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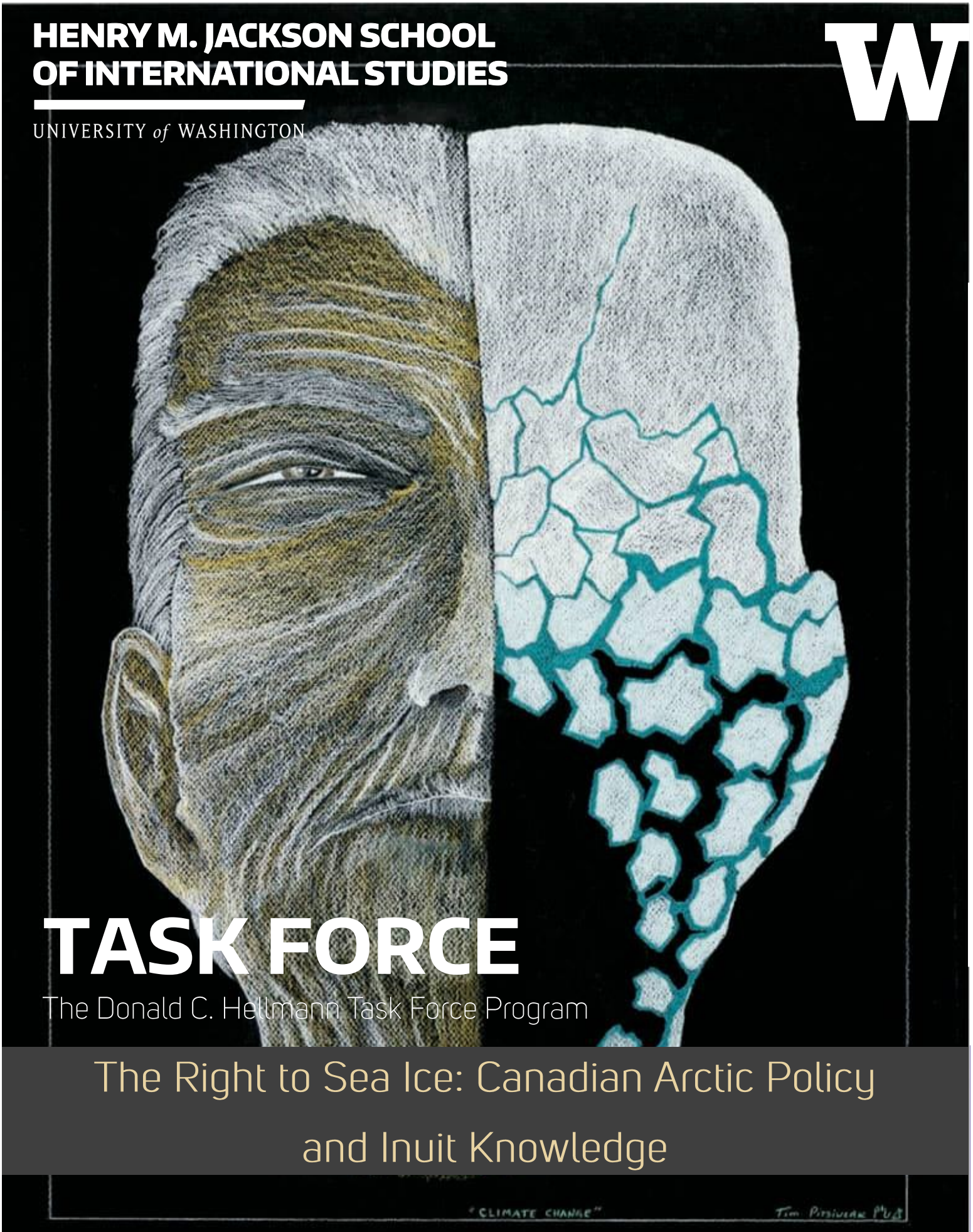

TASK FORCE

The Donald C. Hellmann Task Force Program

The Right to Sea Ice: Canadian Arctic Policy and Inuit Knowledge

Cover art by Tim Pitsiulak, Inuk Hunter

Henry M. Jackson School of International Studies
University of Washington, Seattle
Task Force Report Winter 2020

The Right to Sea Ice: Canadian Arctic Policy and Inuit Knowledge

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Table of Contents

PREFACE

NADINE C. FABBI AND MICHELLE KOUTNIK
Henry M. Jackson School of International Studies and Department of Earth and Space Science, University of Washington

> *As Inuit, our relationship with the environment is steeped with meaning. It shapes our identity, values and worldview … Keeping our homeland cold is critical to us as a people. The international community understands now, more than ever, just how key keeping Inuit Nunangat cold is to avoiding irreversible changes to the Earth's entire climate system.*
> – Natan Obed, Inuit Tapiriit Kanatami[1]

> *Where I live, the sea ice never stops. It is a living thing.*
> – Jayko Oweetaluktuk, Nunavik[2]

Ice is critical to life. Ice is the largest storehouse for freshwater on earth. However, the Arctic is warming at nearly twice the global average and we are losing ice at an alarming rate. Ice sheets are losing mass, glaciers are retreating, permafrost is melting, and sea ice is thinning and is less extensive. To date, there is no international policy for sea ice. The United Nations Convention on the Law of the Sea (defining the rights and responsibilities of nations with respect to use of the oceans) dedicates one article (Article 234) to the protection of "ice-covered areas" and this is open to interpretation. How might we think about the development of policies to protect ice? In this course we looked at the impact of climate change on Arctic sea ice and engaged in a simulated exercise to draft an Arctic policy for Canada, where sea ice and the Arctic natural environment play a role in how we understand the Northwest Passage and are an integral part of Inuit life and culture. In this course students were introduced to how ice is understood in Western science and culture and the role of ice in the lives of Inuit.

