing, well established and based on historic title, founded in part on the presence of Inuit and other indigenous peoples since time immemorial. (Canada 2010, 5)

Highlighting the emphasis on Canada's sovereignty and how it relates to the presence of Inuit in the Arctic has profound implications. Some of these implications are the social and economic responsibilities on the part of the government to "improve[e] the social well-being of Northerners" (Canada 2010, 10). Despite not putting human security on the forefront of what is discussed for Canada's Arctic policy, it is still present. In tying together the implications and importance of human dimension, one can see where food security fits in, as one of the most important aspects of human security.

On the other hand, the United States' Arctic policy is missing any sort of emphasis on human security in its policy statement, which was released in 2009. Although some mention is given towards "involving" the Arctic's indigenous communities in decisions that will affect them in the North, there is hardly any attention given to the human dimension (U.S. President 2009). The significance in making comparisons within these Arctic policies is to highlight how much focus is given to the human dimension in the Arctic on the policy-making level.

Lastly, the Inuit Declaration on Arctic Sovereignty and the 2010 Nuuk Declaration are important in the conversations surrounding Arctic policies, since they significantly represent the human dimension and human security. In other words, these declarations represent the people who actually live in the Arctic. The first statement in the Inuit Declaration on Arctic Sovereignty states the following: "Inuit live in the vast, circumpolar region of land, sea and ice known as the Arctic. We depend on the marine and terrestrial plants and animals supported by the coastal zones of the Arctic Ocean, the tundra and the sea ice. The Arctic is our home" (ICC 2009, 1). This statement points directly to the importance of animals as a food source for the Inuit in the Arctic. With that, it is emphasized in relation to the Arctic being home, in other words, sovereign Inuit territory.

The Nuuk Declaration, also drafted by the Inuit Circumpolar Council, emphasizes more directly the importance of food security as it urges the following:

> Address the negative impact on Inuit food security brought on by the effects of contaminants, climate change, and regulatory decision taken by others on polar bears, seals, and other mammals and Urge ICC to incorporate Inuit food security issues into its work on health, nutritious foods, sustainable utilization of wildlife, contaminants, biological diversity, and climate change. (ICC 2010, 5)

This statement within the Nuuk Declaration points to the growing attention around the issue of what food security means in the Arctic, and most importantly, how outside factors are harming food security for Inuit peoples. Unfortunately, climate change is likely to accelerate the rates of contaminant transfer to the Arctic, so the time could never be more appropriate to continue seriously implementing policy changes to protect food sources in the Arctic (ACIA 2004, 75).

Alaska and Canada

The effects of climate change, compounded with POPs, mercury, and other contaminants, all pose a threat to the Arctic regions of Alaska and Canada. In Alaska, just like in the Canadian Arctic, communities often rely on a mixed economy of cash and country food, such as whales, seals, caribou, and fish, as Richard A. Caulfield describes in his report titled, "Food Security in Arctic Alaska: A Preliminary Assessment" (Duhaime 2002, 75). According to food surveys conducted throughout various Inuit communities, traditional foods provide anywhere from about twenty to forty percent of total caloric intake in peoples diets (Theriault 2009, 237).

According to Caulfield, the major issues affecting food security in northern Alaska are subsistence conflicts, contaminants in country foods, global climate change, industrial development, habitat degradation, and animal rights activism (Duhaime 2002, 75). In considering all these issues, one can see the cultural and historic importance of Inuit in the Arctic and how external factors are affecting their livelihoods. This makes it even harder to ignore the fact that Inuit need to be consulted in the decisions that affect their environment in the North, as so many things affect their food security and, therefore, their cultural and sovereign rights to the lands they have inhabited since time immemorial.

Historically, it is important to take into consideration the long-standing relationship of land-claims and native subsistence rights issues between the Inuit in Alaska the state and federal government. The following excerpt from a 2005 article, "The Legal Protection of Subsistence: a Prerequisite of Food Security for the Inuit of Alaska", illustrates where some of the problems lie.

"One aspect is dual federal and state land management, which creates confusion for subsistence users and hampers the sound management of fish and game resources upon which the sustainable availability of food depends. Another problem is the defective or limited subsistence priority afforded by both the state and federal regime" (Theriault 2005, 85). The importance of securing these rights is only becoming more significant. For example, Alaska's Inuit Circumpolar Council (ICC) December 2010 newsletter affirmed that the board recognizes "food security and hunting" as a top priority for the organization (ICC Alaska 2010, 1).

Inuit diets in both Canada and Alaska incorporate imported foods and the same issues of health concerns, affordability, and availability exist in both regions (Duhaime 2002, 75). Outside foods are delivered to rural communities by means of air or sea (Duhaime 2002, 87). Increased infrastructure could help resolve some of the issues faced by inadequate access to affordable and healthy imported foods in the Alaskan Arctic. Both country foods and market foods need to not only be a top priority for the ICC in Alaska, but for legislators and policy makers in the state and in the federal government in order to push for changes and increased food security for Inuit in Alaska.

In Canada, ITK has recently taken the initiative to draft the National Inuit Food Security Strategy. Mary Simon, as previously quoted, speaks to the various issues surrounding food security, covering topics ranging from hunting security to poverty and starvation. In a May 2010 speech, Simon was quoted in saying that "more than 70% of households in Nunavut with pre-school children experience food insecurity in the course of the year" (Simon 2010b). Coupled with the previously mentioned issues regarding food security, such as high costs or threats of contaminants, this statistic is an unfortunate addition to the list of challenges and concerns. Fortunately, in some communities in the north, particularly in region of Nunavik, community freezers exist where people have shared access to free traditional foods (Makivik Corporation 2011). Increasing funding for initiatives, such as this, is one way communities can work to combat food insecurity in regards to inadequate access to food.

The Future of Food Security

Previous chapters in this report detailed the effects of increased shipping and resource exploitation could have on regions in the Arctic. Complex issues regarding development in regions such as the Mackenzie River Valley already exist and with the effects of climate change increasing, interest in the region for resource exploitation will only increase. Furthermore,

shipping passages can also pose threats to the ecosystem if traffic is not regulated on the strictest levels possible.

According to the ACIA, "retreating sea ice will increase access to the region via the Northern Sea Route" and this is "likely to increase development, with potentially detrimental effects on local people and their traditional cultures" (ACIA 2004, 117). The potential for increasing economic well-being of Inuit communities exists as well, with the result of oil and gas development bringing both financial benefits and costs in the future (ACIA 2004, 119). As mentioned in former chapters, a huge element of balance is going to be most critical in terms of development and increased traffic throughout the north. The Inuit need to be consulted on matters of development in the North, as many factors may be detrimental to their already threatened livelihoods.

> Alaska Natives are experiencing first-hand the impacts of the changing climate and have traditional knowledge about the animals' biology, migrations and ecosystems. The conservation community must work with Alaska Natives to understand their concerns about ice dependent marine mammals, climate change, subsistence, and the human activities that are increasing in the Arctic such as offshore oil and gas activities… all stakeholders should try to work cooperatively to figure out creative ways to advocate for greenhouse gas reductions and mitigation measures for new Arctic development. (Marz 2006, 16)

The above quote, from the 2006 Ice Dependent Marine Mammals Report, points to the need for critically assessing the potential costs and benefits in Arctic development. The costs and benefits on human security to those that would be, and currently are, most affected by changes happening in the Arctic, need to be taken into particular consideration.

Furthermore, the issues that already exist in terms of access to food relate directly to the ability to exercise Inuit sovereignty. More specifically, food security for Inuit communities largely depends on the "recognition and protection of their rights to access their ancestral lands, waters, and resources, either for subsistence purposes or for sustainable economic development projects" (Theriault 2009, 238). Whether it manifests in conversations regarding development or contamination issues relating to traditional food, the Inuit need to be consulted. The implementation and recognition of Inuit sovereignty and threats to food security needs to be recognized on the national level, as well as continually through (representation in) the Arctic Council.

The Arctic Council is one of the most important organizations for Inuit and other indigenous peoples in the Arctic to voice their concerns, interests, and insights. One example of how research efforts have been made to combat contaminant threats in the future has been the establishment of a Working Group called Arctic Contaminants Action Program (ACAP). It is important to reemphasize the importance of food security on the Council's level as many of the concerns discussed do not only relate to the United States and Canada, but to all the member states and permanent participants. The Declaration on the Establishment of the Arctic Council in 1996, interestingly made the following statement as their first affirmation: "our commitment to the well-being of the inhabitants of the Arctic, including special recognition of the special relationship and unique contributions to the Arctic of indigenous people and their communities" (Arctic Council 1996). Over the past decade since this declaration was created, there is no doubt that interests in the Arctic have increased, and the "well-being" of indigenous populations is not always cast as one of the top priorities, as it appears to be in the Council's 1996 declaration. The need is greater than ever to bring more focus to the "human security" of the Inuit that live in the Arctic, and how their livelihoods and cultural integrity can be protected for generations to come.

IV. Recommendations

In light of the concerns surrounding threats to food security in the Arctic for Inuit, both in Canada and the United States, there remains great room for improvement. As previously mentioned, the need for human security to be among discussions in the Arctic is greater than ever before. The following recommendations propose a number of solutions in which the United States, Canada, and Arctic Council as a whole could engage in towards combating issues specifically threatening food security for Inuit in the Arctic:

- All members of the Arctic Council, including the United States, Russia, and Greenland (Denmark) should sign and ratify the 2001 Stockholm Convention on Persistent Organic Pollutants.
- The Arctic Council should increase funds towards educating southerners about the harmful effect pollutants from around the world are having on the humans living in the Arctic.
- Canada and the United States should focus on a more bi-lateral relationship in terms of not only security, such as military threats or illegal immigrations, but also human security.
- The United States and other Arctic nations need to place human security as a greater priority in policy making.

- Permanent members of the Arctic Council should work collaboratively towards a shared interest in the initiatives needed to guarantee food security for indigenous populations in the Arctic.
- Canada and the United States should guarantee access to healthy and affordable imported foods through government funded subsidies.
- Canada and the United States should increase infrastructure in the Arctic, with more ports and planes for increased access to food via community resupply.

Chapter Seven

Public Health and Education Policies in Arctic Indigenous Communities

Kim Selling

Abstract

Education and public health are inextricably linked, and the indigenous populations of the Arctic have received very little funding or attention to improve their circumstances. Many of the issues rampant in indigenous populations in the Arctic would be relieved, if not solved outright, if these communities were given a concrete and sovereign voice in policy-making regarding their own health and security. Inuit in particular, especially in Nunavut, have been instrumental in bringing about important infrastructural changes for their own communities across the Arctic, but still more needs to be done by the Inuit and the Canadian government together with a specific focus placed on the arenas of education and public health. Educational improvement would clearly decrease the rates of unemployment (and tangentially suicide and alcoholism), as well as lead to extensive and varied research at post-secondary institutions that could aid in staving off future pressing issues that might affect Inuit in the Arctic.

I. Background

The state of indigenous communities in the Arctic varies greatly depending on the region. This chapter will focus on Inuit communities in Northern Canada as a key demographic example of health and education-related issues within indigenous groups. The health and education foundations in Inuit-populated regions are not strong, and currently need special attention. There are policies in place that were developed specifically to bolster these foundations, but there is more that could be done by the communities and the federal government together to improve the state of Inuit groups.

To be clear, the Inuit of Canada are a large and politically cohesive ethnic group that has been as vocal as possible in cementing better care for their own within the context of public health and education. One of the key reasons for this chapter is to outline certain ways in which the community has been relegated to second-class status, and how such relegation can be rectified through the implementation of improved policies. The Canadian government, more specifically Indian and Northern Affairs Canada (INAC), has more recently been instrumental in responding to the needs of Aboriginals in Canada. However, as Inuit have historically been referred to as a sovereign ethnic nation within the country, they were not paid the proper amount of attention as befitting Canadian citizens.

Originally, the Canadian government maintained an official policy of encouraging Inuit to retain their traditional way of life with regards to education. Until the mid-twentieth century, children would receive instruction from their elders, and the government would not interfere (Bonesteel and Anderson 2008, 82). An agreement regarding federal administration of Inuit education was made in 1955 between the Northern Administration Branch of the Department of Northern Affairs and National Resources, the Indian Affairs Branch of the Department of Citizenship and Immigration, the Northwest Territories Council, and the Roman Catholic and Anglican churches; under this agreement, the federal government assumed responsibility for all schools but agreed to partially fund church-run hostels that housed students while they attended school. This was one of many agreements made in the 1940s and 1950s that shifted the responsibility of education to the federal government (Bonesteel and Anderson 2008, 83).

At first, the federal system for Northern education adopted the curriculum that was standard in southern Canada, which meant that the subjects covered and the methods of instruction used were foreign to Inuit students, and required Inuit to learn English. Such a divide brought about forced acculturation to a degree in Inuit regions, as there was no other educational system provided at the time (National Aboriginal Health Organization 2008, 31). Therefore, in addition to requesting more culturally sensitive curricula from the federal government, leaders of Inuit communities expressed interest in programming that would educate adults and help parents understand the government's goals for their children's education (Bonesteel and Anderson 2008, 83).

Groups like Inuit Tapiriit Kanatami (ITK) have made recommendations for foundational changes that would reduce present inequities between the educational preparedness of Aboriginal Canadians and that of non-Aboriginal Canadians. The Inuit community is currently working towards the creation of a more extensive formal education network in the region. One key motion is the development of the Inuit Education Accord, which was signed into effect in April 2009 by several high-profile Inuit civil leaders. The Inuit Education Accord seeks to design an educational system based on the Inuit societal and cultural worldview, and delivered in the Inuit language, that would be comparable to the education standards already available to other Canadians (Hendrie 2009). The vision therein is heavily based upon the ability to construct a future for Inuit youth in education without having to sacrifice culture or tradition. In addition, the specific purpose of the accord itself was to bring the Inuit as well as partner organizations and

governments together to establish the National Committee on Inuit Education, which would in turn develop the National Strategy on Inuit Education.

In 2009, multiple Inuit and Canadian leaders convened for the first meeting of the National Committee on Inuit Education (NCIE), which identified a plan to create a National Strategy on Inuit Education within a year. The goal of this strategy was to eliminate the gap in Inuit educational outcomes and to achieve educational success for Inuit comparable to Southern populations. Inuit currently have the lowest graduation rates in Canada; according to Statistics Canada, 61 percent of Inuit aged 25 to 64 have not completed high school, compared with 23 percent of non-Aboriginal Canadians (Hendrie 2009). Because of this, the NCIE summit identified six essential themes to be elevated for further development: capacity building, graduating students fluent in Inuktitut and either English or French, mobilizing partners, investing in comprehensive curriculum, building post-secondary success, and collecting and sharing information across provinces (Inuit Tapiriit Kanatami 2008). All themes can be applied to early childhood education, K-12 instruction, and post-secondary studies.

The Report on the Inuit Tapiriit Kanatami Education Initiative outlines several problem areas that could easily be remedied, like language instruction in early education efforts. According to the report, a coordinated investment in early language programs including the development of the Inuktitut language and Inuit specific resources across Inuit Nunaat would be an important foundational investment in furthering the improvement of student outcomes (Inuit Tapiriit Kanatami 2008, 39). Many schools in Arctic states begin with educating their students in Inuktitut, then switch to English instruction after grade school. A language switch can be difficult during the early years of formal education because students tend to not yet be familiar enough with foundational material in their native language, and so an abrupt switch can derail previous learning without building up the structure necessary to succeed later on (Berger 2006).

The National Committee on Inuit Education is one group that was established in order to explore the development of ways for students to reach post-secondary education. One endeavor supported by the newly minted NCIE is the University of the Arctic. The university itself, known colloquially as UArctic, is not a single isolate campus, but instead is a cooperative network of universities, colleges, and various other education- and student-based organizations that have committed themselves to the pursuit of higher education and research in the Arctic. As stated by the UArctic Strategic Plan, the overarching goal of UArctic is to empower through education and

to create a strong and sustainable circumpolar region within which knowledge generation and skill application is both encouraged and fostered in Northerner and indigenous communities (University of the Arctic 2008, 8).

The university board has established three central areas of focus for all organizations involved: "1. Building Human Capacity in the North: culturally relevant training and education for sustainable Northern communities; 2. Adaptation to Climate Change: challenges for human society as well as nature; 3. The North as an Energy region: economic, cultural, environmental, and technical opportunities, demands, and impacts" (University of the Arctic 2008, 8). These focus areas are key strategic topics in furthering Northern research because they are consistent with perceived international areas of governmental priority for the region as outlined by the agenda of the Arctic Council. The establishment of a university-centric community is important because there has never been a legacy of strong post-secondary education in the region, and there also has never been a physical university in the circumpolar Arctic. UArctic is but one of the new endeavors that are paving the way for positive educational growth for Inuit.

In addition to education, there have historically been issues with public health programs in the Canadian Arctic. Though Inuit health in some areas has improved over the last twenty years, specifically with life expectancy and reduction of infant mortality rates, the population is still far behind that of its Southern counterparts (Bjerregaard and Young 1998, 61). Health is linked to a number of factors, most notably education, income, sanitation, nutrition, housing, environmental quality, and health care access. On average, Inuit -- and most Aboriginal people -- face higher rates of chronic and infectious diseases, a shorter life expectancy than non-Aboriginal populations, and much higher instances of suicide (INAC 2006).

Within the spectrum of chronic diseases currently impacting Inuit health in Canada, the issue of Type 2 diabetes is one of the most pressing. Type 2 diabetes affects Aboriginal communities three to five times more than the general Canadian population; such rates led to the introduction of the Aboriginal Diabetes Initiative (Bell 2009, 11). In 2005, the Canadian government provided a renewed investment of about CAD$190 million over five years to maintain and enhance the Aboriginal Diabetes Initiative. The main goal of the initiative is to reduce Type 2 diabetes and its complications through a range of culturally relevant health promotion and prevention services, delivered by trained health service providers and diabetes clinic workers (Bell 2009, 11). In March 2010, the Canadian government once again renewed the

initiative, this time pledging a budget that would allocate CAD$285 million over two years for a range of health programs specifically for Aboriginal Canadians, including the ADI, the Aboriginal Youth Suicide Prevention Strategy, maternal and child health, the Aboriginal Health Human Resources Initiative, and the Aboriginal Health Transition Fund (Bell 2009, 13).

Infectious diseases are also a concern, as the tuberculosis rate for Inuit in the Arctic has doubled to 185 times that of Southern Canadians over the past four years, according to 2008 figures recently released by the Public Health Agency of Canada (PHAC 2008). Incidences of tuberculosis (TB), traditionally considered a 'third world disease' in the greater medical community, are exacerbated by overcrowded housing and poor nutrition. Decrepit conditions that negatively affect lifestyles make communities especially vulnerable to a varied spectrum of other infectious diseases as well (PHAC 2008). In addition, a shortage of health care providers in remote communities also challenges the ability to manage TB and be proactive in eradication strategies (PHAC 2008).

In the Canadian Arctic, a lack of proper housing is a major contributor to elevated health risks. From 1956 to 1965, the Eskimo Housing Loan Program was established to assist Inuit in purchasing houses. The majority of residences most Inuit could afford at the time were small one-room units with about 26 square meters of space; during this time, the average Inuit household was about 3.8 people, thus resulting in severe overcrowding (Bjerregaard and Young 1998, 188). The loan program was soon replaced by the Eskimo Rental Housing Program, due to its inability to keep pace with the rapidly increasing influx of Inuit into settlements. However, this new program, though focused on scaling rents to real income, was still not designed to accommodate the amount of Inuit who moved to permanent settlements as a result of federal programs. Overcrowding is still a pressing issue, as entire families can be forced to live in single room accommodations (Bonesteel and Anderson 2008).

In the 1980s, the federal government initiated a process intended to transfer control of all health services to territorial governments; this process was completed in 1988. Regional health boards, evolving from regional hospital boards, were also established in order to determine policies and administer programs, and were meant to include a number of Inuit and other Aboriginal members. According to a case study of one board, political interference is not uncommon, and conflicts often occur between Inuit cultural values and established public health practice and law (Bjerregaard and Young 1998, 69).

II. Need for Action

These issues are important because the Inuit are the only tangible personal link the Canadian government has to connect itself to the Arctic. If the human dimension is given credence in the political sphere, then Canada can continue to claim legitimate use of land and resources in the Arctic through the Inuit Land Use and Occupancy Project. The ILUOP was a series of studies funded by the federal government intended to document how the land was 'occupied'—this term refers to the social, intellectual, and economic systems that underlie Inuit patterns of land use, while 'land use' refers to any or all of the hunting, fishing, trapping, and other activities that take place within the land, open-water and sea-ice environments that comprise Inuit territory (Bonesteel and Anderson 2008, 108). Given that the ILUOP clearly delineated Inuit claims to certain properties that are technically within Canadian jurisdiction, the Canadian government is able to connect itself to these territories through Inuit land use, thereby legitimizing their actions in the Arctic through a connection to the people who exist there.

These issues are also important because Inuit are a civilization that has thrived in the Arctic for time immemorial, and should be respected as the caretakers and cultivators of the region. Such respect needs to be manifested in more comprehensive policies that would improve Inuit communities. The development of educational strategies is part of a greater transition from the repressive era of residential schools and assimilation policies in education to an era of Inuit empowerment and determination. A positive transition could bring about an educational system that is founded upon Inuit language and culture and that prepares Inuit to thrive in a rapidly changing world (Hendrie 2009).