The students in this Task Force were encouraged to think creatively about ice – to think about ice as alive, as having memory, as constituting territory, and as a human right – and to explore ice through science, culture, history, law, and art. Importantly, the students were encouraged to incorporate the science of ice into policy reports dealing with issues in the social sciences.

Part of the course included a research study tour to Ottawa over the last week of January 2020 where students met with scientists, scholars, representatives from the Inuit organizations, and federal government departments. We strongly encouraged the students to use these visits to ground their research in the actual functioning of Canadian federal departments, Inuit approaches to sea ice loss and other issues, and the research of key scholars in the field. Perhaps, most importantly, we asked the students to consider how we might think about policy differently – how we might think about policy from an Inuit perspective and therefore challenge how we develop, create and implement policy. We are extremely proud of how the students identified issues they felt were critical to human rights and/or environmental justice, and how each student addressed a problem from his or her own viewpoint and way of knowing.

[1] Inuit Tapiriit Kanatami, *National Inuit Climate Change Strategy* (Ottawa, Inuit Tapiriit Kanatami, 2019), 2.
[2] Inuit Circumpolar Council, Canada, *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat* (Ottawa, Inuit Circumpolar Council, Canada, 2014), i.

In addition to the many offices and individuals that met with the Arctic Task Force in Ottawa (see Appendix B), we wish to thank the following for their time and energy in making both the capstone course and Ottawa program a success: Dvorah Oppenheimer, Gail Schmitz, Michael Walstrom, and Kaitlyn Li in the Business Office, Henry M. Jackson School of International Studies (Jackson School); Marion Ferguson, Haley Taylor-Manning and Lucas Contreras in the Canadian Studies Center, Jackson School; Katherine Kim and Lauren Dobrovolny in Academic Services, Jackson School; Tamara Leonard, Center for Global Affairs, Jackson School; Katherine Kroeger and Emily Warren in the UW Study Abroad office; Dan Mandeville, Maureen Nolan, Sion Romaine, and Adylenne Ascencio with UW Libraries; Jaime Morse, Indigenous Walks, Ottawa; Morley Hanson, Nunavut Sivuniksavut; Robert Kadas, and Latifa Belmahdi, Global Affairs Canada; Carole Simon, Inuit Circumpolar Council, Canada; and Max Showalter, School of Oceanography, Ellen Ahlness, Political Sciences, and Elizabeth Wessells, Anthropology.

This Task Force, including the Research Study Tour to Ottawa, is part of the Don C. Hellmann Task Force Program, Henry M. Jackson School of International Studies, University of Washington, Seattle and is the capstone experience in the undergraduate International Studies Program and the Jackson School's International Policy Institute. Funding was made possible by a grant from Carnegie Corporation of New York, and by the Canadian Studies Center and Center for Global Studies with Title VI grant funding administered by the International and Foreign Language Education office in the Office of Postsecondary Education, U.S. Department of Education.

Arctic and International Relations Series is the outcome of a partnership between the Canadian Studies Center/Arctic and International Relations and the International Policy Institute in the Jackson School of International Studies (supported by funding from Carnegie Corporation of New York), and University of Washington's Future of Ice initiative. The series is dedicated to translating scholarship into policy options to enhance understanding of the Arctic as a unique region in international affairs including the important role of Arctic Indigenous peoples in policy shaping for the region.

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BIOGRAPHY
WHIT FRASER
Expert Evaluator, Ottawa

Whit Fraser's entire working life has been associated with Canada's Arctic: as a Canadian Broadcasting Corporation (CBC) broadcaster, chairman of the Canadian Polar Commission, executive director with the National Inuit organization, and more recently as author of *True North Rising*.

His combined experience, beginning in 1967, allowed him to travel to every community across Canada's three Northern Territories, as well as throughout Northern Quebec, Labrador, Alaska and Greenland. He lived in Iqaluit and Yellowknife from 1967 to 78 when he joined the CBC National News and in Kuujjuaq, Northern Québec from 2008 to 2015.

For eight of his 25 years with CBC, Whit Fraser worked on Parliament Hill in Ottawa, and during that time provided unprecedented coverage of Arctic and Indigenous issues for a national audience. He was also prime time anchor for *CBC Newsworld* when it went on the air in 1989. During his broadcasting career, he witnessed the remarkable developments that shaped northern Canada and Indigenous people today including the historic First Minister's Constitutional amendments affirming Indigenous rights in the Constitution of Canada; the negotiation and settlement of four comprehensive Inuit Land Claim Agreements; and, the creation of the new territory of Nunavut.

From 1974 to 1977 he covered the Berger McKenzie Valley Pipeline Inquiry and led a team of Indigenous language reporters, producing daily reports in English as well as all six Aboriginal Languages. In his view, this Commission of Inquiry became a turning point for the political, economic, social and environmental developments that has shaped the Arctic today.

As founding chairman of the Canadian Polar Commission from 1991 to 1997 he worked with a distinguished Board of Directors to recommend to the Canadian Government a series of measures to strengthen science policy in the polar regions both internationally and nationally, including greater emphasis on human health and social issues confronting Indigenous peoples.

As executive director with Inuit Tapiriit Kanatami from 2001 to 2006, he coordinated the Inuit-specific agenda presented to the Kelowna First Ministers meeting on Aboriginal issues in 2005.

His recent memoir, *True North Rising* (2018), is an eyewitness account of a remarkable cadre of young Indigenous leaders who confronted and challenged colonialism in Canada's Arctic and brought about a far greater measure of equality and reconciliation to the North.

Whit is a regular participant as an educator and storyteller for the Students on Ice Arctic education program, and Adventure Canada, the premier Arctic Cruise line that focuses on cultural connections and our scientific understanding of the world's farthest-flung regions. He currently lives in Ottawa, Ontario.

Introduction

CLAIRE COWAN
Henry M. Jackson School of International Studies, University of Washington

> *The freeze traps life and stops time. The thaw releases it. We can smell the footprints of last fall and the new decomposition of all who perished in the grips of winter. Global warming will release the deeper smells and coax stories out of the permafrost. Who knows what memories lie deep in the ice? Who knows what curses?*
> — Tania Tagaq, *Split Tooth*

Climate Change

In Western society, the Arctic region is often reduced to scientific data and its potential economic value in both cooling the globe and extracting natural resources. Since climate change can potentially change current Western lifestyles, the Arctic has been of increasing interest scientifically and economically. The planet's global mean surface temperature has risen almost two degrees Fahrenheit since the late 19th century, mostly driven by human-made emissions and increased carbon dioxide released into the atmosphere.[3] Data from the 2004 Arctic Climate Impact Assessment showed that the Arctic is warming at almost twice the rate of the global mean temperature, emphasizing the persistent research in the Arctic spanning decades.[4] Arctic temperatures are projected to increase another 4-7 degrees over the next 100 years due to greenhouse gas emissions leading to significant changes in the Arctic environment.[5]

Climate change is a global challenge, especially for people living in the Arctic. While physical scientists describe ice as frozen water, an emotionless natural phenomenon, Inuit consider ice as rich and alive with memory and also as a human right.[6] In understanding how climate change affects the Arctic, it is important to consider these divergent perspectives of ice and the land. Melting sea ice, thawing permafrost, and the changing climate affect Inuit ways of life through major changes in their transportation routes and in seasonal mammal migration patterns. Throughout the circumpolar region, Inuit communities are resilient, thrive in the cold, and rely on sea ice, yet are concerned about how they will have to adapt to changing climate conditions.[7] Inuit have strong historical ties to the Arctic and a unique perspective on the land; the land enables activity that is central to their life and culture.[8] In acknowledgement of their experiences, the Government of Canada is committed to including Inuit needs in addressing the challenges of climate change within the Arctic as stated within *Canada's Arctic and Northern Policy Framework* (2019). Collaboration between government departments and Inuit with experience living sustainably in the North is necessary in order to generate new discussion and new action about how to sustain the Arctic in the face of change. Multiple issues are becoming increasingly apparent: the Northwest Passage opening as a potential shipping route intensifies global interest

[3] "Global Climate Change Indicators." Monitoring References | National Centers for Environmental Information (NCEI). NOAA, n.d. http://www.ncdc.noaa.gov/monitoring-references/faq/indicators.php#warming-climate.
[4] Hassol, Susan. 2004. *Impacts of a warming Arctic: Arctic Climate Impact Assessment*, 10-27. Cambridge, U.K.: Cambridge University Press.
[5] Ibid.
[6] *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat*, 5. Inuit Circumpolar Council Canada, 2014.
[7] Ibid.
[8] Ibid, 6.

in the region, more tourism causes disruption of marine mammal migration, and melting sea ice affects how Inuit travel on the ice. To address these issues, policies need to continue to be developed that mitigate the negative outcomes of climate change in the Arctic while leading to more positive outcomes for Inuit communities.

Our Task Force report identifies specific issues that occur within Inuit communities and provides a perspective on policy recommendations based upon action that has already been taken. Approximately 65,000 Inuit currently live in Canada and Indigenous knowledge and experience must be incorporated into Canadian policy.[9] This has already begun to happen in Canada with the establishment of the Crown-Indigenous Affairs department, which works to renew the relationship between Canada and Indigenous populations and to support their self-determination.[10] The co-development of *Canada's Arctic Policy* also provides an important starting point for further collaborative efforts between Indigenous groups and the Government of Canada.[11] Collaborative policies between both governments and Indigenous people are necessary for moving forward with actions in response to climate change that will enable better futures for both parties.