New educational policies are necessary for the improvement of secondary education, something that is sorely needed in order to bolster programs like UArctic. The goals of UArctic are incredibly noble, but there is at least one key issue: this university system defines higher education as inclusive of all post-secondary education and training (University of the Arctic 2008, 2). The issue therein is that many indigenous people do not make it to the post-secondary or undergraduate level of study because their primary education network is already so weak. This is most definitely a policy issue that desperately needs attention in order to bring infrastructural improvements to the region. Another key issue with this university and others is that they require prospective students to move to cities farther south, which is problematic because it forces further depletion of Inuit regions. There is a great reluctance among students in bringing about

isolation from their communities. For many Northerners, limited and often negative experiences with formal education meant that there was little promotion of educational achievement, or even school attendance (Berger 2006). Having to leave home communities to attend school in larger communities further discourages many Inuit from secondary and post-secondary school attendance (Bonesteel and Anderson 2008, 121).

In addition to the need for different and varied educational policies, the introduction of better health care is essential for bettering the longevity of the Inuit population. Health policies like the Aboriginal Diabetes Initiative (ADI) are supplemental in improving the general health of Inuit in the region; however, such policies would most likely be unnecessary if these communities had initially received proper care. While the Canadian government has given every indication that funding for the next two years will be at the same level as the 2009-2010 budget, this was not specifically confirmed in the budget announcement made in March 2010. The budget simply notes that the programs have been renewed, and provides a global funding figure for all five programs within the renewed initiative. Specific funding allocations for the ADI were expected to be confirmed soon after, but still have not been.

ADI funding from the federal government is essential to sustaining grassroots national organizations like the National Aboriginal Diabetes Association (NADA), that develop culturally relevant diabetes prevention and management resources. Any termination would have a devastating impact on over 600 Aboriginal communities across Canada; programs and services essential in bringing a halt to diabetes would cease to operate without ADI funding (Bell 2009, 12).

One policy that showed promise in closing the gap between Aboriginal and non-Aboriginal communities was developed by the Martin administration and deemed the Kelowna Accord. Meetings held in 2005 resulted in a five-year, CAD $5.085 billion dollar plan that would delineate funding for the improvement of education, housing, economic development, and health and water services in indigenous regions (Patterson 2006). However, mere days after the final meetings, former Prime Minister Paul Martin gave up power to the more conservative administration of current PM Stephen Harper, and what had been a CAD $5.085 billion dollar plan was reduced to a CAD $450 million dollar plan. Because the details within the original plan outlining how much of the money would be spent and who would provide the services were left

to be negotiated at a later date, the transfer of power prevented the accord from concrete implementation (Patterson 2006).

Plans like the Kelowna Accord are what are needed to solve unnecessary issues related to poverty among Aboriginal groups, like poor health conditions. Infectious diseases like TB will never be eradicated until increased funding is set aside for the improvement of housing, education, and food security, as well as access to health care for Inuit so that it may be closer to established standards in other parts of Canada.

III. Evaluation and Analysis

The core of this issue is that Inuit communities are not given enough funding or attention by the federal government. Because of this, the arenas of education and health suffer greatly, affecting nearly every facet of the indigenous experience. Politicians and scholars alike have liberally used the phrase 'human dimension' to refer to the moral heart of Arctic issues. However, the concrete human dimension is being ignored in favor of bolstering natural resource industries and other similar developments.

When this Task Force traveled to Ottawa, the group was met with a common consensus from multiple leaders in both the federal government and non-governmental organization spheres: the devil is in the implementation. Educational policies in Canada are introduced and imposed according to province, and so certain concepts—especially those that must already be transferred from Southern to Northern mentalities—can get lost in translation. Therefore, it is essential that any endeavors undertaken to improve the quality of life in Inuit communities include concrete goals for implementation. Because different regions may find themselves at different points in the development of education policy, implementation procedures that allow for such differences will be key in this arena.

The weaknesses in indigenous educational programs center on several key issues, including a lack of government attention and funding, as well as language barriers and other cultural blocks. With regards to educational provisions, dropout rates, language instruction, and youth incentive programs must be given precedence. The rather extreme statistics surrounding low graduation rates stated earlier are not uncommon within the educational field in Inuit communities.

A key rift lies in the way language instruction is implemented in early education. Three recent studies about language instruction and its use among Nunavik children show similar

results: instruction in traditional languages at lower elementary grades seems to promote traditional language retention, but it makes the transition to instruction in English difficult in later grades. In particular, one study concluded that, "the shift from heritage-language to dominant social-language instruction in Grade 3 was associated with a significant decrease in personal self-esteem" (Bonesteel and Anderson 2008, 88). In many Canadian Arctic communities, the local Inuit language—that is, the local dialect version of Inuktitut—is taught as the primary language of instruction from kindergarten to somewhere between grades three and five. Unless students have significant exposure to English or French in their home, they may experience difficulty and frustration with the transition to school instruction in one of those languages (Bonesteel and Anderson 2008, 88). A switch like this is intensely confusing to most students and tends to weaken linguistic skills for both English and Inuktitut, thereby limiting students before they have even approached other subject matters. Such limitations prevent most Inuit youth from further education opportunities, like attending college, and discourage many from making future plans involving academia. Loss of language and educational underachievement are very strongly linked (Berger 2006, 25). With that being said, the strengthening of Inuktitut in every environment—school, home, and the greater community—could catalyze improvement and substantial achievement in both Inuktitut and English.

Bolstering early language instruction is essential in the creation of a solid educational foundation that would lead to more opportunities for Inuit youth. Such opportunities are currently being created through the development of university settings in the Arctic. Based on the Northern Indicators 2004 survey data collected by Indian and Northern Affairs Canada and Human Development Index measurements of Inuit well-being (created using 2001 Canadian Census data), Inuit still have a low level of educational attainment compared to other Aboriginal peoples in Canada. With regards to post-secondary education, Canada is currently the only circumpolar state without a formal university located in the Arctic zone. UArctic is the only university system that provides some further education for students in the Canadian Arctic and is supplemented by Arctic College in Nunavut and Aurora College in the Northwest Territories. Despite recent growth within these institutions, varying degree programs are usually only offered for a limited time period, and most students who wish to obtain university degrees are required to attend campus facilities in southern Canada (Bonesteel and Anderson 2008, 89). The educational empowerment provided by UArctic is necessary to carve out a prominent role for indigenous

people in government and greater society, which is why it is important to support these institutions. If given more and better opportunities as well as a scholastic foundation from which to build a legitimate career trajectory, subsequent generations of Inuit and other groups will have greater agency in determining the future of the Arctic. With regards to health provisions, it is imperative that the Canadian government—in both federal and territorial respects—work closely with Inuit in the design, delivery, and policy implementation of health care. Productive collaborations between government, non-government, and Inuit organizations should be encouraged, and such encouragement can be incentivized through allocated adequate multi-year funding for Inuit community-based organization and other non-profit community-based foundations (Nunavut Tunngavik Incorporated 2008, 6).

Life expectancy in the Arctic region is much lower than in southern Canada. For Inuit, a typical life span is around 68 years, according to data collected from 1991 to 2003, while the measurement for Canada as a whole, is around 80 years of age (Bjerregaard and Young 1998, 63). Such a gap can be blamed on the huge discrepancies in treatment, access to care, and other variables mentioned like diet and a lack of proper health programs. Analysis of the 2001 Census data revealed lower levels of education and income and poorer housing conditions for the Inuit-inhabited areas compared with Canada as a whole. Any or all of these, in addition to lifestyle risk factors and environmental conditions, could be at least partly responsible for the much lower life expectancy in Inuit community regions (Bjerregaard and Young 1998, 64).

A situation related to lower life expectancy is the extremely high suicide rate in Inuit communities. The extent of Inuit suicide was documented in a 1999 report for the former Baffin Regional Health and Social Services, showing that suicide rates in the Nunavut Territory—especially among young males—were six times greater than southern Canada (Tester and MacNicolle 2004, 2626). The Baffin region of Nunavut had the highest male rate at 133.9 per 100,000, and the highest female suicide rate at 47.1 per 100,000, while Inuit accounted for 87 percent of all suicides within the area. The rate of attempted suicide in the Inuit population of Nunavik is also high. A separate Sante Quebec study done in 1994 reported that among people 15-24 years of age, the attempted suicide rate for males was 27.6 percent and for females, 25.3 percent (Tester and MacNicolle 2004, 2627).

References to the rate and nature of social change among Inuit since World War II are common in almost all accounts of Inuit suicide. Modernization and rapid social change are held

responsible for a range of personal and emotional states; social disorganization is the most common framework for examining Inuit suicide. Though forced acculturation is certainly to blame for some segments of crumbling Inuit society, the mental health factors that vary from individual to individual must also be taken into account. Access to proper psychological care would go a long way in decreasing suicide rates among Inuit. The objective now is to enhance the productive capacity and self-determination of the Inuit in the effort to confront these challenges.

IV. Recommendations

Based on the current state of many indigenous lifestyles and the failure of certain policies to fully deliver comprehensive programs to Aboriginal communities in Canada, the following have been developed as a working set of recommendations regarding the formation and shaping of public health and education policies that would affect Inuit in the Arctic region:

- The Kelowna Accord needs to be fully implemented; this includes complete follow-through on the agreements made in the Kelowna Accord with a full delineation of funding.
- Permanent funding for the Aboriginal Diabetes Initiative and all other related initiative appropriations must be officially confirmed and extended for more than two-year periods, including the present pending confirmation of the ADI for funding past 2012.
- There should be extended funding for Inuktitut language and Inuktitut/English and Inuktitut/French bilingual projects; strengthening and progression of the Aboriginal Languages Initiative is paramount in this endeavor.
- Provincial school district boards need to focus on the expansion of drop-out prevention initiatives for the Inuit youth population, specifically in the 14-19 year old range.
- There should be further development of youth incentive programs by ethnic institutions like the Makivik Corporation and elsewhere in federal programs, including the continued support of the National Inuit Youth Council as well as creation of new positions for Inuit youth to both observe and participate in civil affairs in their respective communities.
- The position of the Ambassador for Circumpolar Affairs should be reinstated by the Canadian government, with a subsequent installation of a cabinet committee that will take Inuit involvement in Arctic issues more seriously.

- The Nunavut Agreement must be fully ratified and imposed so Northern communities will no longer be neglected.

Inuit leaders need to be included in all legal decisions regarding the Arctic given that the region comprises their homeland and that Inuit communities will be the most affected by future decisions.

Chapter Eight

Hunting, Fishing, Trapping and Gathering in Education Policies
For a Better Recognition of *Maqaittiit*

Lisa Koperqualuk

Abstract

ᑌᒪᖕᖓᓂᐊᓗᒃ ᐃᓄᐃᑦ ᐃᓄᑐᐃᓐᓇᐅᓂᖏᓐᓂᒃ ᑎᒍᒥᐊᕐᐳᑦ ᖃᓪᓗᓈᓄᑦ ᑎᑭᑕᐅᓚᐅᕐᓂᖁᒥᒃ ᓱᓕ ᐃᓗᕿᓯᕐᒥᓂᒃ ᑎᒍᒥᐊᕐᓯᑎᒃ ᐃᓅᓯᖓ ᓱᕐᖁᑕᐅᓚᐅᓗᐊᕐᑎᓗᒍ ᐊᓯᔾᔨᓯᒪᓚᐅᓗᐊᕐᓯᓂᓗ. ᐃᓄᐃᑦ ᓱᓕ ᒪᖅᑫᑦᑎᐅᕗᑦ, ᐊᖑᓇᓱᒃᑎᐅᓯᑎᒃ, ᐃᖃᓗᒃᓯᐅᑎᐅᒃᓯᑎᒃ, ᒥᕿᒥᐊᕐᓂᐊᓲᒍᒃᓯᑎᓗᓯᓕ ᐊᒻᒪᓗ ᓄᓂᕙᓲᒍᒃᓗᑎᒃ, ᐃᓚᖏᑎᒍᑦ ᐃᓕᓐᓂᐊᓈᖅᓯᒪᓲᒍᑎᒃᓗᒋᑦ ᓴᐳᒥᔨᖕᖑᑐᑦ, ᐋᓐᓂᐊᓯᐅᑎᖕᖑᑐᑦ, ᑎᒻᒥᖂᕐᑎᖕᖑᕐᑐᑦ, ᐊᐅᓚᑦᓯᔨᖕᖑᑐᓪᓗ ᐱᕗᑦ. ᑭᓯᐊᓂᓕ ᒪᖅᑫᑦᑏᑦ ᐃᓕᑕᕆᔭᐅᓂᖃᓲᒍᖕᖏᓚᑦ ᐱᓇᓱᒐᒻᒪᕆᑎᑐᑦ. ᐆᑦᑑᑎᒋᓗᒍ ᑕᒪ ᑲᓇᑕᒥ ᑭᑎᒃᓯᔫᑦ ᑭᑎᒃᓯᔫᔭᑦ ᐃᓕᓐᓂᐊᕖᕐᓯᒪᔪᓂᒃ ᐳᕐᑐᓂᕐᓴᓂ ᐳᕐᑐᓂᕐᓴᕆᐊᓪᓚᓂᓗᐋᓐᓃᑦ ᑭᓯᐊᓂᓕ ᒪᖅᑫᑦᑏᑦ ᑭᑎᑕᐅᕐᑲᑕᐅᓲᒍᖕᖏᓚᑦ. ᑭᓯᐊᓂᓕ ᒪᖅᑫᑦᑏᑦ ᐊᑐᕐᓂᓕᖕᒪᕆᐅᕗᑦ ᓄᓇᓕᒥᑦ ᐃᓗᐊᓂ ᐱᓇᓱᐊᕐᑐᑦ ᓄᓇᓕᒥᑦ ᒪᑭᑕᓂᖕᖓᓄᑦ ᐃᖏᕐᖁᓂᖕᖓᓄᓗ. ᐊᖏᕐᑲᑎᒌᒍᑏᑦ ᓴᐳᒻᒥᒋᔫᑦ ᒪᖅᑫᑦᑏᑦ ᐱᔪᓐᓇᐅᑎᖏᓐᓂᒃ ᐊᖑᓇᓱᓐᓂᒧᑦ ᐃᖃᓗᒃᓯᐅᓂᕐᒧᑦ ᒥᕿᒥᐊᕐᓂᐊᓂᕐᒧᓗ, ᑭᓯᐊᓂᓕ ᑖᒃᑯᐊ ᓴᐳᒻᒥᔭᐅᑦᓯᐊᓚᐅᓗᐊᕐᑎᓗᒋᑦ ᐅᕕᒐᕐᑐᓄᓪᓕ ᑭᖕᖑᒪᓇᕐᑐᐃᑦ ᓴᖅᑮᔭᕐᑎᑕᐅᖕᖏᓚᑦ ᐊᖏᕐᑲᑎᒌᓐᓂᑎᒍᑦ ᐃᓱᒪᒋᑦᓯᒍ ᐃᓕᓴᕐᓂᒥᒍᑦ ᓄᖅᑫᓇᑲᑦᑕᓂᓇᓲᖕᒋᑦ. ᐅᕕᒐᕐᑐᓄᑦ ᐃᓕᓴᒍᑎᖃᖕᖏᓚᖅ ᒪᖅᑫᑦᑎᖑᕐᓂᒧᑦ ᐱᔭᓅᕐᓂᐅᑎᑖᕈᑎᐅᒍᓐᓇᑐᓂᒃ ᐃᓕᑕᕆᔭᐅᓐᓂᐅᑎᑖᕈᑕᐅᓗᑎᓘᓐᓃᑦ. ᐅᑭᐅᕐᑕᑐᒥᓗ ᓄᓇᒻᒪᓇᖅᑯᑎᒥᓴᐅᐸᑦ ᓯᓚᕐᔪᐊᒥᐅᒍᕐᑲᑕᐅᓂᑯᒥᓄᑦ ᒪᓕᒐᕐᔪᐊᖕᒥᑦ ᐃᑉᐱᒥᔭᕐᑲᖕᖏᓚᑦ ᐃᓕᓴᕐᓂᐅᑉ ᑐᑭᒧᐊᒍᑎᕐᑲᓇᐊᕐᑲᕐᓂᖕᖓᑕ ᓄᓇᕐᑲᖅᑳᓯᒪᔪᓄᑦ ᐅᑭᐅᕐᑕᑐᒥᐅᓄᑦ. ᑌᒃᑯᐊ ᐅᑭᐅᕐᑕᑐᒥᐅᑦ ᓵᒦᑦ ᐃᓄᐃᓪᓗ ᕐᑭᒥᕐᕈᓱᒥᑦ ᐊᑑᑎᕐᑲᑎᒌᒃᓯᒪᖕᒪᑏᒃ ᐊᔾᔩᕆᓚᐅᓂᒃ, ᑕᑯᒍᓐᓇᐳᒍᑦ ᓵᒦᑦ ᐃᓕᓴᐅᑎᓕᐅᕐᓯᒪᓕᕐᓂᖕᖏᓐᓂᒃ ᑐᒃᑐᕐᑯᑎᒥᓂᒃ ᐱᕈᕐᓴᔨᐅᓂᕐᒧᑦ ᐅᕕᒐᕐᑐᕐᑯᑎᒥᑕ ᐃᓕᓴᐅᑎᑦᓴᖕᖏᓐᓄᑦ ᑐᕌᖕᖓᔪᓂᒃ ᑕᒪᓐᓇ ᐱᕈᕐᓴᔨᐅᓂᖅ ᓵᒥᐅᓗᓂ ᐊᓯᐅᔨᔭᐅᕐᑯᓇᒍ. ᑌᒫᒃᓴᓇᕐᑕᐅᖅ ᐃᓱᒪᓇᕐᐳᖅ ᐃᓄᑐᐃᓐᓇᓄᑦ ᑐᕌᖕᖓᔪᐃᑦ ᐃᓕᓴᐅᑎᒃᓴᑦ ᑲᖅᑫᑎᖕᖑᕐᓂᓚᑦ ᓴᖅᑭᑕᐅᒍᓐᓇᓯᕐᑯᓗᑎᒃ ᐃᓄᐃᑦ ᓇᓪᓕᑳᖅᕕᖅᑲᕈᓐᓇᓯᖅᑯᒡᓗᕆᑦ ᐃᓕᓴᐅᑎᐅᒍᓐᓇᑐᓕᒫᓂ ᒪᖅᑫᑦᑎᐅᓂᖅ ᐱᓇᓱᒐᒃᓴᐅᓂᖓ ᐃᓚᒥᓴᐅᑎᓪᓗᒍ ᐃᓕᑕᕆᔭᐅᓂᖏᓐᓂ.

Inuit, while remaining Inuit in their own inimitable way, have passed through decades of adaptation and accommodations. While some Inuit remain maqaittiit—i.e. hunters, fishermen, trappers and gatherers—others become educated through the western education system, as lawyers, nurses, pilots, administrators and the like. However, maqaittiit do not receive the same recognition as other occupations do. A case in point is the decision by Statistics Canada to not include maqaittiit among the educational achievement statistics for Canada. But maqaittiit are a very important part of social economy in the Inuit communities. Land claim agreements provide for the protection of Inuit rights that include hunting, fishing and trapping rights, yet these provisions do not address the high dropout rates Inuit youth are experiencing. No formal training programs exist for Inuit youth to train as maqaittiit, and when there exists some training no diplomas are offered. In examining the foreign policies of the Arctic Council member states one also sees that no attention is paid to educational matters of the indigenous peoples of the Arctic. Upon comparison between Sami and Inuit, who have lived through similar experiences, one sees that the Sami have established educational programs in reindeer husbandry to pass on

such knowledge to their youth. It is hoped that similarly an educational institution can be created for Inuit so that they may be able to choose maqaittiuniq as an occupation.

I. Background

The last few generations of Inuit in the circumpolar world have been forced to adapt to changes imposed on their communities by southern governments. Some groups of Inuit like the Kalaalliit from Greenland and the Nunatsiavut from Canada have dealt with foreign contact for well over 200 years, yet it is only recently that their communities have had to make major accommodations in response to contact. While embracing the ideas of modernization, Inuit have at the same time maintained their Inuit identity through the pragmatism they have been known for. Today there are 50,000 Inuit in four northern regions of Canada who have concluded land claim agreements (LCAs) with the federal government and their respective provincial governments. Such agreements, which began with the 1975 James Bay and Northern Quebec Agreement (JBNQA) and ended with the Nunavik Inuit Land Claim Agreement in 2006, are seen as the forums where Inuit affirm their culture and their identity. After the imposition of government norms on Inuit communities, Inuit had begun pushing for certain measures of autonomy to enable them to make decisions concerning their livelihood. Canada's Inuit now have settled their land claims, which assist in facilitating and supporting Inuit-based social programs including education.

Inuit LCAs however, did not occur before the introduction of the institutions that drastically changed their once semi-nomadic lifestyle. Unfortunately, southern-style educational institutions were already established before the LCAs were settled. When the formal education system was implanted in the Arctic it was seen as key to Inuit empowerment by Inuit and non-Inuit alike; the educational system was they were seen as a way for Inuit to enter into the mainstream and to obtain much needed jobs. The education system in the North was established in the 1950s without the Inuit culture in mind in order to instill "Canadian" values, which were based on a language, an economy, a form of teaching, and a society very different from Inuit society. Some of the impacts have been profound such as the forced separation of children from their families so they could enroll in residential schools, whereby they lost their mother tongue and lived through horrific abuses in the process. The negative effects continue to be felt today and have yet to be calmed. Yet out of the imposed system also came out Inuit leaders, some of whom had been sent to Ottawa in the early 1960s in what could be called a social engineering

experiment. The lives of three well-known leaders who had been sent for schooling in Ottawa as young boys can be seen in a film produced by White Pine Pictures called *Experimental Eskimos.* Each leader discusses the personal impact of having been sent south. Despite the long-term negative impact the experiment had on them, Zebedee Nungak, Peter Ittinuar, and Eric Tagoona became the next generation of Inuit leaders. Today, most young students must still leave their homes and live in southern cities to attend post-secondary institutions if they wish to continue their studies. There are still many challenges Inuit youth must deal with in order to achieve the same level of education as their Canadian peers.