Arctic Sea Ice Change

This Task Force has a primary focus on changing policy on Arctic sea ice as its melting and thinning relates to prospective economic gains for non-Arctic states and directly affects Inuit life and culture. Sea ice is defined as frozen ocean water that completely forms, grows, and melts in the ocean.[12] It is a major component of the climate system due to the albedo contrast between ocean water and ice cover, and the presence (or lack) of sea ice determines how much of the Sun's energy is reflected back into space.[13] Decreased sea-ice extent feeds back into further sea ice loss, as less sea ice cover means that more solar energy is absorbed. Loss of sea ice can be measured using multiple variables such as thickness, extent, concentration, sea ice age, as well as changes that occur seasonally. From 1980 to 2008 alone, the average sea ice thickness had decreased from 3.64 meters to 1.89 meters.[14] Younger sea ice is thinner, often reforming only in the winter of each year, and therefore more prone to breakup and melting. Since the 1980s, Arctic sea-ice extent has decreased approximately 12.85% per decade.[15]

Sea ice in the Arctic is vital for maintaining a functioning, healthy, and sustainable ecosystem. For Inuit, sea ice is an integral part of their identity and culture, not an impediment to economic

[9] "The National Voice for Inuit Communities in the Canadian Arctic." Inuit Tapiriit Kanatami, n.d. https://www.itk.ca/national-voice-for-communities-in-the-canadian-arctic/.
[10] "Crown-Indigenous Relations and Northern Affairs Canada." Canada.ca. Government of Canada, January 15, 2020. https://www.canada.ca/en/crown-indigenous-relations-northern-affairs.html.
[11] "Canada's Arctic Foreign Policy." GAC, May 12, 2017. https://www.international.gc.ca/world-monde/international_relations-relations_internationales/arctic-arctique/arctic_policy-canada-politique_arctique.aspx?lang=eng.
[12] "National Snow and Ice Data Center." *All About Sea Ice | National Snow and Ice Data Center*, nsidc.org/cryosphere/seaice/index.html.
[13] Cook, John. "Climate Science Glossary." Skeptical Science, 2020. https://skepticalscience.com/earth-albedo-effect.htm.
[14] "State of The Cryosphere." SOTC: Sea Ice | National Snow and Ice Data Center, October 11, 2019. https://nsidc.org/cryosphere/sotc/sea_ice.html.
[15] "Arctic Sea Ice Minimum." NASA. NASA, October 2, 2019. https://climate.nasa.gov/vital-signs/arctic-sea-ice/.

resources as it is often seen by non-Inuit.[16] Instead of sea ice being a separate entity from the rest of the land, it is viewed as an extension of their territory and provides important transportation routes for hunting.[17] Inuit view sea ice as something living and a place for temporary habitation during hunting trips that help to sustain their communities.[18] Since sea ice differs in meaning for Western and Indigenous cultures, it is important to take into consideration the perspective of Inuit who have the experience of living on the ice for thousands of years.

The Canada Ice Service, with a mission to provide navigation information regarding sea ice for those traversing through the region states that, "For those living outside the Arctic, sea ice is primarily an adversary in Operations, and the nature of the work of Canada Ice Service, is to ensure the safety of those traveling through ice infested waters. But their work is also to repackage their data for the communities-for those that use sea ice as a highway."[19] By taking Inuit perspectives into account, more can be done to understand how sea ice loss affects Indigenous communities and the Arctic as a whole. Study groups interviewing and asking Inuit elders for their perspectives on the sea ice and land contribute to understanding sea ice as more than simply frozen water as it acts as a connector for travel and hunting grounds.[20] Since sea ice is primarily an extension of the land, melting sea ice reduces Inuit ability to travel on and survive off of this territory.

The melting and thinning of sea ice also causes international interest in the Arctic as sea ice loss results in the opening of shipping lanes and makes resource extraction more readily possible. Due to this, the "Arctic seas are now a battleground between Inuit, industry and environmental organizations" as more nation-states, groups with economic interests, and environmental activists become interested in the resources of the Arctic and how they are used.[21] The resources of the Arctic have largely remained untapped due to the ice and cold temperatures. With global warming occurring, it is now more desirable for non-Arctic states to lay claim to these areas. The opening of the Northwest Passage in particular means that nation states have a greater opportunity to use these shipping routes. The Northern Sea Route has been used more historically as the Northwest Passage is covered with more ice throughout the year, but open water means that travel would be safer to use this route connecting the Atlantic.[22] With this opening of the Northwest Passage, balancing economic and environmental interests while maintaining Inuit lifestyles has become a primary concern for the Government of Canada and Indigenous organizations according to *Canada's Arctic Foreign Policy* (2017). Economic opportunity has caused non-Arctic states to attempt to stake a claim in shipping rights through the region as untapped resources would have a large economic boost for participating countries. An increase in large ship traffic in the Arctic would cause significant damage as the heavy fuel

[16] *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat*, 6. Inuit Circumpolar Council Canada, 2014.
[17] Ibid, 9.
[18] Ibid, 21.
[19] Scott Weese, presentation to Arctic Task Force. Canadian Ice Service, Ottawa, January 28, 2020.
[20] Krupnik, Igor. *SIKU: Knowing Our Ice ; Documenting Inuit Sea Ise Knowledge and Use*. Dordrecht: Springer, 2010.
[21] Kuupik Vandersee Kleist, *Nilliajut 2: Inuit Perspectives on the Northwest Passage, Shipping, and Marine Issues.* Inuit Tapiriit Kanatami, 2018. https://www.itk.ca/wp-content/uploads/2018/01/NilliajutTextPages_Draftv4_english_web.pdf
[22] *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat*, 28. Inuit Circumpolar Council Canada, 2014.

oil used is almost impossible to clean up and uses black carbon. Black carbon is a result of the combustion of fossil fuels and biomass, and the primary source of emissions for it include diesel engines, cook stoves, and forest fires.[23] According to one advisor for the Inuit Circumpolar Council, black carbon leads to further climate warming and is referred to as a "short lived climate forcer."[24] However, according to research, the current increase in ships through the Northwest Passage is due to the large increase of fishing vessels and pleasure vessels that have come into the region and are harder to monitor.[25] This is due to their small size and the fact that they don't show up on radar monitoring. These boats are causing more problems as they can cause earlier breakup of sea ice and disturb the marine mammals that live and migrate in the region.[26] The Northwest Passage will continue to be a source of contention for multiple groups in the coming decades as it opens up and will affect the ecosystems of the northern Canadian Arctic.