The KSB is an institution created through the JBNQA and is therefore a public institution. The KSB has worked extensively on bilingual education to ensure that young students maintain the Inuit language while proficiently learning a second since government legislation provides for the protection of Inuit language (Taylor 2007, 11). Additionally, when young people leave their communities to pursue post-secondary studies they leave behind further means of learning Inuit-based curriculum. One of the challenges that post-secondary students face when they begin attending southern colleges and universities is that they are not at par with their southern peers in terms of academic levels. To catch up, they do a year of preparatory work before being inserted into the mainstream. Another challenge is the dropout rate of young people from secondary school. When young people are not learning the skills necessary for living in the Arctic in the schools and the curriculum seems irrelevant to them, then it would be difficult for them to remain in school. Selling further addresses education in Canadian Inuit communities in Chapter seven.

One of the policies of the KSB states:

> The Kativik School Board prioritizes the preservation of the Inuit culture and traditional skills. Any measure or action to ensure the transmission of this patrimony to the students must be encouraged and implemented. The Board believes that the complete education of a student involves experiences beyond classrooms and textbooks in order to get the rudiments of survival in an environment where the climate changes. These activities must be provided with adequate safety measures considering that danger is part of the Nunavik territory. These experiences may be curricular, co-curricular or extra-curricular in nature. The Kativik School Board and its schools may, from time to time, organize field trips and excursions for its students in this respect. (Kativik School Board 2008)

The secondary schools in most Nunavik communities organize excursions at least 4 times a year so that students are exposed to learning *maqaitiit* skills. More recently, a 2 two credit *Land*

Survival course was introduced to six secondary schools with plans to expand it to the rest of the 14 Nunavik communities. However, as Assistant Director for Inuktitut Curriculum Qiallak Qumaluk said,

> the adults of today no longer have the complete knowledge that our ancient ancestors did. And even if we would like to include 100% of what our ancestors knew of land survival skills, it is also a challenge to include everything in a curriculum plan, which is divided among many other subjects such as math, science, Inuit language, second language and so on. I would hope to see *Maqaittiuniq*[5] become an educational choice, in a way that a person can fully become a *maqaitti.* (Qumaluk 2011)

When Qiallak mentioned that while the hired *maqaittiit* pass on the knowledge that they know, the old skills of true Inuit, Inuit before contact, are no longer fully known by Inuit elders today. People, local *maqaittiit,* with land survival skills are hired by the schools to organize excursions to bring children out on the land. School children are receiving exposure to land survival skills but not enough in the way to make them fully trained, because the school curriculum entails that they learn the other subjects as well. Thus the excursions bring a certain amount of exposure to becoming a *maqaitti* but not enough in the way for students to become professional *maqaittiit* because of the little amount of time spent in this program.

Currently in Canada's Arctic there is not sufficient curriculum or professional programs to adequately train individuals to become *maqaittiit*. Cultural schools such as the one in Sisimiut, Greenland have been established but their programs do not yet allow for individuals to become recognized as professional *maqaittiit.* This school, the Knud Rasmussen Folk High School, opened in 1962 and it admits students who do not have to have a formal education. Students must speak their Inuit language Kalaallissut and their curriculum varies with courses in tanning, handicraft, history, social sciences, literature, beadwork, stone polishing, math, science, geography, music, singing, sports, first aid, and computer science. In the spring, students head out on the land (*Siku News*,February 11, 2005). In Clyde River Nunavut, the construction of *Piqqusilirivvik,* a brand new Inuit cultural folk school was begun in 2010. Its creation was born out of an initiative by the Nunavut government to remain driven by Inuit values, that is, *Inuit Qaujimajatuqangit,* (IQ) Inuit traditional knowledge. An Inuit Societal Value (ISV) project based on IQ was begun in order to reverse a trend where Inuit knowledge was being marginalized. However, students will not receive diplomas from this school. Elders will be

[5] *Maqaittiuniq* means generally, being a *maqaitti*, a hunter, fisherman, trapper, and gatherer.

pivotal to pass on life skills and skills related to being a *maqaitti* once the school has begun its programming in 2012 (Canada 2009). Students will receive valuable land survival and *maqaittiit* skills but such skills would still be marginal in comparison to professions already recognized. This school is partly modeled after the Knud Rasmussen Folk High School since Nunavut began studying the possibility of creating a similar school in 2005 by visiting Sisimiut. .

Land Claims and Recognition of Hunting, Fishing and Trapping and Rights

Land claim agreements hold provisions for the recognition of hunting, fishing, and trapping rights. In the above meaning of *maqaittiit,* I have included gatherers as suggested by Mary Simon. However the JBNQA mentions only hunters, fishermen and trappers and therefore this section on land claims does not include the term gatherers. Where otherwise indicated, *maqaittiit* also includes gatherers, which are constitutionally protected in Canada. Land claim organizations are seen as the organizations that protect Inuit political and cultural rights as well as working for the wellbeing of their Inuit beneficiaries. For example, section 29 of the 1975 James Bay and Northern Quebec regime sets out a Hunter Support program, which is overseen by the Kativik Regional Government. This program supports traditional activities and its first component serves to help hunters who do not have regular employment to purchase the fuel necessary to reach their hunting grounds (Kativik Regional Government 2011). Some of the provisions of the JBNQA section 29 speak of salaries for hunters, fishermen, and trappers, but the KRG information speaks only of providing fuel necessary for *maqaittiit* to reach their hunting grounds. In fact, there is a provision that states that "hunter, fishermen and trapper training and development programs" would be established (Government of Québec 1975). Only the secondary level schools as noted above provided any form of teaching or training through the excursions program of the KSB. This must be qualified however, because different levels of training do occur in the communities with funding that comes from different sources. The Kativik Regional Government provides some funding for activities that promote the employability of participants by fostering traditional skills. These funds come from their Employment and Training department and are tapped for unemployed or dropouts aged 16 to 35 who then learn land survival skills (KRG Annual Report 2009, 53). More recently, the Nunavik Regional Hunting, Fishing and Trapping Association received funds from the Ungaluk

Program[6] that could be used for any individuals, not just a certain age bracket of individuals, so that anyone interested could practice and train in *maqaittiuniq* (Jobie Tukkiapik 2011). The funds are distributed to the local Hunting, Fishing, and Trapping Associations where they can then be used for training mostly male *maqaittiit*.

According to Jobie Tukkiapik who lives in Kuujjuaq Nunavik and has a full time job and hunts on a regular basis, the training for *maqaittiuniq* does exist in the Inuit communities but no one particular institution seems to have the mandate for developing a one for all training program. There is no guarantee that the training being offered reaches out to the youth in need of traditional knowledge in becoming *maqaittiit*. In his point of view,

> Schools have culture program, there is a Heritage program for unemployed, and the men have the program *The Land, the Hunt* through the local Hunting, Fishing and Trapping Associations but there is nothing formal. There are summer camps too, some of which are more traditional and others less traditional. I could imagine one of the better-known hunting and fishing camps owned by Inuit becoming what I would call a "Land College". A land college for youth, and for unemployed, and for those who want to learn a specific module that could be like "net fishing", I think that would help a lot. But it has to be designed by Inuit, and then recognized by the government. (Jobie Tukkiapik 2011)

He speaks as well to the need of having such programs, and therefore the skills, of Inuit receiving recognition by the Canadian government. The community in Nunavik benefits from the Hunter Support program through the fact that hunters are provided with funds to help pay for the costs related to hunting and fishing. In turn, the community is provided with fresh, healthy food, which is especially helpful to those who do not have hunters in their family, single parents, elders, and others. Martin Thibault, a Professor of Sociology at the University of Winnipeg who studied the Nunavik institutions in the context of globalization discussed the Hunter Support Program. Thibault made an interesting point about how the JBNQA, a Land Claim Agreement, allowed for the creation of modern institutions run by Inuit that have become tools of development and also forums for which traditional practices continue to be observed (Thibault 2003). While globalization continues to impact Inuit society through the introduction of

[6] For more on the Ungaluk Program check the Makivik Corporation's website, www.makivik.org/building-nunavik/ungaluk-program-safer-communities/. Makivik Corporation and the Government of Quebec reached an agreement whereby funds would be set aside for the prevention of crime in the communities, in lieu of building a detention centre in Nunavik, which had been a provision in the JBNQA but never implemented.

communications media, travel, modern technology, and so on, LCAs allow Inuit to continue to be able to practice being Inuit in this modern world.

Education Policies in the Circumpolar Arctic

The previous discussion in this chapter has shown how students could learn to become *maqaittiit* in a regional context through land claim regimes and government policy. However, no educational institute that graduates *maqaittiit* exists as of yet. The forthcoming discussion will explore how education curriculums in the circumpolar Arctic regions deal with *maqaittiit* through Arctic policies. Finland's 2010 Strategy for the Arctic Region mentions the Sami who have traditionally depended on reindeer husbandry for their livelihood. Interestingly, Finland's is the only Arctic Policy of the Arctic states that mentions the importance of traditional culture – in this case reindeer husbandry – as critical to the livelihood of the Sami. While the Finland Strategy mentions the necessity to strengthen education and culture for its 9,500 Sami, it concentrates mainly on improving programs for the preservation and development of Sami language. However, with the Accession Treaty in which Finland became part of the European Union, Finland as well as and Sweden recognize their obligations and commitments and "consider that traditional Sami culture and livelihood are dependent on natural sources of livelihood, such as reindeer husbandry in the traditional area of Sami settlement. For the Sami, reindeer husbandry is not just a means of livelihood but also a foundation of their language and culture" (Finland 2010, 33). This recognition is most compellingly expressed by the funding provided to the Sami Education Institute by Finland's Ministry of Education and Culture for Sami culture and language education programs. Part of its legislation states:

> The current operations of the education institute geared to offer general adult education and education in the Sami language (Northern, Inari and Skolt Sami) and Sami culture are important for the preservation and developing of new forms of livelihoods and culture. The amended legislation will not use the term "general adult education" because it is outdated and ambiguous in modern legislation. The legislation will enact that the mission of the education institute is to provide education in Sami language and culture, which will include current general adult education and courses in Sami language and culture. (Ministry of Education 2009)

To summarize, curriculum for Sami education would include what is important to the Sami, both in terms of their culture and in terms of what they need to become productive members of the larger Finnish society.

Finland has done more than just provide policy plans for traditional education in its Arctic foreign policy, it has also worked to integrate Sami-centered curriculum on a number of fronts. There have also been Sami initiatives to develop Sami based curriculum on reindeer husbandry. Two associations, the Reindeer Herding Women's Network and the International Centre for Reindeer Husbandry jointly began to work in establishing an educational centre for reindeer husbandry. This effort was begun in 2002 and resulted in a project called the Birgen Project whose purpose is the preservation and development of knowledge of reindeer husbandry. One of their goals lies in education, for which they wish to "investigate measures to improve the conditions for the traditional knowledge and education in reindeer husbandry, including the development of learning materials" (Kemi 2009). The project is a very good one in that it encourages family bonding as well as keeping knowledge of reindeer husbandry in the Sami community itself. It is also even more interesting because it was begun as an initiative by Sami herding women who found it important that their traditional lifestyle, which is a way of keeping families together, be kept alive. With the challenges they face in a country where they struggle to have their culture recognized, this effort remains crucial in bringing their knowledge to the present. Most of all, the initiative recognizes the importance of training young people as Sami reindeer herders. It provides a route that youth who wish to know more about their traditional lifestyle can turn to.

The Norwegian Government's 2009 High North Strategy holds a section called "Safeguarding the Cultures and Livelihoods of Indigenous Peoples". The document asserts that the indigenous people "possess valuable knowledge about nature, the climate, the environment and traditional practices [and that] they are stewards of cultural values and languages, and have specialized knowledge of ways of making a living under marginal conditions in a subarctic area" (Norwegian Ministry of Foreign Affairs 2009, 42). Although it affirms the value of traditional knowledge of indigenous people, it does not outline an educational policy besides stating that traditional Sami knowledge would be documented. Along this line it further states that "the purpose is to ensure that traditional knowledge is an element in the process of further developing our knowledge and that it is integrated into planning and management in the areas of land use, natural resources and the environment in the High North, and utilized in the monitoring of the region" (Norwegian Ministry of Foreign Affairs 2009, 43). The guiding line of the Strategy is to create an environment that would promote development and encourage the Sami to be able to

participate in the economic development in their regions, but not necessarily to maintain reindeer husbandry as a livelihood.

Canada's own northern strategy, *Our North, Our Heritage, Our Future* has even less to say about education policy for Inuit. Its policy relates to issues such as the affirmation of sovereignty, economic development, transport routes, environment and conservation, climate change, and pollution. Though it touches on the human dimension and the well-being of its northern inhabitants (Canada 2009), it has no mention of cultural preservation and little on education. A statement was made regarding the provision of funding transfers to support programs for children and for post-secondary education, with a view to improving labour market training and community development (Canada 2009). Though this is its domestic policy Canada has little to say about the recognition of its indigenous people of the north.

Equally amiss on the subject of the education of indigenous people is the *Statement on Canada's Arctic Foreign Policy, 2010*, whose section that is dedicated to the Peoples of the North deals mainly with governance and empowerment. Like Finland and Norway, Canada will support the Indigenous Permanent Participants that come from Canada so that they can fully participate in Arctic Council activities (Canada 2010). But there is no statement on education policy, neither on the recognition of the importance of culture and language for Inuit. The support for indigenous peoples' participation in the Arctic Council is present but there is work to be done when it concerns indigenous education. More efforts must be made in order to incorporate Inuit-centered educational values within the domestic Arctic education policy.

Perhaps these are reasons why Inuit Tapiriit Kanatami President Mary Simon reacted with a document that demands a fuller integration of Inuit concerns in its northern strategy. Among one of the concerns cited by ITK was of the Inuit educational achievement being below the norm. (ITK 2008, 5) Thus the document cites a concern of "crippling gaps and deficiencies in core social areas, particularly education, housing, and health currently experienced by permanent residents (which) have to be addressed and remedied" (ITK 2008, 17). And so one of the policy directives given by Mary Simon was to "investment in an intergovernmental/ aboriginal program of action, to lift education, housing, and health standards to national norms within the lifetime of an Arctic strategy" (ITK 2008, 18).

Maqaittiuniq, a profession and a way of life

There are many compelling reasons for why *maqaittiit* should become recognized as professionals, which is the main argument of this paper. The following is a list of different reasons, which originally came out of ideas on how to address the high dropout rates experienced by young Inuit men.

Currently, the high dropout rate of young men from the educational system is of great concern for Inuit communities. Statistics Canada compares the level of educational attainment for all Canadians with that of Inuit and shows 12% of Inuit men aged 25 to 64 in Inuit Nunangat[7] have a high school diploma.

Canada		Inuit		Non-Aboriginal population		
Both sexes	Men	Women	Both sexes	Men	Women	
Less than high school	51%	51%	51%	15%	16%	14%
High school diploma	13%	12%	14%	24%	23%	25%
Total - Postsecondary	36%	37%	36%	61%	61%	61%

Figure 1. Educational Attainment in Canada, ages 25-64 (by percentage)
Figure by Highest level of educational attainment of Inuit and non-Aboriginal aged 25 to 64, by sex, Canada and Inuit regions, 2006 Canadian Census.

The table above of course does not show statistics on *maqaittiit* and how they might be contributing to Inuit society. In fact many of those men without a high school diploma are feeding their families through harvesting activities. But no numbers exist to show their contribution to their society. Instead, the statistics show only educational achievement as either finishing high school, or post-secondary studies, none of which include *maqaittiuniq*. Census taking has not taken the Inuit lifestyle, which includes many active *maqaittiit*, into account. In fact, many young men have successfully gained educational and professional skills in hunting and fishing but these are not reflected in statistics that only look at conventional education; although the ability to speak an indigenous language is usually accounted for in the Aboriginal Peoples Survey. Aside from the knowledge that Hunters, Fishermen and Trappers' Associations exist in Inuit communities, there is no available information as to how many men or women

[7] Inuit Nunangat is defined as the regions where Inuit live in Canada.

could be considered as *maqaittiit.* It would be a good idea to begin including information of how many Inuit become *maqaittiit*, or would be interested in becoming. One good reason to have this type of information on hand is to show recognition for *maqaittiit* as valuable contributors to Inuit society, just as those who have secondary or post-secondary level achievements are considered important.

Another good reason is that it would show *maqaittiuniq* being an educational choice. The young men not interested in continuing academic studies would be encouraged to become *maqaittiit.* Hence *maqaittiit* would be part of educational choices such as becoming a nurse, or becoming a pilot, or becoming an anthropologist. There are several young Inuit men becoming airplane pilots, and being hired by Inuit owned airline Air Inuit. But not all Inuit men can become pilots or university graduates. Currently, the dropout rate for young men is higher than that of young women. But many young people as dropouts do not see themselves becoming *maqaittiit*, since this occupation is not valued in the rhetoric on education. If one does not finish high school, one is a failure. That is not to say that once some young men become *maqaittiit* that they are not proud of it, for indeed they are. If *maqaittiuniq* would be seen as an educational choice, it would place more value to becoming one within educational terms or rhetoric.

Another reason that *maqaittiuniq*, being a hunter, fisherman and trapper, should be recognized as a profession would entail its recognition as a job. Currently, there are no formal training programs in place to allow for someone to become a *maqaitti*. Nor do the training programs that may be in place provide diplomas or certificates. Also, job-training programs do not allow for traditional activities to be practiced because hunting, fishing and trapping are not considered jobs by the government. This recognition would allow for government programs to provide funding for training programs, which absolutely does not exist today because *maqainniq* is recognized as a "traditional activity" and not part of a job attaining profession.

Hunting, fishing and trapping are part of the northern economy. Inuit *maqaittiit* have been lobbying governments to provide tax subsidies for *maqaittiit* just as governments do for farmers in the agricultural industry (Aatami 2011). Farmers are well recognized by government for providing food products for homes as well as contributing to economy. For whatever reasons there may be, *maqaittiit* do not receive the same recognition. Yet they are an important part of northern social economy, they provide food for homes and very often work out of charity. They buy expensive equipment such as freighter canoes, fishing boats and snowmobiles, and must be

equipped with sleds and rifles as well as fuel, the costs of which are augmented by the high amount of taxes to be paid due to the extra cost of transport to the remote regions.

II. Need for Action

Although the Canadian education system partially accommodates Inuit culture, as in the example of Inuit language curriculum from kindergarten to grade four of the Kativik School Board (KSB), there is still a lacuna. There are no educational institutions that address the need for curriculum and diplomas for *maqaittiit,* hunters, fishermen, trappers, and gatherers. Yet the curriculum must follow the Québec Ministry of Education standards and does not contain *maqaittiuniq*[8] as a possible job-attaining profession. Add to this the fact that secondary school graduates must leave their communities if they wish to pursue post-secondary education because there are no colleges or universities in the North. So the possibility of learning to become a *maqaitti*[9] becomes increasingly reduced; hunters, fishermen, trappers, and gatherers get left on the wayside by the education system. While certain adjustments have been made over the last three decades to keep, for example, Inuit language in the curriculum, curriculum based on the Inuit lifestyle has been lacking to a certain degree.

Culture courses exist in the secondary schools in the North but with no diplomas or certificates for *maqaittiit*. The gap in the educational system exists at the very foundation of Inuit society, a society that has relied and still does on hunting, fishing, trapping, and gathering. As such, it is in the interest of Inuit to make sure that their children learn the skills of *maqaittiit*; skills appropriate for inhabitants of the Arctic.

III. Evaluation and Analysis

Having examined the Arctic Foreign Policies of three countries, Finland, Norway and Canada, one can see that the Finland and Norway policies speak on the recognition of the culture and language of their indigenous peoples, and show more concern about the knowledge of indigenous people. There seems to be no concrete education policy but nonetheless the Sami run an Education Institute as well as an International Centre on Reindeer Husbandry that educates their young on the Sami lifestyle based on reindeer herding. Upon reading these policies one notices the focus on economic and environmental issues as well as sovereignty and border issues that surface. In Canada, in particular, sovereignty has become important due to the perceived

[8] *Maqaittiuniq* as opposed to *maqaittiit* means "being hunters, fishermen, trappers and gatherers".
[9] *Maqaitti* is singular for *maqaittiit*.

opening of the Northwest Passage. But Canada's Arctic Foreign policy, compared to the Finland and Norway policies, does not speak to the recognition of the culture and language of its indigenous peoples of the North. It carries no words on education policy. Sometimes each country has the same concern expressed in Arctic Foreign Policy such as the ability of multilateral governance of the Arctic. But in any case the Arctic interests of the Arctic states get to be addressed through the Arctic Council. However, it does not appear for education to have a place in Arctic Foreign Policy.

In looking at domestic Northern Strategies, perhaps the sense here is that Canada may well be leaving the recognition and protection of indigenous rights to land claim regimes in the Inuit regions. Or perhaps, in the way it had justified its reasoning for not including Nunavik or Nunatsiavut in its Northern Strategy, it is taking the same position on educational policy due to jurisdictional issues. Perhaps this reason prevents it from making any policy statements on education, since education is a provincial responsibility. Nevertheless, as explained above, land claims provide for the protection of hunting, fishing and trapping rights, but they do not necessarily provide for *maqaittiit* education. Since the provinces or territories have jurisdiction over education, the educational policies originate from them. In Nunavut there is an emerging movement, propelled by the government's guiding principles on *Inuit Qaujimajatuqangit*, seen through the creation of a new cultural school in Clyde River where people will learn *maqaittiit* skills. However in Nunavik where Quebec's Ministry of Education sets out the guidelines, there is no educational institute dedicated to *maqaittiit*. And although the JBNQA provides for the support of *maqaittiit* in the Inuit communities, it has not set out any formal educational program for people to become *maqaittiit.*

We also see that in Sami Land the Sami have taken it upon themselves to address the education needs of their youth in terms of reindeer husbandry and the Sami lifestyle. There would be nothing to stop Nunavik Inuit from creating an institution similar to the Sami International Centre for Reindeer Husbandry, or to establish more formal training and development programs as provided for in the JBNQA. The existing Hunter Support Program may be acting like a smoke screen in fact, providing some funds that can keep experienced *maqaittiit* active but perhaps neglecting a large part of Inuit society, the youth who have a need to learn how to be *maqaittiit*. Land survival and hunting, fishing, trapping and gatherers' skills remain important in today's Inuit society.