Guiding Policy

For this report, it is important to acknowledge the work that has already been done with regard to collaboration between the Government of Canada and Indigenous people in order to outline how to combat the inequities Indigenous groups experience living in the North. The visions that Canadians and Inuit have for the future of the Arctic North are described in *Canada's Arctic and Northern Policy Framework* (2019), which includes improving living conditions and the environment for all Canadians, including Indigenous populations. This policy report gives a recent overview of the issues and objectives that need to be focused on in the present day. Within the context of this policy, the following objectives and goals are set:[27]

- *Canadian Arctic and northern Indigenous peoples are resilient and healthy*
- *Strengthen infrastructure that closes gaps with other regions of Canada*
- *Strong, sustainable, diversified and inclusive local and regional economies*
- *Knowledge and understanding guides decision-making*
- *Canadian Arctic and northern ecosystems are healthy and resilient*
- *The rules-based international order in the Arctic responds effectively to new challenges and opportunities*
- *The Canadian Arctic and North and its people are safe, secure, and well-defended*
- *Reconciliation supports self-determination and nurtures mutually respectful relationships between Indigenous and non-Indigenous peoples*

Among the objectives and goals laid out in this framework, there is an emphasis on helping the northern Indigenous communities thrive with the same level of infrastructure as implemented in the south. Also important is that Canada stresses the need to outline an international policy and

[23] "What Is Black Carbon?" *Center for Climate and Energy Solutions*, 4 Feb. 2020, www.c2es.org/document/what-is-black-carbon/.

[24] Stephanie Meakin, Senior Science Advisor, talk with the author. Inuit Circumpolar Council, Ottawa, January 29, 2020.

[25] Alison Cook, Post-doctoral Researcher. *A Melting Arctic: Implications of Sea-Ice Loss on Governing the Arctic.* University of Ottawa Symposium, Ottawa, January 30, 2020.

[26] *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat*, 29-30. Inuit Circumpolar Council Canada, 2014.

[27] "Canada's Arctic and Northern Policy Framework." *Government of Canada; Crown-Indigenous Relations and Northern Affairs Canada*, 18 Nov. 2019, www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587#s6.

generates a level of understanding for how the Arctic region functions and is regulated. In the chapters that follow, an aspect of each of these objectives will be addressed in order to provide the basis for an Arctic policy that addresses sea ice and environmental change.

Report Purpose and Chapters

In this report, our Task Force team seeks to understand and evaluate how sea ice loss and Arctic environmental change impact Inuit communities as the Arctic region warms. Each chapter will provide policy recommendations and thoughts on how to address the specific issue that is outlined and discussed.

From January 25 to February 1, our Task Force team had the opportunity to visit Ottawa and meet with Arctic scholars, scientists, authors, ambassadors, government officials, and Indigenous peoples. Our report and our perspective on Arctic issues was enhanced through these visits and connections. These visits greatly assisted in helping us to solidify our chapter topics, focusing on pressing issues involving the Canadian Arctic, Indigenous populations, and the Arctic environment.

Our report is organized into three parts:

- Part I. Preserving the Arctic Environment
- Part II. Closing Gaps in Societal Health
- Part III. Mobilizing Inuit Knowledge

Part I discusses the implications of Arctic pollution and environmental change. In chapter one, Johnna Bollesen explores how sea ice loss is affecting different wildlife populations in the Arctic and how these changes affect Inuit communities that depend upon them for survival. Chapter two by Gabi Coueille centers on waste management and infrastructure in northern Arctic communities and how it affects human and environmental health.

Part II discusses social issues widely affecting Inuit communities. Hsin Yi Chen argues international perspectives on resources and exploited economic opportunities primarily through mining problems in chapter three. Chapter four by Kimiko Boswell argues the need for suitable housing infrastructure within northern Inuit communities to maintain health and explores how to best achieve these needs in the face of thawing permafrost and melting sea ice.

Part III discusses how to best use Inuit knowledge to co-develop future policy regarding the Arctic region. In chapter five, Kendrick Lu describes more specifically how policy as a whole can be used as a tool to protect sea ice. Chapter six by Caitlin Clarke addresses legal approaches of sea ice from an Inuit perspective. Chapter seven by Nadene Paltep focuses on the land claim agreements in Nunavut, as well as Inuit struggles for sovereignty. Bonnie Greer will conclude with chapter eight focusing on Inuit art in Arctic policy, and how art can influence policy by bringing a distinct perspective to policy discussions.