The Nunavut Government's initiatives based on *Inuit Qaujimajatuqangit* as their guiding principles show promise and could serve as examples for other regions. The proposed Nunavik Regional Government, which could become a reality in 2013,[10] could very well come up with similar principles and create a training program for *maqaittiit* in future. Such a program could partly address those many young men who have dropped out and looking for jobs. A new education system could look at the inclusion of *maqaittiit* as part of a fuller education curriculum, one based on Inuit values and on the environment in which Inuit live.

Inuit are still Inuit, *maqainniq* a part of modern contemporary life: this is the view of many contemporary social scientists and the like. Hugh Brody, a writer and anthropologist who has studied among the Inuit in Nunavut since the early 1970s, presents a comparative view of agriculturalists and hunter-gatherers and goes to show that there is no evolutionary theory between *Qallunaaq*[11] and hunter (Brody 2000, 161). His observations nicely sum up the views of some of the issues presented in this paper. By showing how agriculturalism is explained through the myth of creation in the Old Testament's Genesis, he says that agriculturalism gives rise to a pervasive form of nomadism. American history, for example, displaced "nomadic" peoples so that civilized farmers could have the lands as ordained by fate or God. (Brody 2000, 159) Brody continues, "In the history of "education" provided by these states, there is no acknowledgement that hunter-gatherers had a right to be on their lands, nor a jot of concern for their skills and knowledge. So they were silenced. Broken down. Transformed or killed." (Brody 2000, 23) The Inuit worldview is not based on a Genesis, and Genesis is not a universal truth about the human condition, Brody says (Brody 2000, 20). In the contemporary Inuit society, many Inuit still practice hunting, fishing, trapping and gathering and lead lives working day jobs from nine to five. In the Arctic where they have lived for millennia, they are their own agents of change.

The Arctic Foreign policies of the eight Arctic State members of the Arctic Council deal with Arctic interests in the social and political arena, the environment, economy and security issues. They also look to cooperate and work together and are concerned for the future of the Arctic and its peoples. There are important indigenous groups in these states and it is necessary to bring in the indigenous perspective into Arctic policy. However, education must be in these

[10] A public consultation is currently in progress and a referendum is to take place in April for residents of Nunavik to decide on the Final Agreement toward a Nunavik Regional Government. See the website http://www.nunavikgovernment.ca/ for more information.

[11] *Qallunaaq* in this case means white person, the agriculturalist.

policies and education that is Arctic-centered promoting Arctic values and based on the professional needs of the region.

One of the ways to encourage the Arctic States to include education in the Arctic Foreign policies is to make policy recommendations to the Arctic Council. Internationally, the Inuit Circumpolar Conference created in the early 1970s, and which recently changed its name to Inuit Circumpolar Council (ICC) represents the Inuit across 4 countries: Siberia, United States, Canada and Greenland. ICC has worked at the United Nations since it obtained Accredited Observer Status 1993 in the United Nations Economic and Social Council (ECOSOC) and was very active in the development of the United Nations Declaration on Indigenous Rights (UNDRIP) (Simon 2011, personal communication with author). Canada finally adopted the UNDRIP in 2010. The ICC is also a Permanent Participant to the Arctic Council and is a voice to be heard in the Arctic Council Ministerial meetings that take place every two years. The ICC holds its general assemblies every four years and at its last assembly in Nuuk in 2010 came up with the Nuuk Declaration. The ICC has worked for over three decades in the promotion and protection of Inuit rights in the international stage, and the 2010 assembly continued along this line. In particular there is a section with respect to hunting that states, "Instruct ICC to promote the redefinition of hunting activities and use of renewable resources by Inuit as a profession within all international human rights fora;" (ICC 2010). As time goes on the issue of *maqaittiit*'s place in Inuit society will be discussed and debated more and more. The needs among youth to retain Inuit culture and Inuit concerns about their occupation as *maqaittiit* are becoming louder, and the Arctic Council will have to take these voices into account.

Shayna Plaut, a doctoral candidate in Education at the University of British Columbia, discusses the cooperation between Inuit and Sami who have worked together for many years in their participation in the United Nations Permanent Forum on Indigenous Peoples and especially on international issues. (Plaut 2010) With the Sami, who are also Permanent Participants of the Arctic Council, Sami and Inuit can advocate for the inclusion of education policy in Arctic Foreign policies. The history of their cooperation and the similarity of their experiences are an advantage to them and bring them a stronger voice.

Education policies fall under government responsibility, so an Arctic policy should encourage state governments to begin to recognize the traditions and culture of Inuit. Hunting, fishing and trapping and gathering are the very foundation of Inuit communities, still today, and

so education policies should recognize these and ensure that concrete measures are taken to ensure that the Inuit lifestyle becomes recognized in policy measures.

On the adoption of the United Nations Declaration on the Rights of Indigenous People, Plaut quoted Aqqaluk Lynge, current president of the Inuit Circumpolar Council, "we have our rights guaranteed internationally - now we need to see it through in domestic implementation on a national level" (Plaut 2010, 29). Inuit rights are protected through State legislation as well as through international means, and national Foreign policies should also reflect this.

V. Recommendations

- That the Arctic States' Arctic Foreign Policies who have not already done so, recognize Inuit culture and language.
- That the Foreign Policies of the Arctic States take the Education of Indigenous Peoples into account, one that takes their worldview and lifestyle, social and political realities into account.
- That Canada support and encourage the culture and language of the Inuit of Northern Canada.
- Create a Working Group within the Arctic Council that will study the issue of Education policy within the Foreign Arctic Policies of the 8 Arctic States.
- That education programs be developed, designed and implemented by the indigenous people, with the support of respective States. Part of this would encourage the inclusion of indigenous lifestyles in the way States measure academic success.
- Support ICC in its renewal of the definition of *maqaittiit* and create a mechanism whereby information about *maqaittiit* may be readily available.

Chapter Nine

"Aboriginal Rights as Property Rights" in Nunavut: Strengthening Indigenous Governance Capacity

Kelly Miller

Abstract

In 1993, the government of Canada and the Inuit of the Nunavut Settlement Area created the Nunavut Land Claims Agreement; the federal territory of Nunavut with a public administrative government and co-management regulatory regime was to follow, paving the way for a new form of Land Claim Agreements and solutions for governance in the Arctic. As discussions of resource development and partnerships with local communities have intensified with climate change and increased Arctic activity, the rights of indigenous peoples to their lands and resources of traditional use find expression in the model of Nunavut. Strengthening the voice of indigenous Arctic residents in the procedure of development of settlement areas and the rents received from such activities offer sustainable solutions for regions often plagued with little socio-economic development, over-extraction of natural resources, and low participation in regional governance.

I. Background:

Examining the practices of states, where new systems of governance secure and implement property rights for indigenous peoples, allows for the beginning of a case-based dialogue toward real solutions for governance in the Arctic—solutions that would protect and further the rights of its indigenous inhabitants. In 2008, Inuit activist Sheila Watt-Cloutier spearheaded a petition against the government of the United States for human rights abuses[12] related to climate change. This asserted that Arctic states should acknowledge the fundamental rights of native residents in their dealings with development and governance (Shadian 2010). Watt-Cloutier's motion to hold governments accountable finds a basis in the international rights regime. Article 3 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) declares the "right to autonomy or self-government in matters relating to their internal and local affairs" (UN General Assembly 2007); Article 22 of the Rio Declaration requests that "states recognize and duly support their [indigenous peoples'] identity, culture and interests to enable their effective participation" (UN Conference on Environment and

[12] "Human rights abuses related to climate change" were formally recognized by the international community with United Nations Human Rights Council Resolution 7/23 (UN Human Rights Council 2008).

Development 1992). Although this regime is non-binding, these principles assist in the legitimacy of the argumentation for native rights.

The framework for native rights focuses primarily on the concept of "aboriginal rights as property rights" (Shadian 2005). Property rights presuppose special jurisdiction over the usage and development of traditional lands and resources. Included in these access, usage, and protection rights to settlement areas is the property of self-determination. The Permanent Participants of the Arctic Council demonstrated this connection between self-determination and property rights in the 2010 Moscow Declaration (Arctic Indigenous Leaders Summit 2010). Further illustration of a commitment to a rights-based methodology has occurred at the circumpolar level, presented in the Inuit Circumpolar Council's (ICC) Declaration on Sovereignty in the Arctic, which emphasizes the need for engagement with communities as "active partners" in the problems faced by the circumpolar Arctic community (ICC 2009). Indigenous rights as a guide for development and governance have reached the level of the nation-state, as well. The Inuit organization of Canada, Inuit Tapiriit Kanatami (ITK), stresses the need for federal and international initiative to develop enhanced partnerships with indigenous peoples in their 2008 Integrated Arctic Strategy (ITK 2008). Therefore, rights to land and resources find strong expression in indigenous representative institutions from the local to the circumpolar level.

Increasing resource development, maritime activity, and concerns for public safety in the Arctic has necessitated an increased focus by the Arctic Council and its partners on the concept of "Aboriginal rights as property rights", as implemented through self-determination and new land-ownership strategies. The 2004 Arctic Climate Impact Assessment Act stresses the need for capacity-building in localities inhabited primarily by native peoples. The Arctic Governance Project devoted an entire task force specifically to indigenous governance solutions. Exclusion of indigenous representatives from the Arctic Five meeting and its resulting Ilulissat Declaration, despite an expressed commitment in the Arctic foreign policies of all Arctic states to involve indigenous perspectives, demonstrates a lack of concrete response by Arctic states to the calls for greater self-determination. Key to this doctrine of self-determination is an "expanded consideration" to the right to lands and resources traditionally used and inhabited by indigenous peoples (Arctic Governance Project 2010). The Arctic Council and its member states lack a

means to furthering the rights of self-determination and resource management in Arctic indigenous communities.

The model of Nunavut as a partnership between the Inuit and the government of Canada, provides an example of how native rights may be incorporated into domestic and international practice. The diverse position of indigenous peoples and their communities within Arctic states complicates any one-size-fits-all approach to the application of such a case study. A constitutional guarantee of rights, capable of federal adjudication in Canada, differs greatly from the lack of "Aboriginal status" and thereby any positive bill of rights. The approximately 26 native peoples who make up Russia's "Northern Minorities" are an example of this contrast (Vakhtin 1994). Despite this difficulty, this chapter will explore the particular historical formation, resource management structure, and problems of capacity within Nunavut, so as to produce recommendations of best practices and best mitigation/resolution strategies for dealing with Arctic indigenous governance.

The Case of Nunavut and Canada's NLCA policy

Canada's newly created territory of Nunavut and its accompanying Nunavut Land Claims Agreement (NLCA), represent the newest trend in indigenous land rights in Canada; public[13], self-governance paired with co-management of resources. The implementation of the commitment for greater involvement of indigenous peoples as "active partners" in governance, while securing rights to the full usage and development of settlement areas, has proceeded to the greatest geographical[14] and legal extent with Canada's system of modern comprehensive Land Claim Agreements (LCAs).

The history of LCAs in Canada is a history of the defense and negotiation by Inuit of special rights to usage, development, and inhabitance of lands under the Canadian Crown. LCAs represent an alternative to the traditional treaty structure (followed by the United States with the exception of Alaska), consisting of an exchange of constitutional "Aboriginal status"[15] for title to the lands and resources traditionally used by indigenous groups (Canada 2008). Prior to the LCA regime, the Inuit were considered wards of Canada under the Indian Act (Duffy 1988). The

[13] "Public" refers to a government, whose primary authority rests on territorial grounds, rather than on ethnic identification. Co-management of resources refers to an arrangement between territorial public representatives, the federal government, and ethnic (indigenous) representatives.

[14] For the geographical extend of LCAs in Canada, see Figure 1

[15] "Aboriginal status" grants indigenous peoples federal protection of cultural activities, health, subsistence, and settlement by the government of the state in which they reside.

relationship between the Inuit and Canada began to change in 1969, when the government issued the *White Paper* to the Indian Act, suggesting that the Inuit be incorporated into the legal citizenship framework of the state. This move would have removed the Inuit from the provisions extended to First Nations for management of settlement lands and resources. The Inuit formed the Inuit Tapirisat Kanatami of Canada (ITK—now Inuit Tapiriit Kanatami) in 1971, an organization established to speak for the interest in preserving traditional livelihoods through maintaining these protected rights over lands (Canada 2008).

A loss of status, in light of increased commercial activity and federal interest in the resources of the Arctic, could mean a loss of livelihoods for the Inuit. The ITK, with the assistance of grassroots mobilization groups like the Northern Quebec Inuit Association (NQIA), demanded an end to the *White Paper* and an end to development on settlement areas reserved specifically for Inuit, calling resource exploitation without consultation a violation of the Crown's constitutional mandate to protect indigenous populations. In 1971, in response to Inuit mobilization, the government of Canada withdrew its attempt to nullify the Indian Act (Duffy 1988). In 1973, Canada formally adopted the Land Claims Policy, creating a Land Claims Commission with the following objectives: "joint management of natural resources and negotiation to access to offshore areas in regions of traditional use" (Canada 2008, 63). The Constitution Act of 1982 pledged further governmental support for the autonomy of indigenous peoples, particularly in response to the Inuit voice. Article 35 calls for greater autonomy and devolution of powers for indigenous groups. Although it is not explicitly stated in Article 35, precedent has allowed for A35 to reference Canada's commitment to the settlement of land claims and devolution of governance (Canada 2008).

Combined with the LCA regime of land and resource rights, the constitutional guarantee for greater self-determination and self-governance by and for Inuit, led to the creation of Nunavut, basing the territory's existence on the fundamental rights of indigenous people to management of the places they call home. The particular process of the Nunavut Land Claims Agreement's formation consisted of bi-lateral negotiations between the Inuit of the Nunavut Settlement Area (NSA) and the Canadian government. As the NSA contained non-Inuit residents as well, a vote by all residents for secession from the Northwest Territories was taken to ensure a democratic push for the establishment of a new, Inuit-run territory within Canada. With 85 percent in favor, Canadian Parliament confirmed the Nunavut Land Claims Agreement (NLCA),

which contained provisions for a public system of self-governance in Article 4. Article 23, termed the "equity clause", requires that representation in government be equal to the population; thus, Inuit should be in the majority. After a final five year review for territorial devolution as outlined in the NLCA, the federal government created the official Territory of Nunavut (The Inuit of the Nunavut Settlement Area and the Government of Canada 1993).

The new territory exhibits a dual-sovereignty relationship between powers tied to the NLCA specifically (and its Inuit beneficiaries) and to the public Government of Nunavut (GN) and its territorial duties. Nunavut Tunngavik Inc. (the NLCA representative body) and the GN form a unique public-private partnership in managing the territory. Prime Minister Mulroney, speaking at the signing ceremony in 1999, praised the unprecedented feat of Nunavut, saying: "we are forging a new partnership, a real partnership…between aboriginal and non-aboriginal Canadians" (Berger 2006, 67).

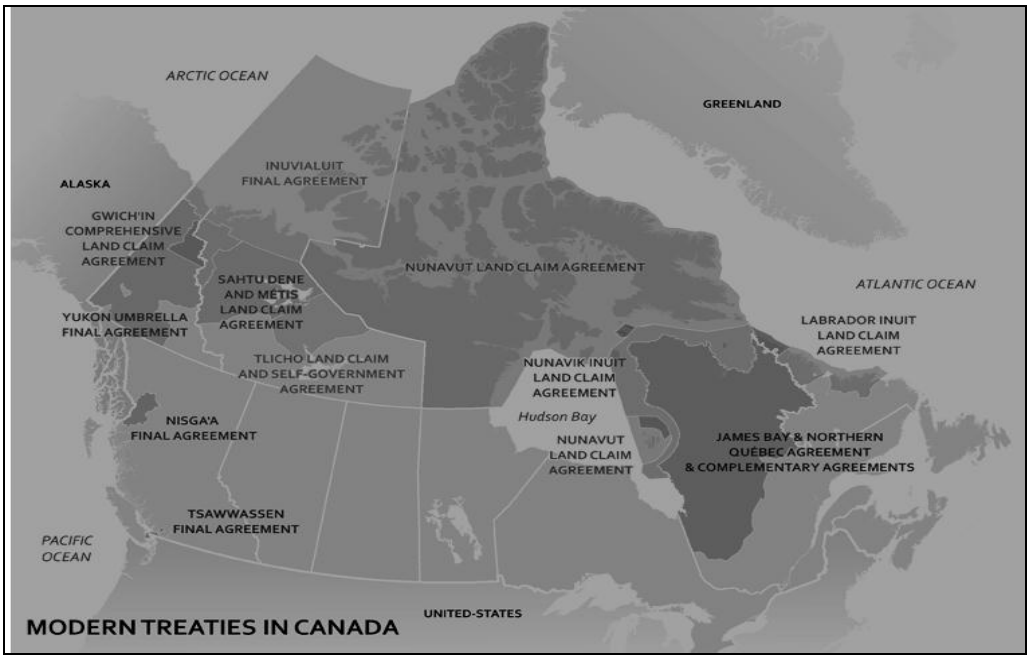


Figure 1. Geographically shows Land Claims Agreements in Canada
Map by Department of Indian and Northern Affairs Canada (accessed on 14 February 2011)

The Management of Lands and Resources in Nunavut

A brief overview of the function, process, and jurisdictional issues of the resource management regime in Nunavut is necessary to ground Nunavut's model for "Aboriginal rights as property rights" in actual practice. LCAs across Canada enable a shared system of sovereignty between ethnic and public institutions that protect native rights in balance with corporate and

federal interests. The unique, dual-sovereignty model of the territory of Nunavut has led to an equally unique regulatory and resource management regime that balances not only the culture-specific needs of the NLCA beneficiaries and the federal government, but the needs of the public territory as well. The presence of culturally-sensitive practices and consultations strengthens Nunavut's example of Arctic governance, by demonstrating that resource development, traditional lifestyles, and local autonomy must not be at odds with one another.

The Nunavut regime focuses primarily on wildlife, water/marine areas, and land development, empowered by the NLCA and implemented by both Institutes of Public Government of Nunavut (IPGs)[16] and co-management boards. The three primary boards in the regime—the Nunavut Wildlife Management Board (NWMB), Nunavut Water Board, and the Nunavut Impact Review Board (NIRB)—consist of an equal partnership between federal officials and elected Nunavummiut[17]. Article 5 of the NLCA regulates wildlife, balancing the needs of the local population with federal environmental legislation and a deep respect for sustainable practices (The Inuit of the Nunavut Settlement Area and the Government of Canada 1993). Federal quotas do not apply to Nunavut settlement areas; rather Hunter-Trapper Organizations (HTOs) and Regional Wildlife Organizations (RWOs) mediate the creation of "adjusted basic needs levels" toward a particular season's "total allowable harvest" for each species (Vertes, Connelly, and Knott 1998). As listed in the 2001 Review of the Nunavut Land Claims Agreement, "these rules are non-quota limitations that are established for conservation purposes, public safety, and public health reasons that apply to Inuit" (McCrank and Strahl 2000, 11).

The development of lands and resources proceeds within this co-management regime in tandem with the Government of Nunavut. The Nunavut Planning Commission and the NIRB mediate discussions between developers and community members at the level of municipal councils. The Commission engages these municipal stakeholders to map out areas of high conservation value, areas prone to over-hunting or exploitation, as well as areas desirous for development. Such a process helps to establish policies that reflect not only a commitment to general economic development, but to the local effects of development and the incorporation and

[16] IPGs are bodies within the Government of Nunavut that perform the bureaucratic functions of the territory, such as the Nunavut Water Authority.

[17] This is the term used to describe residents of the territory of Nunavut, Inuit or non-Inuit alike.

protection of local knowledge, IQ *Inuit Qaujimajatuqangit*[18] (Nunavut 2003). After the co-management assessment process, all development projects pass through the Department of Community and Government Services of Nunavut. The powers of the government and of the NIRB to reject or grant development rights depend on the area of interest. In the case of surface development, the right rests within the jurisdiction of the Government of Nunavut in accordance with the NLCA (Nunavut 2008).

Sub-surface rights are not included in the jurisdiction of the NLCA, so development may proceed with authorization of the federal government. Issuance of a license by the territorial Government of Nunavut is not required. Independent and national corporations alike have a "duty to consult" the NIRB, the territorial government, and the NCLA implementation corporation (Nunavut Tunngavik Inc.). A failure to consult would be a violation of federal common law, established in the case of Little Salmons (O'Callahan and Gilbride 2010). The NIRB and the Nunavut Tunngavik Inc. partner to manage these consultations, conducting assessments and reviews, as is the case with surface development. These multilateral negotiations work to draft Impact Benefit Agreements (IBAs), which are then submitted for approval by the Government of Nunavut's legislative assembly before development proceeds; territorial approval is not, however, required.