Within the chapters of our report, pieces of Inuit art are incorporated to provide another perspective on the arguments made by the Task Force team. We acknowledge that as non-Inuit, we come from an outside perspective. Incorporating these pieces into our report is not meant to

be a substitution for Inuit voices or to speak on their behalf. Instead, in an effort of solidarity with Inuit, our Task Force recognizes the importance of Inuit knowledge in all forms and the need for it to be applied in the development of policy regarding the Arctic region.

Claire Cowan and Johnna Bollesen will conclude the report by providing an overview of the recommendations made by our Task Force team regarding Arctic policy in relation to changes in sea ice and the Arctic environment.

Biography

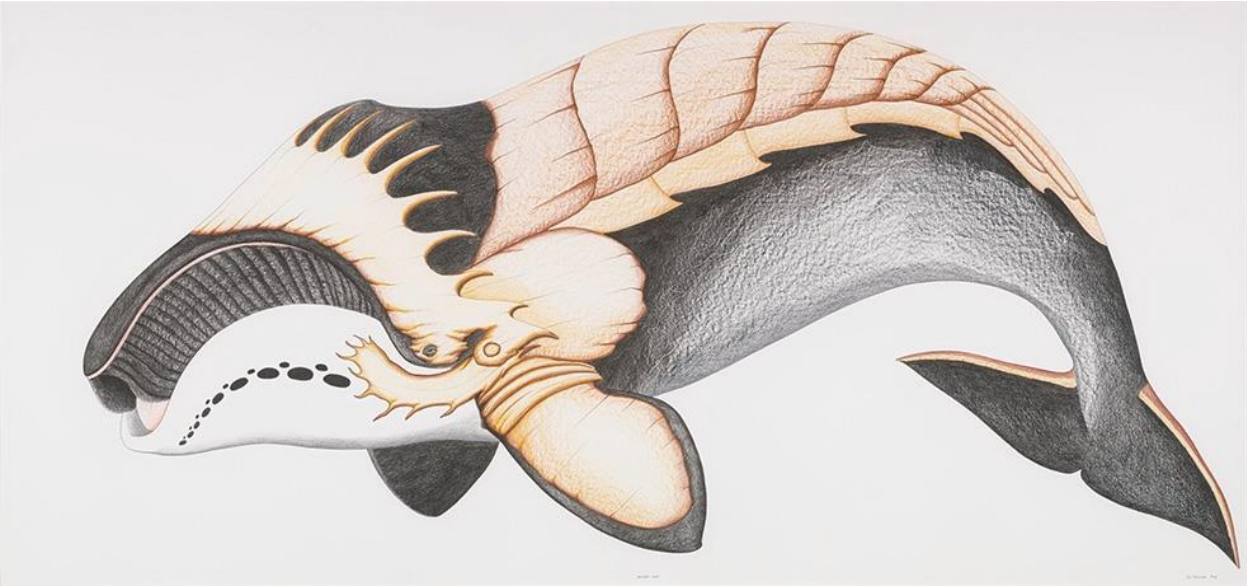
Claire Cowan is an undergraduate senior in the Henry M. Jackson School of International Studies at the University of Washington and originally from Kelso, Washington. She has a minor in Dance and her primary love is traveling.

Part I: Preserving the Arctic Environment

Part I will address the effects of climate change and sea ice loss on the Arctic environment and northern infrastructure. With the loss of sea ice through the Northwest Passage, there has been an increase in shipping that has disrupted the livelihoods of-Arctic wildlife, particularly bowhead whales and caribou (Chapter 1). Meanwhile, permafrost thaw, increased precipitation, and landfills have produced a waste management crisis in Inuit communities (Chapter 2). Addressing these issues is critical for producing long-lasting solutions that will protect the Arctic environment and sustain prosperous communities.

Chapter 1: Effects of Climate Change and Shipping on Arctic Wildlife

JOHNNA BOLLESEN
Henry M. Jackson School of International Studies, University of Washington



Tim Pitsiulak, *Armored Whale*, 2014

ABSTRACT

Climate change and increased northern maritime traffic drastically disrupts the prosperity of wildlife in the Arctic polar region. There have been clear and devastating impacts on many native species, as shown by growing endangered populations lists, changing hunting and breeding grounds, and shifting migratory patterns. These changes are especially destructive to bowhead whales and caribou – two of the primary resources that Inuit and northern Indigenous communities depend on. This study examines the threats confronting these two pivotal species at the heart of Inuit culture and livelihood, offers insight into the current policies in place to protect the delicate Arctic ecosystem, and provides a series of recommendations for strengthening the protection of bowhead whales and caribou.

INTRODUCTION

Melting sea ice has created more open waters that has led to increased maritime traffic, including smaller vessels such as jet skis and sail boats, as well as larger vessels including icebreakers, merchant crafts, and cruise ships.[28] According to a recent study conducted between 2015 and 2017, an annual average of 132,828 trips were made through the Northwest Passage by over 5,000 different vessels.[29] This spike in shipping has had numerous negative effects on northern wildlife populations. Invasive species, pollution, and contaminants have been introduced, and

[28] Silber, Gregory K., and Jeffrey D. Adams. "Vessel Operations in the Arctic, 2015-2017." *Frontiers in Marine Science* 6 (2019): 573.
[29] Ibid.

hunting, breeding, and migratory patterns of both marine and terrestrial animals have changed.[30] Walruses have stopped returning to previous breeding grounds. Polar bears are having fewer cubs each year. Narwhals are becoming increasingly endangered. Seals are hunting in different areas.