Nunavut's regulatory regime functions to incorporate the diverse voices of federal, territorial, and ethnic stakeholders. The process of sub-surface development demonstrates that not all procedures are followed, however, despite the "duty to consult" through the case of Little Salmon. In 2009, the NTI, the NLCA representational body, filed a law suit against Canada for a total of CAD $1 billion in damages, for failing to implement the NLCA in full (Nunavut Tunngavik Inc. 2006). Essentially, Canada has granted permits for sub-surface exploration without participating in the IBA procedure. The outcome is pending adjudication, but the fact that a NLCA-representative body within a federal territory has taken the Canadian government to court demonstrates that new levels of authority are developing in the Arctic through LCAs.

Capital Generation and Development in Nunavut

Supplementing the model of Nunavut's resource regulatory regime in this case study are the economic benefits and financial burdens accrued through the unique status of an Inuit-based

[18] *Inuit Qaujimajatuqangit* is the Inuktitut term for traditional, situated knowledge.

public territory. Negotiations for new implementation strategies of the NLCA have been characterized by criticism of the process, in which capital is generated and development progresses in Nunavut. In 2004, the Canadian government voiced public support for greater devolution[19] in Nunavut (White 2009). Prior to the signage of an official protocol, the Canadian government commissioned Paul Mayer to investigate the readiness of the territory, essentially its capacity, to assume these province-like powers. In 2008, the Canadian government entered into formal negotiations for devolution with the Government of Nunavut and Nunnavut Tunngavik Inc. Mayer's results compounded with Thomas Berger's 2006 report on the lack of socio-economic development in Nunavut have led to a stalemate in devolution (White 2009). Examining the foundation for the stalled movement toward greater self-determination and resource management by Nunavut and its indigenous residents requires background knowledge of the interaction between the regulatory regime outlined in the previous section and the progress of socio-economic development and human capacity[20] in the territory.

As demonstrated in the case of surface versus sub-surface development, the territorial government of Nunavut and its NLCA beneficiaries do not have complete control over the resources or lands on Nunavut settlement areas, despite the great strides in devolution made in the Nunavut Land Claims Agreement. The NLCA structure is predicated on the protection of traditional activities in the Arctic through land titles, not necessarily on economic development or financial self-reliance. For example, when sub-surface resource development proceeds on Nunavut territory, which does not require official approval by the co-management structure as aforementioned, the federal government stands to collect royalties directly upon the completion of the project. This is also the case for the development of surface resources and lands—the Canadian government receives the majority of financial returns from any development project within the boundaries of Nunavut, because Nunavut is a federal territory. The Government of Nunavut and its residents must then wait for financial transfers of these resource-generated returns from the Canadian government, to be later distributed to residents through Nunavut's public-administrative capacities. In contrast to this centralized form of financial benefit and re-distribution, the surface rights explicated through the NLCA allow for the transfer of royalties to

[19] Devolution is the transfer of province-like responsibility for lands and resource management from the federal government to the territory.

[20] "Capacity" refers to the human capital required for a region to govern itself effectively, utilizing a particular skill set and professional competency level.

the LCA's beneficiaries, the Inuit residents of Nunavut, on a check-by-check basis to homes across the territory. The NTI performs this financial responsibility of distribution under its mandate of implementing the NLCA.

In sum, resource-generated capital in Nunavut must move through a system dependent on federal transfer. For minimal territorial gains from surface resource development, the individual transfer system of the NLCA to Inuit beneficiaries produces little in the sense of sustainable capital. In 2002, as a result of the problems with resource-based capital-generation in Nunavut, negotiations between the NTI, the Government of Nunavut, and the government of Canada for renewal of the NLCA's Implementation Agreement reached a deadlock. In 2005 Justice Thomas R. Berger, the Supreme Court authority in charge of the 1985 Mackenzie Pipe Line Inquiry[21], was assigned the task of resolving the dispute, by devising a new strategy of NLCA implementation.

Berger's 2006 final report titled "The Nunavut Project", chastises the failure of the federal government to implement the NLCA in full, most notably in its inability to adhere to the conditions of Article 23 of the NLCA[22], with only half of the current government of Nunavut consisting of Inuit Nunavummiut out of a population of 85 percent Inuit (Berger 2006). According to the report, the remaining key issue areas in Nunavut's self-governing capacity and overall well-being are as follows: 1. high unemployment (70 percent in more than 5 of the 27 communities) within an economy lacking of sustainable industry; 2. underfunded schools affected by a "colonial system" of mono-lingual education that affects governing capacity (which Selling discusses in chapter seven); and 3. insufficient territorial infrastructure, such as housing and roads. For Berger, the residents of Nunavut cannot effectively govern their territory due to a lack of adequate investment by the federal government in local programs, as well as the presence of inhibiting obstacles.

The 2007 Mayer Report on Nunavut Devolution followed Berger's controversial documentation of the territory's challenges to economic development. The Mayer Report bridges the "The Nunavut Project's" evaluation of root problems with a new assessment of potential solutions—devolution. Focusing on the lack of human capacity, Paul Mayer emphasizes that

[21] The Mackenzie Valley Pipeline Inquiry was commissioned by the Government of Canada to investigate the potential social, environmental, and economic impacts of a proposed gas pipeline through Northern areas traditionally used by indigenous people. Berger's recommendations strongly discouraged development in the face of the project's human impacts (Zellen 2008).

decentralization efforts in Nunavut have cost the government to date upwards of CAD $32.3 million (Mayer 2007). In addition to the high costs of a process without any signs of progress, there are few Inuit who possess the necessary human capital to manage the new authority of devolution, leaving government offices vacant (Mayer 2007). The report concludes by recommending that the government postpone a settlement of devolution negotiations until development conditions are met. According to Mayer, Nunavut is in no way prepared for greater control of resources and development.

II. Need for Action

The institutional framework of the NLCA makes Nunavut an effective partner in ensuring that management of the development of lands and resources is sustainable, effective, and culturally-directed. Ultimately, the LCAs structure the rights of indigenous residents. The question on the minds of policy-makers and Nunavummiut themselves, however, is one of capacity (Mayer 2007).

Despite the predicament of fledgling development in Nunavut, where these rights have been recognized and empowered through a territorial government and LCA structure, the government of Canada can work to further devolve power over resources toward enhanced capacity. Economic self-sufficiency depends on the strength of existing institutions to transform internal conditions (White 2009). As voiced by the former Premier of Nunavut, Paul Okalik: "financial independence is a key to Inuit self-sufficiency, so it is imperative that Inuit share in the material success of the creation of Nunavut, now and in the future. *Article 24* of the *Nunavut Land Claims Agreement* recognizes that economic development will be one of the true measures of success" (Okalik 2001, 53). The Nunavut project can still be rectified with a strengthening of the involvement of residents in deciding when and how sub-surface development may proceed and when and how royalties from all development projects may be invested directly into Nunavut's economy.

Improving Nunavut's capacity and devolving power to local levels would assist in the creation of necessary partnerships across the Arctic with local and international bodies, facing the expediency of climate change adaptation and of natural resource protection and monitoring. The participation of Nunavut in the International Polar Year, the development of the Nunavut Geosciences program and its sea-bed mapping activities (Nunavik Geoscience 2008), the establishment of a new fisheries monitoring system (Burns 2010), and the development of a

Climate Change Regional Adaptive Collaborative (RAC) with INAC to be based in Iqaluit (Quassa 2009), among many other initiatives, are all examples of how models like Nunavut can be useful in Arctic-wide solutions with state and non-state actors alike. If development can strengthen capacity and capacity thereby re-enforce development, indigenous self-governance may prove to be the most sustainable innovation in Arctic governance.

Finally, as mentioned at the beginning of this chapter, strengthening governance by and for indigenous peoples can assert rights to land as native rights. As Terry Fenge in his work on the formation of Nunavut so eloquently put it:

> *Human rights* have long been an ideal of Canadians…Canadian activism abroad must be matched by action at home. By extending political rights and their own territorial administration to Inuit in Nunavut, Ottawa would be making a much stronger statement than any number of press releases aimed at remote and relatively impervious countries. There is widespread interest in the Nunavut model around the world, and federal backtracking will be noticed. (Fenge et. al 1989, 111)

These words of wisdom should be taken into account by all Arctic states, in recognizing the importance of indigenous communities for their Arctic sovereignty, involvement in Arctic management of resources, and practice of theories of human rights. The potential for reform within Nunavut by strengthening its governance through resource devolution presents the potential for enhanced indigenous rights through land and resource management across the Arctic. The following section will then attempt to demonstrate how capacity may be built simultaneously with governance through increased territorial ownership of resources by those best-suited to manage them. Existing models do not need to be demolished, only reformed.

III. Evaluation and Analysis

Why has development in Nunavut "failed" (Berger 2006)? The words of the NTI President, Paul Kaludjak in 2006 upon the announcement of the lawsuit of the NTI against the government of Canada for CAD $1 billion, reveal Nunavut's position on the matter: "the Government of Canada keeps Inuit dependent and in a state of financial and emotional despair despite promises made when the NLCA was signed in 1993. The Government of Canada is not holding up to its end of the bargain. Canada got everything it wanted immediately upon signing the NLCA. Inuit are still waiting…" (Nunavut Tunngavik Inc. 2006). As Kaludjak emphasizes, the government has reaped royalties from development on Nunavut lands, but the territory remains a mixed, subsistence economy with little growth.

According to Paul Mayer in his report, a lack of capacity is a lack of investment and effective implementation of these investments (Mayer 2007). Mayer continues that structural problems are at work that must be internally corrected before greater powers over the royalties and usage of resources can be granted. Yet, financial dependency through a trickle-down of royalties from the federal government, when added to a lack of complete power over traditional lands, leads to a lack of valuable, local involvement. Those who are the true stakeholders in the affairs of Arctic development, management, and overall governance face political and economic exclusion due to a lack of capacity. The investment discussed by Mayer in his critique on Nunavut's capacity, assumed to stem from the federal level and the territory's ability to generate income and capital, requires a greater say over how and when funds will be received, as well as how and when resources will be expended for profit-generation. Greater economic agency in receiving and distributing returns from development projects would lead to positive results for the development project of Nunavut, on which its capacity as a viable partner for Arctic solutions depends.

The territory of Nunavut currently operates as a province, managing its own resources in cooperation with a public government. It remains, however, a far-removed territory under law, unable to benefit completely from the resources in the form of the property rights that other provinces enjoy (Kaludjak 2006). The present system of two-pronged financial returns for surface development through both public and ethnic (NLCA) channels in Nunavut, in addition to the federal transfer approach with sub-surface rights, creates an often confusing collection of interests in resource development (Usher 2003). Without direct access to the funds from resource development, the Government of Nunavut and its residents must rely heavily on the federal agencies responsible for the implementation of both the NLCA (with transfers made to the Nunavut Trust) and its financial responsibilities to the Crown's territories. The mechanisms for community development exist on the ground; they are simply not working due to a lack of a sustainable, internal economic support system.

Resource Devolution is Needed before All Conditions for Development are Met

Adequate developmental conditions need not be established before devolution can be implemented, as the absorption of rents and externalities of development projects by local residents and the direct investment of territorial royalties into local economies enhances governing capacity. Titles to land follow what has been constitutionally and now legislatively

declared the inherent right to govern lands of traditional occupancy (The Inuit of the Nunavut Settlement Area and the Government of Canada 1993). Retaining a title to one's land means an assumption of the externalities of development on one's land, as well as the collection of rents from resource exploitation.

Assuming the rents and externalities of development projects at the local level translate into more effective management of resource exploitation, a more effective management of royalties gained from such projects will be had. Lands are collectively owned in Nunavut, under the guardianship of the Government of Nunavut with the mandate of the NTI and the NLCA, so each resident stands to experience the costs and benefits of the resources. Collecting rents of settlement areas in full leads to a balance between potential development and dormant sources of revenue and economic potential would be maximized. At the same time, if all externalities of development projects are equally weighted throughout Nunavut communities through this shared system of ownership, development projects cannot focus solely on economic returns but on community well-being, as well. Therefore, self-determination of development in communities like Nunavut leads to more efficient, community-minded development (Huff 2005).

Giving residents a greater voice in their communities by giving them a greater stake in the titles of their lands and what is done with them can only lead to better, more expedient investments, effectively moving Nunavut from the mixed, subsistence economy it currently is to one that truly reflects Inuit principles (Elias 1997). Investment of rents in local projects would find local support through this collective stake in the titles of lands of traditional inhabitance. A greater assumption of risks means a greater assumption of profits as well, leading to a reduction in dependency at the federal level for stable, self-sufficiency. Wise investments and self-sufficiency is in the interest of successful management of increasing marine activity, drilling and mining, security apparatuses, assistance to Coast Guard, and employment opportunities in these Arctic activities (McCrank 2005).

Improvements to development and management capacity are then a win-win situation for Arctic states, indigenous groups, and the government of Canada. Strengthening the LCAs through territorial devolution would be a sustainable and replicable tool within Canada and within regions with similar political revisions. The next step for devolution of powers through resource title transfer in Nunavut has been completed before within the Yukon Territories. All

that is now required is political will to overcome the idea that greater resource control cannot proceed before development has been reached (Cameron and Campbell 2009).

Applying Nunavut to Arctic Governance

Devolving governance to Northern communities over resources lends a voice to indigenous communities based on fundamental rights to land usage and protection—Aboriginal rights are effectively property rights. Confronting the challenges of Nunavut in implementing these rights in the face of climate change and increased commercial activity lends new theory and practice to governance solutions. Governance by indigenous groups requires a transitional period of socio-economic development and the creation of mechanisms which will protect traditional ways of life and cultural values. These goals can be achieved in Nunavut, thereby presenting the Arctic community with a case study through which best practices may be compared and a conversation on a greater political and economic voice of indigenous peoples to begin.

The Counter-Case of Alaska

The case of Alaska provides an excellent example of an indigenous arrangement outside of the Canadian LCA regime that exhibits structural and developmental impediments to full capacity for partnership in the Arctic, thus standing to benefit from the Nunavut model and its reforms. Increased management of resources as a vehicle of rights recognition could very well extend to Alaska, if the current system would incorporate new approaches to subsistence and land-development rights. Thomas R. Berger, previously mentioned in conjunction with his report on the Nunavut Project and Mackenzie River Valley Pipeline, also conducted the impactful Village Journey report for the Alaska Native Review Commission in 1985. According to Berger's analysis, the problems with the Alaska arrangement for indigenous property rights and resource control "boils down to three subjects: land, self-government, and subsistence" (Berger 1985, 155). These three issues have changed little since Berger's report in 1985 (Korsmo 1994).

In comparison to the Canadian relationship with indigenous peoples, the Arctic Alaska Natives of the United States, namely the Yup'ik and Inupiat, inhabit an indefinite legal space that oscillates between policies of "assimilation and retribalization" (Korsmo 1994, 87). As in Canada, the Alaska Natives have been granted a different legal arrangement than Native Americans, effectively receiving benefits with the 1968 Indian Civil Rights Act, while also living under the vague jurisdiction of the 1968 Alaska Native Claim Settlement Act (Korsmo

1994).[23] Negotiated by the Alaska Natives, the state of Alaska, and the U.S. government, the ANCSA is an example of land reform but not of a modern comprehensive Land Claims Agreement, where residents of settlement areas receive traditional usage rights, as well as rights for inhabitance. Instead of a system of self-governance and co-management with a LCA representative corporation, the ANCSA established a consortium of corporations, charged with managing settlement lands according to the mainstream capitalist market (Berger 1985).

The North Slope Borough, the largest community in the ANCSA region, demonstrates the results of a corporatist structure on the environment and the cultural integrity of indigenous regions, as opposed to a public, representative system of co-management in Nunavut. Basically, native settlement regions as outlined in the ANCSA are prone to over-exploitation of resources without much regard for the livelihoods of residents physically and culturally dependent on the environment's wildlife and fisheries (Zellen 2008). According to Sophie Theriault, the ANCSA is based on endogenous values and paradigms for governing capacity that naturally exclude traditional livelihoods and the right to land as right to food, resulting in a movement from traditional sustainability and well-being to dependency (Theriault 2005).

Neglecting to offer any provisions for traditional subsistence and cultural activities in relation to wildlife and resource usage on settlement lands, the ANCSA must adhere to the federal government's fishery, hunting, and trapping quotas that include even native settlement areas. These federally-established parameters restrict not only the quantity of allowable catches but also areas where such practices may occur. Development projects related to oil and gas or the preservation of natural habitats for threatened species restrict native access to lands that lie within the corporatist, management jurisdiction of the ANCSA (Korsmo 1994). In essence, the ANCSA does very little to protect the rights of indigenous peoples and puts the natural environment and livelihoods of human inhabitants at risk. Socio-economic development and capacity-building do not seem promising within such an arrangement of corporate-driven, top-down development under a shaky legal basis of indigenous status. Considering the political mobilization of Alaska Natives for a re-negotiation of the ANCSA to include resource usage provisions, best vocalized in the 1992 Inupiat Secession Declaration and the 1998 Commission on Rural Government and Empowerment, the U.S. government should take the Canadian LCA

[23] The state of Alaska controls municipalities that were created as a result of the ANLCA but are not actually included in the corporatist management of the LCA settlement areas, i.e. municipalities are on public, Alaskan land and ANLCA land is protected by the agreement at a federal level (Korsmo 1994).

regime as a lesson for a more respectful, empowering, and harmonious relationship with indigenous peoples (Zellen 2008).

In sum, a new paradigm for Arctic governance is one that focuses on the right to manage lands, where one makes one's home, leading a greater say in public government, research, commercial activity, resource development, and policy at the territorial, provincial, national, and international level. It is also a paradigm that offers the ability to learn from past mistakes, spread practices, and to contribute to the development of effective regulatory regimes and rights-based approaches in other regions of the Arctic. The Canadian LCA model can inform how indigenous rights and subsistence may be incorporated into governmental and constitutional arrangements across the Arctic.

IV. Recommendations

Canada in cooperation with the territory of Nunavut:

- Full implementation of Articles 15 and 23 of the NLCA.
- Devolution of resource powers with reduction of annual financial transfers to create province-like system of resource management in the Nunavut territory.
- Implementation of self-governance agreements for all existing LCA regions in the Canadian Arctic and strengthening of those in-progress through increased devolution.

United States and the state of Alaska:

- Renegotiation of the ANCSA to include subsistence rights and traditional hunting activities, specifically by eliminating the federally-imposed quota system.
- Engagement with the Alaska Native Review Commission toward a re-evaluation of the corporatist structure of indigenous property rights in the ANCSA.

Arctic Council:

- Establishment of a working group on indigenous self-governance through LCAs and greater involvement in resource management.
- Fostering greater involvement by Permanent Participants on the United Nations Permanent Forum on Indigenous Issues toward best-practice sharing.

Chapter Ten

A Case Study: Québec and Nunavik, a Model for Arctic Governance[24]

Dominic Maltais

Abstract

Québec's contribution in the far North has been significant and its vision for the Arctic quite unique. This devotion of energy in the North is not surprising given the extent of its northern territory: approximately two third of Québec's territory is located north of the 50th parallel and it is home to the second largest Inuit population in Canada. Over the past thirty years, Québec has invested hundreds of millions of dollars in development projects in the Arctic and created an efficient model of governance based on cooperation with its Arctic indigenous peoples. This chapter will highlight Québec's efforts in the North, furthering their visibility in the international community. It will argue that Québec's initiatives should serve as a governance model for all Arctic nations that is inclusive of indigenous communities. It will examine the crucial role of the Makivik Corporation of Nunavik (northern Québec) in promoting cooperation with Québec and in working for the economic and political advancement of Inuit communities.

I. Background

The challenges to an effective form of governance in the Arctic are numerous. With climate change and economic activities escalating interest in the region, the North is being integrated as never before into the economic and political policies of Arctic states. This integration is difficult since the social, political and economic realities in the Arctic region are very different from those of communities in non-Arctic regions. Most Arctic communities face a wide-array of social problems, including high levels of unemployment, low levels of education, alcoholism, high suicide rates and overcrowding due to a lack of housing. These communities are largely isolated by great geographical distances and lack sufficient, functioning infrastructure such as roads and ports, resulting is a very high cost of living. The main inhabitants of the Arctic are indigenous peoples who have been strongly fighting for greater autonomy, and the protection of their rights and cultures in face of these problems over the past few decades. An effective governance model in the region would be one that serves as a bridge between the cultures of the

24 Note: The present chapter is a case-study, and as such, takes a unique approach to the building of policies for the Arctic region. Rather than presenting a specific issue, its stakeholders and analyzing a set of policies, it will take a close look at a specific case: the cooperative efforts of Québec and its Arctic indigenous communities. This case study was conducted so as to provide insight into a functioning governance model and propose policies inspired by its analysis.

North and the South, allowing both the state and Arctic communities to participate in and gain from economic activities, without endangering indigenous culture and the environment. This would be accomplished in a cooperative manner, working to ensure safe, efficient and sustainable development. This chapter presents Québec as a case study, offering a model of governance that has achieved efficient economic and political integration of its Arctic communities in Nunavik (see Figure 1). Through land claim agreements and through the work of the Makivik Corporation, Québec and the Nunavimmiut[25] have managed to reconcile their interests and successfully cooperate to form a governance model that is highly efficient and benefits both sides. It is not without flaws, but it is a very unique model that merits exploration. Before diving into an evaluation of this model, the following section will provide an overview of Québec's past actions in the Arctic and highlight the efforts of the Makivik Corporation in promoting dialogue with Québec and advancing the economic and political interests of the Nunavimmiuit.