For bowhead whales and caribou, two of the most vital resources to Inuit, the repercussions have been devastating to both the species and Inuit communities. Numbers of caribou in the Canadian Arctic Archipelago are rapidly declining, and their annual fall and spring migration is being disrupted by a growing presence of icebreakers that shatter the bridges of sea ice that herds use to travel between Victoria Island and the mainland.[31] Meanwhile, bowhead whales are more frequently colliding with pleasure vessels and straying away from their natural habitats due to ship noise.[32]

These are just a few of the challenges that Arctic wildlife face with sea ice loss and the resulting increase in maritime traffic. The disruptions to this fragile ecosystem have grave consequences for both native animals and people.

BACKGROUND

Decline in Ecological Health

According to the Intergovernmental Panel on Climate Change (IPCC), atmospheric temperature warming in the Arctic is two to three times faster than anywhere else in the world.[33] Rising sea levels, declining glaciers and snow, and melting of permafrost are some of the defining stressors wreaking havoc on northern wildlife.[34] Over the last four decades, the summer coverage of sea ice in the Arctic has receded at an alarming rate of 14% each decade.[35] Researchers predict that the Arctic may be completely free of sea ice during the summer as early as 2040.[36]

This rapid decline in sea ice extent and thickness has enabled ice-free shipping routes through the Northwest Passage. Thus, there now exists a greater economic incentive to exploit a region rich in resources and tourist opportunities, leading to more pleasure crafts, passenger vessels, and fishing boats transiting through the Northwest Passage. According to Stephanie Meakin, a Senior Science Advisor with the Inuit Circumpolar Council, "there is more fishing, shipping, and tourism moving North into an incredibly sensitive marine region."[37] Climate change and increased maritime traffic has had destructive impacts on bowhead whales and caribou.

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[30] Conservation of Arctic Flora and Fauna (CAFF). 2013. Arctic Biodiversity Assessment: Report for Policy Makers, CAFF, Akureyri, Iceland: 13.

[31] Mathieu Dumond, Shane Sather, and Rob Harmer. "Observation of Arctic Island Barren-ground Caribou (Rangifer Tarandus Groenlandicus) Migratory Movement Delay Due to Human Induced Sea-ice Breaking." *Rangifer* 33, no. 2 (2013): Rangifer, 01 June 2013, Vol.33(2).

[32] Gross, Michael. "Arctic Shipping Threatens Wildlife." *Current Biology*, Cell Press, 6 August 2018: R804.

[33] IPCC, 2013: *Climate Change 2013: The Physical Science Basis. Contribution of Work Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535

[34] Ibid.

[35] Gross, Michael. "Arctic Shipping Threatens Wildlife." *Current Biology*, Cell Press, 6 August 2018: R803.

[36] Ibid.

[37] Stephanie Meakin (Senior Science Advisor at Inuit Circumpolar Council), in-person interview, January 29, 2020.

Bowhead whales ("arviq") along the Bering Strait, off the coast of Alaska, and at the other end of the Northwest Passage are directly exposed to maritime traffic. As more vessels travel through these areas, bowhead whales that pass through the Bering Strait to feed in the spring are at a high risk of colliding with ships, especially considering their behavioral tendency to feed at the surface.[38] Indigenous groups in Alaska, Greenland, and Nunavut that rely on the consistent presence of bowhead whales for hunting, have expressed concern that shipping or a possible oil spill would threaten their livelihoods.

In addition to the possibility of collisions, vessel traffic can cause acoustic disturbance. Because whales rely on low-frequency sounds for communication, their calls may be easily disrupted by ship noises. According to Silas Elytuk Arngna'naaq, a former member of the Legislative Assembly of the Northwest Territories, in the case of beluga whales, "There have been a number of occasions that [they] have followed small ships or barges into Baker Lake."[39] This highlights the risk that bowhead whales may also follow ships farther north away from their natural habitat.

For caribou ("tukuit"), northern herds have suffered from climate change and icebreaking activity, which in turn affects the Indigenous peoples who depend on them for food and clothing. For generations, caribou have been at the heart of Inuit way of life and represent an important symbol of northern culture.[40] In the homelands of Inuit Nunangat, "tukuit are the most prevalent of country foods consumed, and remain interconnected with Inuit values, beliefs, and practices."[41] For these reasons, in 2010, caribou were identified as a northern species research priority.[42]

Recent caribou migration shifts illustrate the disrupting effects of icebreakers, which plow through bridges of sea ice through the Northwest Passage, causing caribou to fall through the ice, cutting off their access to food, and forcing herds to find alternative means of travel.[43] New roads and other transportation methods in the North have also disrupted the migration patterns of caribou herds around Baker Lake.[44] These migratory shifts have meant the depletion of a crucial resource to Inuit culture, knowledge, diets, and livelihoods.
According to the World Wildlife Fund-Canada (WWF-Canada), the Bathurst Caribou Herd is under immense threat. Since 1986, the herd's historic high of 472,000 caribou has plummeted –