Québec's Past Actions in the Arctic

Québec's involvement in the Arctic region became significant starting in the 1970's. The government-owned hydroelectric company Hydro-Québec saw in northern Québec great economic opportunities and proposed a project for the development of hydroelectricity in the region. They did so without consulting the indigenous population of Inuit and Cree who were quick to respond to assert their rights. The vast hydroelectric project proposed by Québec had the potential to seriously damage Inuit traditional ways of life (Plan Nunavik 2010, 6). With Canada refusing to help, the Inuit filed an interlocutory injunction, stating that the project was in violation of the 1912 Québec Boundaries Extension Act, in which Québec asserted its obligation to recognize Inuit rights to their northern territory. In November of 1973, Judge Albert Malouf granted the interlocutory injunction and forced Québec to stop all work on the James Bay hydroelectric project (Plan Nunavik 2010, 7). This first incident was a great lesson for the government of Québec who would from this point on engage in careful negotiations with the indigenous when considering the development of northern resources.

25 Nunavimmiut is the Inuktitut word for the people of Nunavik

Figure 1. Map of Québec and Nunavik.
Map By Nunavik Research Centre, Cartographic Services, Makivik Corporation

For the next two years, intense negotiations took place between the Cree, Inuit, Québec and Canada, which culminated in the signing of the James Bay and Northern Québec Agreement (JBNQA) in 1975. The agreement would from then on shape relations between Hydro-Québec and indigenous nations throughout the Province of Québec (Egre, Roquet and Durocher 2007, 240). Along with covering issues of land claims, resources, and economic development, the JBNQA transferred municipal services responsibilities for Inuit communities from Canada to Québec (Plan Nunavik 2010, 11). It also created an array of regional governance structures, establishing important institutions in Nunavik (Québec's Northern region) such as the Makivik Corporation, the Kativik Regional Government, the Kativik School Board and the Nunavik Regional Board of Health and Social Services (Arteau and Savoie, 2011). The agreement provided CAD $225 million in compensation to the Inuit and Cree of Northern Québec in

exchange for Quebec's right to proceed with its multi-billion dollar hydroelectric plan (Plan Nunavik 2010, 9).

1970 thus marked the beginning of a new cooperative political and economic relationship between Québec, the Inuit and Cree of the North. Since then, the government has negotiated a number of agreements with its indigenous communities. In 2002, it signed two very important documents that were made to ensure the safe and sustainable development of hydroelectricity resources in the North. The first was the Paix des Braves Agreement, which provided the Cree Nation with CAD $70 million in economic compensation per year over a 50-year period for Hydro-Québec's right to develop hydroelectric projects. These payments are significant not only monetarily but also because, in the word of scholar Dominique Egre, author of *Monetary Benefit Sharing from Dams: A Few Examples of Financial Partnerships with Indigenous Communities in Québec* they "constitute a recognition of the Cree communities' right to govern themselves and aim to support the trend towards governmental autonomy for Québec's indigenous communities" (Egre, Roquet and Durocher 2007, 240). The second, the Sanarrutik Agreement, is a similar agreement negotiated between the government of Québec and 14 Inuit villages that were granted CAD $450 million in exchange for Québec's hydroelectric developments in their region (Krauss, 2002). Finally in 2007, Québec signed its most recent agreement with Québec's Inuit communities: The Nunavik Inuit Land Claims Agreement (NILCA). NILCA was signed to establish the rights of Nunavik Inuit to the offshore, rights that were left unsettled by the JBNQA (Makivik Corporation 2011d).

> These agreements are a significant step taken by Québec towards greater cooperation with the Inuit and the Cree, but all the more significant is Québec's renewed efforts since 1999 to negotiate with the Inuit for the creation of a government in Nunavik. Since 1969, Nunavik's indigenous communities, like many communities around the Arctic, have been asking their government for a greater level of autonomy. In 1983, Québec's Prime Minister René Lévesque gave a historic speech in which he recognized Inuit's right to self-governance and pledged to initiate negotiations with them. He stated:My answer is yes... it is quite simple; if the Inuit unify their approaches in the way of an autonomy within Québec, in order to have a better management of their affairs, to pass laws in the fields that concern them directly, to organize their life, we would be ready at once to discuss that with them and to accept this consideration. We would negotiate from this base whenever they want...we would be ready anytime but it is up to them to decide. (Rodon and Grey 2009, 321)

The Inuit took these words seriously and immediately began to work towards greater autonomy.

In 1999, a commission was created with the goal of uniting Nunavik's currently fragmented political structure into one official governing body: the Nunavik Regional Government (NRG). An agreement in principle, laying down the mechanisms and development stages for the creation of the NRG, was signed in 2007 and Nunavik is now very close to achieving self- governance. Québec Prime Minister Jean Charest declared that the agreement for the NRG was "at the heart of our desire to promote as never before social and economic development of the Inuit communities" (Makivik Corporation 2011c). The establishment of a regional government with power of key sectors and a National Assembly representative would be a first in the history of Canadian federalism.

Québec's most recent effort in the North has been the drafting of its own Arctic policy document titled the Plan Nord, which calls for a "socially responsible and sustainable form of economic development" (Quebec Government, 2009). According to the executive assistant to the president of Makivik Corporation, Jean-Francois Arteau, Plan Nord is unfortunately an illustration of Québec's lack of vision for the Inuit communities located thousands of miles away from Québec city (Arteau and Savoie, 2011). The plan primarily reflects Québec's economic interests in the North. From past experiences, the government of Québec has learned that the only way to carry out efficient economic development in the North is through cooperation with indigenous communities. Plan Nord does not offer much of a vision for the social development that is most needed in Nunavik. This is why the Inuit of Nunavik have opposed it and demanded its revision. "It is our opinion that the Government of Québec must address our reality in their Plan North before even thinking of any development in our territory" (Aatami 2010). Fulfilling its promise to work in a respectful manner with Inuit communities, the government of Québec is currently reviewing its Plan Nord, which should be released in the next few weeks. According to Jean-Francois Arteau, the negotiations between Québec and the Inuit of Nunavik are going very well and the reviewed version will be significantly different from the working document presented in 2009 (Arteau and Savoie, 2011). What this debate over the Plan Nord illustrates is the dynamic dialogue that has existed between Québec and the indigenous communities of the North since the 1970s.

In 2009, Canada also released an Arctic foreign policy statement. The document, titled Canada's Northern Strategy: Our North, Our Heritage, Our Future, also faced criticism from the Inuit community, but unlike Québec, Canada has not committed to reviewing this strategy and

the document remains unchanged. Canada's Inuit association Inuit Tapiriit Kanatami (ITK) criticizes the *Northern Strategy* for excluding the 19 Inuit communities of Nunavik and Nunatsiavut living south of the 60th parallel and for failing to prioritize strong relationships between Canada and its Arctic peoples (Simon, 2009b). In 2010, through the Report of the Standing Committee on National Defence[26], it made a series of recommendations to Canada in support of the indigenous. Most notably, Québec recommended that Canada include representatives from Arctic communities in its discussion of Arctic policies and do more to recognize the centrality of the Inuit to their sovereignty claim. Additionally, the report supported heightened Inuit participation in scientific research and suggested that Nunavik and Nunatsiavut be included in its Northern Strategy (House of Commons 2010b). This report illustrates Québec's desire to build a stronger relationship between Canada, Québec, and Arctic indigenous peoples. However, Canada has demonstrated that it does not share Québec's vision, as all of the recommendations mentioned above were rejected (House of Commons 2010a).

The Makivik Corporation: For the Political and Economic Advancement of Inuit Communities

When Québec signed the James Bay and Northern Québec Agreement, it also established with the Inuit communities of Nunavik, a very important organization: the Makivik Corporation. Makivik's primary goal was to administer funds provided to Nunavik under the JBNQA. However, the Corporation has since evolved and expanded its operations, engaging in activities that go beyond this original task. Due to Makivik's founding, there has been intensive dialogue, since the establishment of the JBNQA, between Québec and the Inuit of Nunavik . The Corporation has become over the years an engine for the political and economic advancement of Inuit communities and has served as a bridge between the Inuit and Québecois cultures. The following section will provide an overview of Makivik's evolution in order to demonstrate the crucial role it has played in state-Inuit relations.

Makivik's mandate was established in 1975 not only to administer compensation funds, but also to promote the welfare of Nunavimmiut by relieving poverty, advancing education, developing communities and working to promote and protect the Inuit way of life (Makivik Corporation 2011b). This mandate highlights the main reason why the Inuit agreed to concede their indigenous title to the territory, that is, to obtain funds that are

26 The *Report of the Standing committee on National Defence* was chaired by Maxime Bernier, Member of Parliament for the Québecois region of Beauce and co-chaired by Bloc Québecois Defence Critic Claude Bachand.

much needed in a region facing serious social problems. To fulfill this mandate more efficiently, Makivik has moved beyond its role of administrator to that of entrepreneur and assumed the title of Corporation. Since 1975 it has established its own subsidiary companies: Air Inuit, First Air, Nunavik Arctic Food and Hulatik Enterprise. While Makivik started out with a CAD $90 million in equity value[27] under the JBNQA, it has today over CAD $290 million (Arteau and Savoie 2011). Through the years, it has invested as much as CAD $100 million in social development projects, like housing, infrastructure, education and community services. Due to its economic success, Makivik has managed to "overcome initial and deeply held fears by many Inuit about the loss of indigenous title and rights to traditional lands. By carefully investing compensation funds and utilizing selected Inuit "titled" lands it has demonstrated the extent Inuit and indigenous land claims can influence and lead economic and resource development" (Makivik Corporation 2011a). For the Inuit, Québec, Canada and even according to *The New York Times*, Makivik is "one of the success stories of Canadian Aboriginal economic development" (Janda 2006, 785).

While Makivik's work towards economic and social development has been significant, especially given limited resources and the high level of social problems, its main achievement has been in the political realm. Indeed, a central component to its mandate since 1975 has been to represent the 10,000 Inuit of Nunavik politically at the regional, national and international levels. Makivik has pushed for and led the way in the signing of 16 agreements between the Inuit of Nunavik and both the Québec and Canadian government since the signing of the JBNQA. Among these agreements were the Sanarrutik, Paix-des-Braves and Nunavik Inuit Land Claims agreements with Québec. The Corporation sits at the board of directors of the national Inuit organization Inuit Tapiriit Kanatami (ITK) and is an active participant in the Inuit Circumpolar Council, an international non-governmental organization representing approximately 150,000 Inuit of Alaska, Canada, Greenland, and Chukotka (Russia). Since 1975, Makivik has been considered the de facto government of Nunavik (Janda 2006, 789).

Makivik has also played a critical role in negotiating for the creation of the Nunavik Regional Government (NRG). The NRG will be an amalgamation of three public institutions

27 Equity value is the value of a company available to owners or shareholders.

created under the JBNQA: the Kativik Regional Government, the Kativik School Board and the Kativik Regional Board of Health and Social Services. It will be granted executive power over important aspect of Inuit life in Nunavik such as health, education and municipal and regional affairs. Finally, it will allow the Inuit of Nunavik to have their own representative in the Québec National Assembly so that in the words of Pita Aatami, "a person can speak on our behalf and tell the realities of what we're living in the North because the bureaucracy is in Québec City which is a thousand miles away. It's very easy to come up with something while not knowing what's going on in the region" (Aatami 2008, 14). The NRG will allow the Inuit to gain greater autonomy and a stronger political voice in Québec.

II. Need for Action

The cooperative efforts of Makivik and the Government of Québec, since the signing of the JBNQA, have served to slowly and carefully devolve governance from Québec to Nunavik so that the Inuit in the region may have greater power in administering their own affairs. Such efforts are urgently needed not only in Québec, but also in many other Arctic regions where the state shares its Arctic territory with the Inuit and other indigenous peoples. The reason for this urgency is that the Inuit are no longer a secluded nomadic people living in igloos far from the reach of the state. On the contrary, they live in "modern" stationary communities and are increasingly involved in the economic activities of their respective countries. Until recently, the "modernization" and economic integration of Inuit communities has been carried out without much concern for social impacts and without the political integration of affected communities. This has resulted in socio-economic problems such as overcrowded housing, high suicide rates, inadequate education and alcoholism. To counter these problems and ensure that increasing economic activity in the Arctic does not exacerbate them, it will be crucial that Canada, the United States and other Arctic nations allow indigenous peoples to participate actively in forums of discussion concerning the Arctic, or in the words of the ICC, Arctic states must include Inuit "in all bi-lateral and multi-lateral meetings of importance to Inuit, and to do so with the same direct and meaningful manner as at the Arctic Council" (ICC 2010). Mary Simon, president of the ITK, argues that the government of Canada should start shaping policies to devolve economic and political power to indigenous peoples, stating "it is the vocation of the Aboriginal peoples living in the Arctic to run the Canadian Arctic on behalf of Canada, and it is in the best interest of Canada to accept this. This is the new northern policy universe" (Simon, 2009a). In

accordance with Mary Simon's view, the following section will argue that cooperative efforts, such as those carried out over the years by Québec, serve the interest of not only indigenous communities but also the state.

III. Analysis and Evaluation

The Cooperative Efforts of Québec and Makivik: A Model to Follow

First, consultation and careful negotiations with Inuit communities will save Arctic states considerable amounts of both time and money, as the conflicts and protests that are likely to arise from indigenous communities will be avoided. Indigenous rights today are protected by a wide array of well-organized national and international institutions, treaties and constitutions. If states wish to move ahead and exploit Arctic resources or conduct any kind of economic development on Inuit territory without the consultation of Inuit communities, they will face powerful resistance, a resistance that could end up being very costly in legal fees. In 1973, an epoch where Inuit rights were not nearly as well defined nor as well protected as they are today, a small community of Inuit sued the government of Québec to stop the development of a major hydroelectric project. Today, the Nunavimmiut are directly influencing policy by successfully contesting Québec's Plan Nord, which will not be implemented so long as it does not better address Nunavik's social problems. Inuit and other Arctic indigenous voices, far from going away, are strengthening in influence.

The government of Québec published in 2005 a document highlighting Québec's effort since this period to cooperate with Inuit communities, stating: “a quick glance at past history shows us that court-imposed remedies are not the best solution. The legal process can take many years and cost millions of tax dollars” (Secretary of Indigenous Affairs 2005, 11). The document also argues that without agreements framing Inuit indigenous rights, “the exercise of Aboriginal rights remain uncertain and [can] become a source of tension. Such uncertainty can be costly in terms of social and economic development” (Secretary of Indigenous Affairs 2005, 11). The document criticizes Canada for failing to define the effects and manners in which indigenous rights are exercised in the country.

Of major concern to a number of Arctic states, including Canada, is the question of sovereignty in the Arctic. Many Arctic states fear that giving greater political and economic power to Arctic communities will erode their sovereignty in the region. However, what the case of Québec illustrates is that the state does, in fact, gain some control through cooperative

agreements. The governing power it loses, on the other hand, is minimal and serves to make governance more efficient. What Québec sought with the JBNQA was "to affirm and assure its sovereignty, control, power, and presence over this vast territory and its people" (Plan Nunavik 2010, 9). And this is what it gained, since the JBNQA extinguished Inuit aboriginal titles to the territory (Arteau and Savoie 2011). Now with the proposed Nunavik Regional Government, the governance of regional affairs will be handed over to Nunavik. However, giving Inuit the ability to administer their own regional affairs infringes only minimally on Québec or Canada's control in the region since the NRG will remain within part of both the province of Québec and the country of Canada, and as such will be obligated to respect and abide by the rules of both federal and provincial jurisdictions. According to the Inuit Nunatsiaq online news, the NRG is in fact "a nation-building exercise for Québec... [since it] legitimizes Québec jurisdiction over a huge piece of resource-rich geography lying north of the 55th parallel" (Bell 2011). Moreover, such transfer of governing power will greatly benefit Québec by making its funding in the North much more efficient since it will no longer be administered by a bureaucracy located a thousand miles away.

Before even asserting their sovereign rights over the Arctic region, states need to acknowledge first, that for most of their history, they have ignored their Arctic regions and often mistreated their population. The question is how can Canada or any other Arctic state credibly claim to be sovereign over a people it has both ignored for so long and mistreated? The Inuit, and increasingly the international community, are well aware of the contradictions between states' sovereign claims over Arctic territories and how they have treated these territories and their peoples. The ICC's Circumpolar Inuit Declaration on Arctic Sovereignty states that, "for Inuit living within the states of Russia, Canada, the U.S. and Denmark (Greenland), issues of sovereignty and sovereign rights must be examined and assessed in the context of our long history of struggle to gain recognition and respect as an Arctic indigenous people having the right to exercise self-determination over our lives, territories, cultures and languages" (ICC 2009). Michael Byers, in his influential book *Who Owns the Arctic* devotes an entire chapter to these contradictions within Canada. The message is clear: if states wish to assert their sovereignty in the North, they will have to take better care of their northern communities. This is something they can achieve through agreements and cooperative efforts that devolve governance, efforts that will also work to enhance the quality of life of Inuit.

Makivk and the Nunavik Regional Government: Models of Effective Inuit Governance

The question now is how the political and economic integration of Arctic Inuit communities should be carried out by states. This section will argue that a most efficient a way is through the creation of regional Inuit self-government modeled on the Makivik Corporation and Nunavik Regional Government. The NRG is the result of over 35 years of dialogue between Québec and the Inuit and is inspired directly by the successful governance model of Makivik. Throughout these 35 years, Nunavimmiut[28] have built a great deal of experience in conflict resolution with the state via democratic channels and their political experience currently surpasses that of any other region (Rodon and Grey 2009, 332). The political model they have carefully negotiated since the 1980's is thus a very well thought out one which offers a very effective form of governance. It successfully blends both Inuit and non -Inuit forms of governance, serving as a bridge between Québec and the North and operating within the constraints of both provincial and federal governments. In the words of Thierry Rodon and Minnie Grey, Makivik negotiators for the creation of the NRG: "The Inuit of Nunavik are creating a new type of jurisdiction in Canada: a regional government inside a province that allows for political decentralization and provides a model for the decolonization of the provincial North" (Rodon and Grey 2009, 323). The following section will serve to analyze in more details this unique model.

The key challenge to an effective form of governance in the North is to create governing institutions that are both relevant to the needs of Arctic indigenous communities and workable within the political and economic systems of the state. In an article titled, "Why does Form Matter? The Hybrid Governance Structure of Makivik Corporation," Richard Janda argues that form is crucial in that it provides "identifiable pathways for choices and relationships" (Janda 2006, 786). This is what Makivik, the current de facto government of Nunavik, has achieved and the reason it has been so effective in cooperating with Québec, promoting economic development in Nunavik and governing the Nunavimmiut. Makivik's choice to operate as a corporation enabled it to better integrate and be productive within Québec's economy and this was central to its success. Indeed, it allowed Makivik "to have a family resemblance to parallel entities in the wider Québec context and thus be 'recognizable' for economic actors entering into

28 Residents of Nunavik

relationships with it" (Janda 2006, 804). Another element unique to Makivik, and this time aimed at making it more efficient within Nunavik, is that the scope of its corporate membership is very large. In fact, all Inuit who are beneficiaries of the JBNQA are shareholders. This makes for a very strong and personal relationship between Makivik and Inuit communities in that "each community member might undertake a direct relationship with Makivik and its leadership, without recourse to intermediaries or agents" (Janda 2006, 794). Moreover, since seats for the Board of Directors are given to individual communities (rather than distant shareholders), the level of participation at the community level in Makivik's election is very high (Janda 2006, 795). This special relationship also defines the roles of the directors and managers as direct agents for the shareholder, responsible for maximizing profits and accountable to their communities. The result is that even though Makivik holds a not-for-profit status, its leaders have great incentives to show return on investment (Janda 2006, 794).

Makivik's mandate itself has been twofold. On the one side it has worked to integrate Inuit communities in the economic development of the province of Québec while on the other, it has worked to preserve Inuit culture in the face of this development. Makivik's success lies in the fact that it has managed to "live in two worlds at once, combining the roles of economic actor with social actor, combining corporate governance with Inuit governance, and combining a commitment to tradition with a process of modernization and transformation" (Janda 2006, 787). As such, it has served as an effective bridge between the economic interests of Québec and the interests of Inuit, who wish to participate in the Québecois economy while retaining their sense of identity as Inuit.

Makivik has been the main Inuit negotiator for the Nunavik Regional Government and has worked to create a hybrid form of governance similar to its own, combining elements of both Inuit and state governance. The NRG will be similar to the Canadian Westminster parliamentary model since it will have both a legislative assembly and an executive council and because its executive members will be part of the legislative assembly. The NRG in "keeping with the way governments are usually built" will transform the three current Nunavik public institutions of the Kativik School Board, the Kativik Regional Government and the Nunavik Regional Board of Health and Social Services into the Department of Local and Regional Affairs, the Department of Education and the Department of Health and Social Services, respectively (Budgell, Roy and Grey 2011, 16). It will also create a new governing role in accordance with traditional forms of

governance: that of the Secretariat General, which will be elected to coordinate the actions of the different departments (Budgell, Roy and Grey 2011, 16). However, the NRG will also deviate from Westminster or traditional governance models in two important ways. First, its executive will be elected directly by the Nunavimmiut, and secondly, it will seek to balance regional interests with those of the community (Rodon and Grey 2009, 331). Both of these non-traditional elements are implemented so that the new government may be modeled on the governance system of Makivik, which, aside from being very efficient, also has the advantage of being familiar to the people of Nunavik (Rodon and Grey 2009, 331). Combining elements of both Inuit and non-Inuit governance, the NRG will thus become a unique governance model, recognizable to Nunavimmiut and workable within the established provincial and federal systems.

Current Challenges

One of the main challenges to the successful establishment of the Nunavik Regional Government (NRG) and a major problem to indigenous communities around the Arctic is a significant lack of funding from governments. The cost of living in the North is very high, due partly to the sheer cost of delivering goods over such a long distance, under harsh climatic conditions, but also due to a lack of adequate infrastructure such as paved roads. In order for the NRG to operate efficiently in delivering public and social services to the Nunavik community, it will need better funding from both Québec and Canada. A first step would be to include the regions of Nunavik and Nunatsiavut (Labrador) in Canada's Northern Strategy, in which Canada commits to invest in the social and economic development of Arctic communities.

Another challenge will be to ensure the functioning of the complex set of interactions that will arise as the NRG deals with both provincial and federal jurisdictions. The building of a strong relationship and efficient mechanisms for interaction between the three governments will be essential given the fiscal dependency of Nunavik. According to Nunatsiaq January 12 editorial, approximately 82 percent of the estimated CAD $310 million annual budget of the NRG will come from Québec city with Ottawa paying the remaining 18 percent (Bell 2011). Gary N. Wilson writes in *Nested Federalism in Arctic Québec* that " the future prosperity and autonomy of the region will rely on the intergovernmental interactions that occur between the regional, provincial and federal officials...The expansion of Nunavik's autonomy and the consolidation of its government will require the creation of new intergovernmental forums to

accommodate these changes" (Wilson 2008, 87). Without the appropriate forums and institutions to enable efficient dialogue between the three parties, confusion is likely to result and waste both the time and money of governments, seeking to navigate these complexities.

Another challenge for the NRG and for other territorial or regional Arctic governments will be the protection of indigenous cultures in face of greater economic and political integration and the possible influx of southern workers. This is why it will be important that the political and economic activities in the region be managed by indigenous who have at heart not only the economic advancement of their communities, but also the preservation of their rich culture. Other challenges will be to reduce dependence on external funding, find a solution to the boom and bust cycles associated with an economy that relies on the exploitation of natural resources and to overcome the environmental disturbances that are already happening in the Arctic (Inuit Tapiriit Kanatami 2008, 7). The list could go on but the point has been made: governance of the Arctic region will be difficult, not only for territorial and regional Arctic governments, but also for Arctic states who wish to conduct economic development in the region. Both parties will have to cooperate to ensure that efficient and sustainable development benefits indigenous communities as well as the states themselves.

IV. Recommendations

In light of the benefits reaped through state and indigenous cooperation and the challenges currently facing the NRG, the Inuit of Nunavik, and indigenous communities throughout the Arctic, the following recommendations are proposed to Canada and other Arctic states:

- Arctic states should work at devolving governance to Arctic indigenous communities through efficient, hybrid models such as Makivik or the Nunavik Regional Government.
- Arctic states should increase their funding to Arctic territorial and regional governments.
- Canada should review its *Northern Strategy* to include Nunavik and Nunatsiavut.
- Québec, Canada and Nunavik should work at creating new intergovernmental forums to facilitate interactions with the Nunavik Regional Government.

Chapter Eleven

The European Union: Non-Arctic Participation in the Arctic Council

Colleen Kennedy

Abstract

Many non-Arctic states and international organizations, such as the European Union, are becoming interested in participating in the Arctic Council as Permanent Observers. The EU has engaged in flagship and collaborative environmental research and has produced its own policy on the High North. This chapter studies these policies and its research, as well as the current controversies surrounding the EU's ban on seal products, in order to evaluate the application of the EU for Permanent Observer status within the Council. It recommends that the Arctic Council both accept the EU as a Permanent Observer and establish definite criteria for the Permanent Observer application process.

I. Background

The effort of the European Union (EU) to join the Arctic Council (AC) as a Permanent Observer raises the question of who should be involved in Arctic region discussions. It is being debating whether or not non-Arctic states or inter-governmental organizations have a place within the Council. The question regarding EU involvement is unique, due to the supranational nature of the organization and because three EU Member States, Denmark, Sweden, and Finland, are already represented within the AC. The EU has a vast amount of resources in the way of financial support and scientific research, which it could contribute. However, some Arctic Council states and Permanent Participants are against EU involvement in the Council, in part due to the EU's ban on seal products implemented last year. The Council must decide whether the EU, among other applicants, should be accepted for Permanent Observer status.

Arctic Council

The European Union is one of five Ad-hoc Observers within the Arctic Council, joined by: Japan, Italy, China, and South Korea. Ad-hoc observer status is open to all groups that meet the same requirements for Permanent Observer status, which is open to non-Arctic states, global and regional inter-governmental or inter-parliamentary organizations, and non-governmental states. However, Ad-hoc Observers must request and be granted permission to attend each event. With permission, these groups can attend Council meetings, including Meetings of Senior Arctic Officials (SAO-Meetings), the Ministerial Meetings, and many of the Working Group Meetings.

Only biyearly Ministerial Meetings can approve applicants as a Permanent Observer or Ad-hoc Observer within the Council. In these decisions a consensus must be met as in any Council decision. The EU currently has three member states sitting in the Arctic Council: Denmark (Greenland), Finland, and Sweden. Iceland, another Arctic Council member state, is also an official candidate for EU accession.

The EU applied for Permanent Observer status to the Arctic Council in 2009. After the Senior Arctic Officials Meeting in Tromsø, Norway, the Council "decided to continue discussing the role of observers in the Arctic Council" (Phillips 2009). Applications by China, Italy, and South Korea were also rejected at that time. The EU, along with China and other potential Ad-hoc Observers, will again be under consideration during the 2011 Senior Arctic Officials Meeting in Nuuk, Greenland.

European Union Arctic Policies

The European Union has shown a significant interest in the High North region as shown through its policies dating back to the creation of its Northern Dimension in 1999. The Arctic was again discussed in the EU Commission's (hereafter referred to as the Commission) Integrated Maritime Policy Strategy in 2007, the Commission's Communication on the Arctic in 2008, and finally the Sustainable EU Policy for the High North in 2010.

In 1999, the EU, Russia, Iceland, and Norway jointly formed the Northern Dimension policy, primarily to address relations between states in the Baltic Sea area. Other participants include regional councils, such as: the Barents Euro-Arctic Council (BEAC), the Council of the Baltic Sea States (CBSS), the Nordic Council of Ministers (NCM), and the Arctic Council (AC). The focus of this policy was to enhance regional cooperation, foster contact between states, and maximize the resources in the region. In addition, its priorities included "environment, nuclear safety, and natural resources" and more specifically the protection of the Arctic ecosystem (EU Commission 2006, 5).

In October 2007, the Arctic was mentioned in the EU Commission's Integrated Maritime Strategy where global warming in the Arctic Ocean region was discussed. The policy covered a wide spectrum of issues relating to sustainable development in the region, including: marine transport, the competitiveness of marine business, employment in the marine sector, scientific research, and protection of the marine environment. More specifically, it also addressed the topics of future collaborative maritime surveillance and promoting European leadership in

maritime affairs (EU Commission 2007a, 5-6). In the policy, the European Commission (EC) challenged Member States to draw up their own national integrated maritime policies (EU Commission 2007a, 4).

In 2008, the Commission's Communication to the Parliament and Council on the Arctic Region addressed the following three main objectives: (1) protecting and preserving the Arctic in unison with its population; (2) promoting sustainable use of resources; and (3) contributing to enhanced Arctic multilateral governance (EU Commission 2008, 3). Its proposals for action included reevaluating current multilateral agreements to assess whether other measure would be necessary, the application for Permanent Observer status in the Arctic Council, the collaborative measures for protecting maritime biodiversity at an international level, and the creation of a European Arctic Information Centre (EU Commission 2008, 11). In all, the Commission included 49 proposals for action within the three objectives. The Commission agreed with the European Paliament (EP) that the EU was and should be involved in the Arctic and that it needed to enhance its presence within the region (EU Commission 2008, 9).

The most recent EU Arctic policy was the Report on a Sustainable EU Policy for the High North in December 2010. It stressed the need for a coordinated EU policy on the Arctic, in which the priorities of the EU and a strategy were/are defined. It reaffirms interest in the Arctic region through its member states and of their obligations under international law. It specifies the EU's commitment to environmental and climate policies as well as its funding, research, and economic interests in shipping and exploitation of natural resources. The resolution requested the following:

- that the Commission develop the existing Inter-Service Group into a permanent inter-service structure to include a specific Arctic unit
- the advancement of specific areas of scientific research and sustainable management of the environment
- a more strengthened Arctic Council through a permanent secretariat, more equal sharing costs, more frequent ministerial meetings, and an Annual Arctic Summit on the Highest Level
- the creation of the EU Arctic Information Centre
- the protection of indigenous rights and greater involvement of indigenous peoples in policy-making
- a new world trade route through the sea of the Arctic, in particular for the advancement of the EU Member States' economies (European Parliament 2010, 8)

The EU Arctic Information Centre was recently approved in January to be hosted at the University of Lapland in Rovaniemi, Finland. It will provide EU citizens, institutions, companies, and member states with an Arctic information source and a factual overview of the status and trends of the Arctic. Although it will not conduct scientific research, the Centre will foster a network of discussion and education on the Arctic region (European Arctic Centre 2011). The creation of the Centre allows the EU to commit to research development on the Arctic and further its interests in the region.

Scientific Research of the European Union

The Barents Euro-Arctic Council was formed in 1993 between Denmark, Finland, Iceland, Norway, Russia, Sweden, and the European Commission as a means of sustainable development in the Barents Region. Through this cooperation, the EU has been involved in advancing Arctic research within its energy-specific working group. In the Barents Programme 2009-2013, the Barents Cooperation focuses on reducing pollutant admissions, developing a long-term regional environmental strategy, and maintaining biodiversity of the region.

The EU has also spearheaded the funding and promotion of European research and technological development through the Community Research and Development Information Service (CORDIS) Framework Programmes. The main objective of these programs is to contribute to the creation of the European Research Area by improving and integrating collaboration in research across Europe. The Sixth Framework Programme (FP6) from 2002-2006 and the Seventh Framework Programme (FP7) from 2007-2013 have included Arctic-related research. One of the key areas of FP6 was 'Sustainable Development, Global Change, and Ecosystem', which included research in the areas of clean maritime transportation, protection of biodiversity, and greenhouse gas emission (EU Commission 2002, 10). The FP6 budget was just over €12 billion, allotted between the seven key areas. FP7 expanded to ten key areas of cooperative research, including Energy, Environment and Climate Change, and Transport (including maritime), with budgets of €2300 million, €1800 million, and €4180 million, respectively. The overall FP7 cooperative research budget is over €32 billion, showing a significant increase from FP6 (EU Commission 2007b, 8).

Arctic States and the European Union

Canada, the United States, and the European states of the Council have formed many different and strong positions regarding the acceptance of the EU as a Permanent Observer,

while Russia's stance on acceptance of the EU as a Permanent Observer can be seen from multiple viewpoints. Some experts analyze that Russia is unlikely to accept any international organization into the Arctic Council which it is not a part of (Guomundsson 2010, 85). Historical strategic partnerships between NATO and the EU have reaffirmed Russia's disapproval of the EU's involvement in the North. Russia particularly does not want the EU to gain access to any new providers of oil and gas reserves that could come out of the North, particularly since the Russian economy is so dependent on this export (Guomundsson 2010, 86). Some Russians argue that the Arctic Council as a regional organization cannot be expanded into an international organization because it will lose its focus (Avdoshin 2011). In regards to the EU, some believe that it will be difficult to continue bilateral relations in the Arctic between Russia and EU Member States by adding the oversight of the EU to the AC (Avdoshin 2011). In matters of the Barents Region, Russia and the EU have been involved in cross-border cooperation programs (ENPI CBC) since 2010. These programs combine the EU's external relations and cohesion funding within the same instrument as an innovative concept. This also marks the first time Russia has allocated national funding (€105 million) for a cross-border cooperation program (Finland 2010, 51). Some speculate that Russia will not be open to accepting the EU's application for Permanent Observer status. However, Russia-EU relations in other arenas have shown that collaboration between these two actors is achievable.

Canada has openly opposed the EU's application for Permanent Observer status. The most prominent explanation came from Canada's disapproval of the EU's ban on seal products (CBC News 2009), to be discussed later in this chapter. A representative from Foreign Affairs and International Trade Canada (DFAIT) described that prerequisites for any approved Permanent Observer should include recognizing the sovereignty of all Arctic Council member states and recognizing the worth of the indigenous peoples (Berry 2011). These objectives for non-Arctic state involvement were also mentioned in Canada's Statement on Arctic Foreign Policy (Canada 2010, 22-23). More specifically, Canadian Foreign Affairs Minister Lawrence Cannon expressed that "Canada doesn't feel that the European Union, at this stage, has the required sensitivity to be able to acknowledge the Arctic Council, as well as its membership, and so therefore I'm opposed to it" (CBC News 2009).

The United States has not openly opposed nor encouraged the idea of the European Union joining as a Permanent Observer in the Council. In the 2009 U.S. Arctic policy statement

by former President Bush, the United States supports worldwide, collaborative scientific research in the Arctic as well as updating the Arctic Council structure (U.S. President 2009). It does not, however, specifically address the expansion of the Council to include non-Arctic states, international organizations, or further Observers of any kind. Representatives from the U.S. Embassy in Ottawa expressed their views of the future Arctic Council to include only Arctic, sovereign states, with the exception of the Council's Permanent Participants (Locklear and Verloop 2011). The United States has not expressed discontent in the EU's ban on seal products, as these products are currently also banned in the United States.

As an EU member, Denmark supports the acceptance of the Union as a Permanent Observer. However, a representative from Denmark to Canada expressed that the EU will need to prove what benefits it can provide to the Council in the way of funding and research benefits. He expressed that it was essential to include the EU, Japan, China, or any other non-Arctic state or organization due to the fact that these actors would utilize their resources in another association if the Council were not to accept them. However, the Council would need to provide set criteria for Permanent Observer applications which would screen the applicants' interest and intentions within the Council, (Henningsen 2011). While Denmark has been generally supportive of the EU's observer application, it has also expressed disapproval of the EU ban on seal products, due to Greenlanders' traditional hunting traditions (*Ice News* 2009).

Sweden supports EU involvement in any capacity regarding climate protection. In February 2011, Sweden released its announcement regarding a strategy for the Arctic region to be released in spring 2011 (Bildt 2011, 4). This statement also addresses the importance of the international community in these discussions of the Arctic and global climate change (Bildt 2011, 4). Sweden is also currently the Chair of the BEAC and works collaboratively with the European Commission in Working Groups on the environment. Sweden recognizes the new opportunities of development gained by the EU under the recent Lisbon Treaty and believes that these opportunities need to be encouraged (Bildt 2011, 13).

Finland is in full support of the EU as a Permanent Observer. Finland's 2010 Strategy for the Arctic Region lists EU approval as an observer member to the Arctic Council among its main objectives (Finland 2010, 44). In a broader sense, Finland supports the growth of the Arctic Council to include international organizations in order to "emphasize the Arctic Council as the primary cooperation forum on Arctic matters" (Finland 2010, 54). The Finnish support for

expanding the Council to include additional observers, provided that their priorities are in line with that of the Council's (Finland 2010, 38). New observers would bring the Council additional resources and enhanced multilateral cooperation.

EU Ban on Seal Products

The European Union's position on sealing has had a major impact on its relations with Arctic peoples and nations. On August 20, 2009, the EU established limitations and bans on the import of seal products. However, this has been a concern for several Arctic states where Arctic indigenous communities are dependent on the harvesting of seals and other marine animals. After implementation, the EU released an "Inuit exemption", which Inuit Tapiriit Kanatami (ITK) President Mary Simon says does not protect Inuit interests (Simon 2011, 3).

In 2010 the Inuit Circumpolar Council (ICC) released a lawsuit against the EU to lift the ban. The lawsuit is built around the following three claims: (1) the seal ban is animal rights legislation disguised as trade legislation and has therefore been a misuse outside EU Parliament jurisdiction; (2) the ban is excessive and could have been effective through a proper labeling system, and (3) the ban offends European human rights guarantees with respect to Inuit (Simon 2011, 4). On February 11, 2011, the government of Canada officially challenged the EU's ban through the World Trade Organization (WTO) (Clark 2011). The challenge is a way to separate the seal hunt from its free-trade negotiations with the EU (Clark 2011). In addition, the Inuit Tapiriit Kanatami is challenging the ban in the European Court of Justice (*The Toronto Star* 2011).

II. Need for Action

Europeans have become forward about Europe's involvement in Arctic issues including: energy resources, fisheries, new shipping routes, security concerns, and environmental perils as a result of climate change (Traynor 2008). With the increase in environmental changes, these interests have become global.

There is concern regarding whether or not governing institutions are prepared to deal with the challenges due to climate change that are increasingly facing the Arctic region. While the Arctic Council has provided substantial cooperative scientific research among Arctic states, it currently does not have the regulatory ability to meet the future challenges of managing this region (Koivurova, Molenaar, and VanerZwaag 2008, 1). Arctic Council members will need to reevaluate the structure and purpose of the organization in order to examine what its use will be

in the future. Part of this reassessment will require a decision as to who will be allowed involvement in discussions within the Council. Redefining the membership structure and entry criteria of the AC will add to the legitimacy of its work. With a rise in global interest in this region, the Council must resolve issues of membership or risk losing credibility. Non-Arctic actors worldwide will be looking for a venue in which to reduce their environmental effects and they will be considering the Arctic Council in doing so (Young 2009, 430). Therefore, this redefinition of membership will need to have the ability to evaluate the potential worth of non-Arctic states' involvement on the Council.

Experts have questioned of the longevity of the Arctic Council's influence, due to its lack of permissible authority and ability to create legally-binding policies. If actors such as the EU are not invited to be actively involved in the Council, they are unlikely to follow the lead of the Council in future negotiations that require collaborative efforts, such as environmental protection. They will also allot their resources to other organizations outside the Arctic Council such as the Barents Euro-Arctic Council, the Northern Dimension, and the International Maritime Organization (IMO). If the Arctic Council does not utilize the financial and research capabilities of the EU in a timely manner, the EU will find means of becoming involved in the Arctic region through an alternative coalition.

The current lawsuit against the EU's ban on seal products complicates the application of the EU's observer status. The acceptance of the EU application is unlikely to occur while the lawsuit is still in pursuit; once the lawsuit is resolved, the EU's application will need to be addressed. The EU's application, along with applications of other Ad-hoc Observers, will still need to be addressed at the upcoming 2011 Senior Arctic Officials (SAO) meeting in Nuuk, Greenland.

A more pressing issue is the lack of established requirements for prospective observers to the Council. As the Council is looking to strengthen its mandate and further discuss its structure in order to meet its objectives, it would benefit from creating an application process including specifications of membership (Arctic Council 2009a, 9). The Council therefore needs to be quickly evaluating how to makes changes to its membership configuration in order to enhance its abilities.

III. Evaluation/Analysis

The European Union has put forth substantial effort toward the future stability of the Arctic climate. It has produced ample policy within the Commission which effectively communicates its objectives. It has also used its collaborative resources to produce worldwide climate change research. In addition, it holds the funding capabilities which are necessary to push the growth and expansion of Arctic Council research and development. Collaborating with the European Union would allow the Arctic Council to establish stewardship and interlocking arrangements of research that would foster its ability to better tackle issues simultaneously in the North. With the funding and oversight of the EU, Working Groups could expand and new areas of research could be created. The current lawsuit against the EU's ban on seal products will, however, stall the process of building this partnership. The Council needs to accurately assess the overall contribution the EU could make to the Council once the lawsuit is settled. The Council would benefit from enhancing global cooperation with non-Arctic states and international organizations interested in the Arctic. Given the contribution that the European Union has already made in the way of the Arctic region, the Council would strongly benefit from its further involvement. The Council also needs to reassess its membership structure in order to create guidelines and criteria for these applicants seeking Permanent Observer status.

Existing European Representation in the Arctic Council

Enhanced cooperation between the Arctic Five (coastal states) could prove to be an obstacle for EU involvement in the Council. In addition to the EU's ties to three member states (Finland, Sweden, and Denmark), the Council states that Norway and Iceland have to implement much of the EU regulation as part of the European Economic Area (EEA). However, Greenland, Svalbard, and their adjacent maritime zones are not covered by the EU or EEA Agreement, due to Greenland's withdrawal from the then EEC in 1985 and Svalbard's exclusion from the EEA as a result of the 1920 Svalbard Treaty. As a result, the EU does not have an Arctic coastline. If the Arctic coastal state cooperation continues and if Greenland were to secede from Denmark, the EU would be excluded completely from these negotiations. However, EU member states could act as a resource in other capacities. They may act as port states, flag states, or market states (Koivurova, Molenaar, and VanerZwaag 2008, 253).

EU Research Capabilities and Funding

A wider arrangement of collaborative groups and levels of government within the Council including sovereign states, indigenous peoples, international organizations, and regional councils would allow the Council to build stewardship and address a number of issues simultaneously (Arctic Governance Project 2010, 6). This approach will enhance the resources available to the council, allowing it to address both short-term and long-term concerns.

The European Union has a large capacity for climate and environmental research that could be utilized by the Arctic Council. A large amount of the EU's current research is at the multilateral level, involving other nations and organizations through the Barents Euro-Arctic Council and the Northern Dimension. This experience will be both useful and beneficial considering that the Arctic Council is also based on multilateral research. The EU has also self-piloted research through its Sixth and Seventh Framework Programmes. Through these programmes, the EU has both engaged European states and been at the forefront of research.

These research programs also show the availability of funding that the EU could contribute to research within the Council. In particular, the latest Seventh Framework Programme shows the benefits of collaborative research efforts in Europe as the budget for Climate Change and Environment alone is €1800 million (EU Commission 2007b, 8). While clearly the entirety of this budget would not be reallocated to the Council if the EU was admitted as a Permanent Observer, this research initiative shows that the EU has the capacity for climate research and a willingness to tackle rapidly-changing environmental issues. These collaborative research programs, involving a coalition of EU states, could be expanded to include other Arctic Council members. This research would also benefit the expansion of Council Working Groups such as the Protection of the Arctic Marine Environment (PAME), especially considering that PAME's budget for Phase 1, 2009-2011, was just $140,000 USD (Arctic Council 2009a, 10). The EU has proven to be a leader in cooperative Arctic research developments in Europe, and it now needs to be utilized as a means of global cooperative research.

EU Arctic Policies

While the 2008 Communication to the EU Commission caused controversy among the indigenous that their rights were not being represented, the EU's most recent Report on a Sustainable Policy for the High North presents a much more comprehensive statement which aligns with many of the Arctic Council's core objectives. The EU recognizes the rights of the

indigenous, particularly the Sami population within Europe, under the UN Declaration on the Rights of Indigenous People. It moves to support capacity-building programs in order to protect and support indigenous ways of life. It also calls to recognize the important role of Member States and Permanent Participants first and foremost within the Council and is willing to support structural changes within the Council to enhance its effectiveness and longevity. The EU also openly offers scientific research capabilities both in the way of funding and project management (EU Commission 2010). These principles, along with others featured in this Task Force report, represent the priorities of the Arctic Council expressed in the most recent 2008 Ilulissat and 2009 Tromsø Declarations. The EU had made a substantial effort in both making the Arctic a policy priority and communicating its comprehensive objectives within the region.

EU Seal Ban Dilemma

Due to the sensitive subject of the EU seal products import ban that took effect late last year, the discussion of the EU's acceptance as a Permanent Observer will be postponed until the ban is resolved. The main objectors in this regard are the indigenous Permanent Participants of the Council. While these groups do not have the influence to veto the EU's observer application, they hold a strong voice within the Council, particularly toward the member states of which they are citizens. The EU's ban on seal products has created a significant contestation between indigenous Permanent Participants of the Council and the EU. In 2009, even before the ban was instated, Nunavut Premier Eva Aariak openly stated that the Inuit would be opposed to accepting the EU into any formal position of the Council. She cited the ban as being "harmful to Inuit interests, demonstrating a lack of knowledge of the impacts on Arctic indigenous people, and inconsistent with the type of partnership needed in the Arctic Council" (Associated Press 2009). This sentiment has become common across the indigenous groups of the Council.

In particular, the Inuit Circumpolar Council holds a strong voice against the EU. The Nuuk Declaration in 2010 established the recommendation to "support Inuit hunters in their struggle to adapt to the new Arctic, and ask ICC to fight unethical and unfair trade restrictions placed on our own products including the unjust European Union action to ban seal and other marine mammal products" (ICC 2010). Canada has made it a strong priority to protect the traditional Inuit lifestyle (Berry 2011) and will therefore not accept the EU as long as the ban on seal products is still in place. Canadian government officials have said that it could take more

than three years for the WTO to act and for the EU to respond, even if Canada is successful in persuading the WTO panel that the ban breaks economic rules (Canadian Press 2011).

It is not likely that the EU-Arctic Council partnership will be able to make any advancement during the course of the lawsuit against the EU. Regardless, the Council needs to be seriously considering the capabilities and benefits of permanent EU involvement within the Council. After the lawsuit is settled, the Council can revisit the application of the EU in order to make a decision.

Membership Structure of the Council

The Arctic Council could strongly benefit from this collaboration with non-Arctic and international organizations. An increasing number of non-Arctic states, such as China, are drafting foreign policy statements which include the Arctic (Spears 2011). However, in order to protect the integrity and focus of the AC, the Council needs to create guidelines for Permanent Observer applications which will allow for a concrete and structured process. The Arctic Alathabaskan Council's 2007 discussion paper on the future of the Arctic Council stated that in regards to the structural changes needed within the Council, the role of observers needed to be further defined. They also argued that the expertise of observers is not being used (Alaskan Athabaskan Council 2007, 6).

Applicants for Permanent Observer status should be required to have a comprehensive statement or policy on the Arctic. This policy should align with the objectives and priorities of the Arctic Council. The applicant should also have documentation of substantial independent research on climate change and environment that can be integrated into the current research of the Working Groups within the Council. In addition, the Council should be able to recognize the applicant's capacity for financial contribution to research and the Council's work.

IV. Recommendations

Given the active involvement of the European Union in Arctic affairs and the Arctic Council's need to expand its global regulatory capabilities, this Task Force proposes the following set of recommendations:

- The Arctic Council must draw up more specific requirements for Permanent Observer status, including: proof of substantial independent scientific research, foreign policy toward the Arctic, available funding toward the Council, recognition of the rights of indigenous groups, and recognition of Arctic States' sovereignty.

- The Arctic Council should accept the EU's application for Permanent Observer status, following the resolution of the seal ban lawsuit.
- The Arctic Council should continue collaboration with the Councils of the North and increase collaborative research between Working Groups and non-Arctic states.
- The EU should continue to pursue scientific research in the Arctic through its CORDIS Framework Programmes and attempt to further integrate Sweden, Finland, and Denmark in these projects.
- The EU should continue to pursue protection of the Arctic ecosystem through policy created within the Barents Euro-Arctic Council.

Conclusion

Scott Halliday

The purpose of this Task Force report is to understand how the Arctic should be governed and in doing so, the authors have considered traditional and alternative methods of governance. In examining the current state of Arctic affairs, this report challenged the nation-state model of governance as the sole method of approaching international relations and argues that geo-political, Arctic indigenous, and economic development perspectives must be included. This Task Force report is therefore a critical examination of Arctic governance and as such, provides recommendations on the governance of this region with both a sense of comprehensiveness of important issues and clarity about the challenges facing the region.

The Arctic is increasingly occupying the global media limelight as climate change induces ecological transformations. As the sea ice diminishes and the region's ecosystems change, new economic development potential in the Arctic arises. In chapter one, Bryan and Grosman outline how climate change is prompting both primary and secondary effects; the natural effects of climate change are primary effects and the implications of increased human activity through economic development are secondary effects. While mitigation of climate change requires global efforts, the Arctic's inhabitants are already adapting to their changing environment. Recognizing the need to protect the environment and promote indigenous involvement in economic development activities, mandatory natural resource regulations must be established along with the adoption of ecosystem based management.

New and future access to commercial maritime shipping activity along the Northern Sea Route and in the Northwest Passage also characterizes the Arctic region. Economic development flourishes around the Northern Sea Route, while natural resource exploitation redefines the Barents Sea as an area of growth. Due to its relatively high amount of socio-economic activity in the Arctic, the impact of development must be considered as commercial maritime shipping companies seek to increasingly expand their use of the Arctic for transportation. In chapter two, Herke recommends increased commitment from the littoral Arctic states and foreign investors to enhance Arctic infrastructure to ensure safe and sustainable development.

While the consideration of potential use looms large for the commercial shipping and energy industries alike, the attention shifts in the Northwest Passage to its legal status as an

international strait or as Canadian internal waters. Taking into account the strong political cooperation between the United States and Canada in international relations, the urgency to resolve this dispute is not imminent. However, the coastal communities of Alaska and Canada's North are bound to the fate of any maritime traffic or resource exploitation taking place in this region. Considering that the Northwest Passage is not currently commercially viable, now is the ideal time for the United States, Canada, and the indigenous inhabitants of the area to develop proper governance in advance of its future usage. In chapter three, Hamed and Hruska address this opportunity by recommending development of Arctic infrastructure to sustain indigenous communities and implementation of Article 15 of the Nunavut Land Claims.

The race by Russia, Canada, and Denmark to geologically prove their right to an extended continental shelf, the Lomonosov Ridge, highlights the contested nature of Arctic affairs. While the UN Commission on the Limits of the Continental Shelf provides recommendations to states over the delimitation of extended continental shelves, there is no multilateral forum for states to discuss their interests. This lack of dialogue should be addressed now to mitigate future tensions among Arctic states over extended continental shelf disputes, particularly around the Lomonosov Ridge. In chapter four, Choe recommends creating a joint governance regime between the littoral Arctic states to serve as a forum for discussion about the delimitations of continental shelves.

The Arctic is often sensationalized as the potential location of a "polar war" and a region for a military buildup. This rhetoric did not withstand the analysis of chapter five, where Couser shifts attention to human and public security. Recognizing the diversity of stakeholder interests in the area from nation-states with varying approaches to security, to the indigenous groups who call the Arctic home, multilateral security dialogue must happen to ease tensions. Couser recommends that Arctic states expand public security capacity and utilize the Arctic Council as a forum for open discussion on human security.

Effective governance for Arctic indigenous groups must consider food security. Chahary presents in chapter six a contrast between access to traditional, safe, nutritious, and culturally appropriate food against the introduction of market and nontraditional foods in Arctic communities. For the indigenous groups whose lifestyles are characterized by traditional hunting, fishing, and trapping, ensuring access to safe food alongside preserving their ability to continue traditional obtainment of food, is a top concern. To uphold this concern, Chahary

recommends that all Arctic Council member-states ratify the Stockholm Convention on persistent organic pollutants and recognize human security, with an emphasis on food security, as a component of Arctic policies.

Within the indigenous communities in the Arctic, other critical issues are education and health. Selling shows in chapter eight how these two areas are inextricably linked and integral to the vitality of these communities. Using Canada as a case-study, the public education system does not adequately address the educational needs of Inuit students, while the health indicators among Inuit are more indicative of a developing country than a developed one. Recommendations to address these inequalities include the development of curriculum to include bilingual language instruction in primary and secondary education and increasing Canadian government funding and reallocation to education, housing, economic development, and health and water services in indigenous regions.

Further challenges to education include substantiating Inuit-centered educational curriculum. Traditional hunting, fishing, trapping, and gathering encompasses an essential component of Inuit culture and lifestyle as Koperqualuk emphasizes in chapter nine. The Canadian government-sponsored education does not incorporate Inuit *Qaujimajatuqangit* and it does not provide the educational foundation needed for Inuit. The subsequent lack of education for *maqaittiit* presents challenges not only to preserving Inuit culture, but for helping young Inuit men to fulfill a culturally-relevant career and lifestyle. In recognizing this educational gap, Koperqualuk in chapter nine recommends the creation of an Arctic Council working group on indigenous education and that Canadian Arctic educational policy adopt curriculum changes to include *maqaittiit*.

Indigenous groups in the Arctic are key stakeholders in the issue of implementation of Land Claim Agreements. Miller presents in chapter nine the unique governance model of Nunavut as a means to understanding how devolution of government and greater self-autonomy are framing the discussion of indigenous rights in Canada. Although the Nunavut Land Claims Agreement stands in Canadian federal and territorial law, its implementation has not yet been realized. Strengthening the model of Land Claim Agreements for Canada as an example of successful partnerships with indigenous Arctic peoples includes full implementation of the NLCA and improving self-governance capacity through increased regional control of resource

development. Along with the creation of an Arctic Council Working Group on Indigenous rights and self-governance, these recommendations are the core of Miller's analysis.

In chapter ten, Maltais elaborates on how the increasing interaction between the Inuit communities and the Canadian Government vis-à-vis the case study of Québec-Nunavik, have fostered the Inuit right to self-governance. Québec-Nunavik can be seen as a case study for governance in the Arctic region and should be considered by other Arctic states as an example of successful relations between governments and indigenous groups. Maltais recommends increasing bilateral and multilateral engagement between states and indigenous communities in all fora of governance to enhance governance.

The audience of this Task Force report has been the Arctic Council and its member states and actors; chapter eleven is a discussion and analysis about the scope of the Arctic Council. The European Union is one actor among a group of non-Governmental actors and non-Arctic states seeking membership to the Arctic Council. The Arctic Council should accept the EU on the basis of its ability to contribute research and funding to the Arctic Council, pending the resolution of the lawsuit of the ban on seal products. Beyond accepting the EU, Kennedy recommends that the Arctic Council clearly define requirements for membership to states and actors outside of the Arctic as a means of improving its credibility and in working towards a stronger mandate.

These eleven chapters collectively form the breadth of Arctic discussion presented in this Task Force report. The subjects discussed by the authors are not representative of all subjects and issues in the Arctic related to governance, but they instead constitute a small fraction of potential topics. They were chosen because they are central to discussions about the challenges to Arctic governance and the foundations for understanding how the Arctic region is transforming.

Considering the topics discussed and this Task Force report's audience and scope, the common thread shared amongst these specific discussions is the need for a strengthening of the Arctic Council around new means of governance. The views and opinions of Arctic experts worldwide bolster this thread as both states and individual actors alike seek to position themselves to benefit from a strengthening of the Arctic Council. While the authors of this Task Force report have supported a strengthening of the Arctic Council, such support is not universal.

Prevailing arguments against the strengthening of the Arctic Council by its member states and actors include recognizing that the Arctic Council primarily provides research and information to inform policy-making decisions; these stakeholders may contend that broadening

that mandate would dilute its efficacy. In recognizing the diversity of actors and interests in the Arctic and the stability of international relations in the region, the Arctic Council is the most visible forum at the international level on Arctic governance as evidenced by the extensive external interest for membership from non-Arctic states. If the Arctic Council does not strengthen its agency, prospective permanent observers will take their resources to other venues (bilateral agreements or other councils) and therefore the Arctic Council will forego benefitting from the resources that these prospective applicants would bring. The Arctic Council could be strengthened by having more permanent observers and therefore more opportunities for dialogue, sharing of resources, and involvement on its Working Groups. Increased collaboration in tackling the challenges facing Arctic governance, via a strengthening of the Arctic Council, is the most effective way to develop strategies for governance.

Critics of strengthening the Arctic Council may suggest that states in the Arctic Council may be unwilling to compromise on their sovereignty and are therefore hesitant to commit to a strengthening of the Arctic Council. While state boundaries and territories are traditional means of designating governance in international relations, they are not the only means for governing the Arctic. Indigenous groups live in communities that span state boundaries while the circumpolar environment is affected by ecological forces outside of the Arctic. It is important to consider the national interests of the Arctic states, but Arctic governance is about properly dealing with the various important issues facing the region. Addressing these governance challenges requires using alternative governance models that go beyond the state level; limiting governance to states unnecessarily hinders the ability to effectively govern the region. The recommendations in this report are the strongest proposals for Arctic governance because they incorporate this rethinking of Arctic governance, they provide workable solutions, and meet the needs of the Arctic environment and its inhabitants.

The Arctic Council has not only produced landmark research reports and advised policy-makers, but has also been recently proactive in creating policy. The search and rescue agreement that is expected to be signed by member-states and actors this coming May, is a testament that the Arctic Council can produce binding regulations that both consider the needs of its members and create concrete policy. Beyond the forthcoming search and rescue and agreement are the comprehensive reports of its Working Groups, which have enhanced research and understanding of the changing Arctic environment. Collectively, the work of the Arctic Council demonstrates

its capability as an important player in Arctic affairs. To take its visibility to the next level, the Arctic Council needs to establish a Permanent Secretariat.

The Arctic Council is missing the administrative capacity needed to support its efforts. The collection of Ministerial meetings, Senior Arctic Officials meetings, Working Groups, and all other Arctic Council-related events need a centralized Permanent Secretariat to coordinate the collective efforts of the Council. By handling administrative oversight, coordinating logistics, managing a budget, and scaling up public relations efforts, the Permanent Secretariat will enable the Council to better expose its work. The theme of strengthening the Arctic Council presented in this Task Force report goes hand in hand with the establishment of a Permanent Secretariat since it will directly the support a broadened mandate.

Since this Task Force report recommends a strengthening of the Arctic Council, the analysis contained herein has revealed that governing the Arctic is a complex issue that requires consideration of non-traditional models of governance. Comprehensive governance of the Arctic though must also recognize conceptualizations of values and principles about the Arctic as outlined in the Inuit Circumpolar Council's Nuuk Declaration. Just as the indigenous groups in the Arctic are adapting to their changing environments because of climate change, governance models must be similarly adaptive as well to include these actors at the policy-making level.

In attempting to grasp these various governance models and their applicability to the Arctic, an interpretation of the circumpolar world has been contextualized within this Task Force report. As climate change continues to alter the Arctic environment, its inhabitants will be further pressed to adapt to their changing surroundings. The opportunities for natural resource exploitation and economic development have the possibility degrade the environment and threaten the human security of Arctic residents. While this Task Force report provides recommendations to address governing the Arctic in this time of change, they are a foundation for additional policy work. Policy on Arctic governance is an on-going discussion and this Task Force report is one piece of a much larger puzzle that will demand more critical analysis from Arctic stakeholders.

Afterword

Arctic Sovereignty for Whom?

Kitty Gordon

As declared in the Inuit Circumpolar Council's (ICC) 2009 *A Circumpolar Inuit Declaration on Sovereignty in the Arctic:* "From time immemorial, Inuit have been living in the Arctic. Our home in the circumpolar world, *Inuit Nunangat*, stretches from Greenland to Canada, Alaska and the coastal regions of Chukotka, Russia. Our use and occupation of Arctic lands and waters pre-dates recorded history. Our unique knowledge, experience of the Arctic, and language are the foundation of our way of life and culture" (ICC 2009). To us Inuit today, the Arctic is still our home. It is where our ancestors come from - they lived nomadic lives by living off the land, hunting and fishing as a way of subsistence, in sync with and respecting nature without misusing it. Each part of the animals we hunt is used, from the fur to the bones to the meat. There is no waste. To us, wearing fur is part of who we are, and we wear it with pride and not for fashion. Everything we use is for a purpose. Our ancestors endured the harsh climate weather and worked with what was offered by nature. They made houses out of snow, used the animals for food and warmth, made tools out of the animal bones and stone, used plants for medicinal purposes, and relied on dog teams for travel. In short, they lived in micro societies where everyone had a role from being a healer, a seamstress, or a leader, therefore governing themselves and passing on traditional knowledge to the following generations. I believe that's when Inuit had true Arctic sovereignty, without ever using the word sovereignty. 'Arctic Sovereignty' was not a concept that was used. We the Inuit did not have to go to engineering school in order to learn how to build igloos, or to make tools. The women did not need to take sewing classes in order to make clothing, or cooking classes to know how to feed their families. The Inuit culture is taught from generation to generation and is innovative and unique in a way that it is tailored to where the Inuit come from, the Arctic, our home.

In 1953 and 1956, Inuit families were relocated to the high arctic by the Canadian federal Government. They were promised a better land with an abundance of game and marine life. Inuit are natural hunter-gatherers, so the relocation seemed promising to them. However, they soon found out there was nothing in this new, unfamiliar place. The Inuit names of these places are called *Ausuittaq* meaning "where it never melts" (aka Grise Fiord) and *Qausuittuq* meaning "where it never gets light" (aka Resolute). Imagine being moved to a location where it

is dark the majority the year and where there is little or close to no vegetation at all. It is remarkable how the families survived this unfamiliar place. Today, these two locations are now vibrant communities. This illustrates how resilient and innovative we Inuit are. Those individuals that were relocated made it through a very difficult situation. It is often said that the Canadian government placed the families in the high arctic to assert Canadian sovereignty. If the government wants to have a *"true north strong and free,"* why not pay attention to the people who actually live in the true north - the Inuit people. The Inuit were used to solve the Canadian government's sovereignty concerns, but Inuit sovereignty was not taken into account.

Today, Inuit live in permanent communities in heated houses made of material from the Canadian south. We no longer need *qullik's* (oil lamps) for cooking warmth and light. We no longer need to travel great distances to follow the caribou herds in order survive. Now we need to simply hop on modern vehicles to go the grocery or retail stores and buy what we need. Almost every household now has a connection to the worldwide web, and many people have a Facebook account. We have the world at the tip of our fingers. We have adapted to the changes very well - to the changes that were imposed on us. We converted from shamanism to Christianity, we adapted to being relocated to the high arctic, we survived our dogs being slaughtered forcing us to move into permanent settlements because we were no longer mobile. These changes created enormous social issues. Inuit men who lost their dogs could no longer go hunting and instead turned to alcohol. Alcohol leads to more problems such as physical and sexual abuse and suicide. The last two generations are affected by these harsh realities. A lack of services and resources are unfortunately not helping the issues either. A housing crisis is also in effect in the Inuit communities. Families of two to four generations live in a single small home. Living under one roof with 10 to 15 other people is not easy. There is no privacy, disease and sickness spread easily, and sexual and physical abuse is more prone to happen which can lead to depression and suicide. Where is the government now? In the 1950s and 60s, the government implemented many social programs and changes. Now it is time to complete the process and to provide the social services that are needed for healthy communities. I don't think the government had any idea of the negative impact of their interference in the communities. Now is the time to correct this. We are a small number of people who occupy the Arctic, and we need the federal government's assistance in order to make our communities a better place socially. As National

Inuit leader for Inuit Tapiriit Kanatami Mary Simon has stated "Sovereignty begins at home" (Simon 2009).

Despite losing many of our cultural ways, we have still managed to keep and speak our language. Speaking Inuktitut is an essential part our identity today. We still hand sew outdoor attire using store bought and traditional leather (sealskin), store bought material, and fur from hunting. We still eat raw meat. Hunting and fishing is important to us. Eating traditional food is a very strong aspect in our culture so it is vital that the animals we hunt to eat are not contaminated. If the North West passage *does* open, Inuit should and will have to be consulted with. If it were to become a shipping route, it will no doubt affect the marine in terms of possible contamination and affect the migration of beluga whales. Inuit culture is based on what is around us- the land, the animals, the ice and snow, the Arctic in general. All of the Inuit communities are coastal, so this tells you that we are highly dependent on what is in the sea.

If Canadian Arctic sovereignty is an important matter for the federal government, the Inuit voice should be heard and consulted. It would be a step forward by beginning to make the Inuit communities healthy. After all, we have allowed non-Inuit into our home land and adapted a new way of life over the past few decades. It is now the state's turn to hear what we have to say and what our concerns are about the future and safety of generations to come.

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