[38] Gross, Michael. "Arctic Shipping Threatens Wildlife." *Current Biology*, Cell Press, 6 August 2018: R805.
[39] Arngna'naaq, Elytuk. "An Inlander's View of the Northwest Passage." *Nilliajut 2: Inuit Perspectives On the Northwest Passage, Shipping, and Marine Issues*, 2017: 40.
[40] Ljubicic, Gita, Simon Okpakok, Sean Robertson, and Rebecca Mearns. "Uqsuqtuurmiut Inuita Tuktumi Qaujimaningit (Inuit Knowledge of Caribou from Gjoa Haven, Nunavut): Collaborative Research Contributions to Co-management Efforts." 54, no. 3 (2018): 213-33.
[41] Ibid.
[42] Ljubicic, Gita, Simon Okpakok, Sean Robertson, and Rebecca Mearns. "Inuit Approaches to Naming and Distinguishing Caribou: Considering Language, Place, and Homeland toward Improved Co-management." *Arctic* 71, no. 3 (2018): 309-33.
[43] Mathieu Dumond, Shane Sather, and Rob Harmer. "Observation of Arctic Island Barren-ground Caribou (Rangifer Tarandus Groenlandicus) Migratory Movement Delay Due to Human Induced Sea-ice Breaking." *Rangifer* 33, no. 2 (2013): Rangifer, 01 June 2013, Vol.33(2).
[44] Arngna'naaq, Elytuk. "An Inlander's View of the Northwest Passage." *Nilliajut 2: Inuit Perspectives On the Northwest Passage, Shipping, and Marine Issues*, 2017: 40.

first to 186,000 in 2003, then to 34,690 in 2012, and now down to a miniscule 19,769.[45] The Baffin Island Caribou Herd lost 98% of its population, having started with a population high of 235,000 in 1991 and is now left with a meager 5,000.[46] The Porcupine Caribou Herd remains the only large North American herd to not have experienced a decline since the 2000s.[47]

Caribou are often considered 'the canary in the coal mine' – an early warning sign about the state of the natural environment.[48] Based on their fast and substantial drop in numbers, the future wellbeing of the Arctic ecosystem is in peril.

Current Policies

What is being done to mitigate the threats to bowhead whales, caribou, and other vulnerable Arctic species? While some policies exist, Arctic wildlife need more protection as the climate continues to warm and shipping continues to increase. I have identified several key policies from *Canada's Arctic and Northern Policy Framework* of 2019 and *Actions for Arctic Biodiversity Report, 2013-2021* released by the Arctic Council Working Group, Conservation of Arctic Flora and Fauna (CAFF). Upon examining these policies, I will offer a list of recommendations for enhancing their range of environmental protection.

Outlined in Goal 5 of *Canada's Arctic and Northern Policy Framework* are eleven objectives for mitigating climate change across the Arctic ecosystem and promoting adaptive efforts. From this goal, I call specific attention to Objective 9, which aims to ensure safe and responsible shipping practices.[49]

The *Actions for Arctic Biodiversity Report, 2013-2021* focuses on safeguarding critical northern habitats primarily through combatting stressors on biodiversity, adapting to climate change, and incorporating local and traditional knowledge in research and policymaking. I will be focusing particularly on 1) Recommendation 6, which aims to develop guidelines and implement appropriate spatial and temporal zones where necessary to reduce human activity outside protected areas, such as calving grounds, den sites, feeding grounds, migration routes, and molting areas, and 2) Recommendation 14, which aims to further incorporate Indigenous ecological knowledge and surveillance into the assessment, planning, and management of Arctic biodiversity.[50]

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[45] "Decline of Arctic Caribou One of Canada's Greatest Wildlife Concerns, WWF-Canada Says." WWF. WWF-Canada, October 12, 2016. http://www.wwf.ca/?22601/decline-of-Arctic-caribou-one-of-Canadas-greatests-wildlife-concerns-WWF-Canada-says

[46] Ibid.

[47] Gagnon, Catherine A., Sandra Hamel, Don E. Russell, Todd Powell, James Andre, Michael Y. Scoboda, and Dominique Berteaux. "Merging Indigenous and Scientific Knowledge Links Climate with the Growth of a Large Migratory Caribou Population." *Journal of Applied Ecology*, August 2020: 1.

[48] Batycki, Candace, Tzeporah Berman, Lafcadio Cortesi, Chris Henschel, Valerie Langer, Michelle Medeiros. "A Brighter Shade of Green: An Agenda for Caribou, Climate and Conservation in Canada's Forests." *ForestEthics*: 1.

[49] Northern Affairs Canada. *Canada's Arctic and Northern Policy Framework.* Government of Canada; Crown-Indigenous Relations and Northern Affairs Canada, 18 Nov. 2019: Goal 5.

[50] CAFF. *Actions for Arctic Biodiversity, 2013-2021: Implementing the recommendations of the Arctic Biodiversity Assessment*. Conservation of Arctic Flora and Fauna, Akureyri, Iceland, 2015: 5.

RECOMMENDATIONS

(1) New and Larger Protected Marine Corridors

Under Recommendation 6 of the *Actions for Arctic Biodiversity Report 2013-2021*, there currently exist two marine protected areas in the region as well as what the Government of Canada calls a low-impact corridor.[51] While these efforts aim to exclude traffic from heavily populated marine zones, they produce little impact, as vessels simply become displaced into neighboring areas with similar concentrations of whales.[52] In order to better avoid contact between vessels and marine life, I propose creating a corridor completely outside of known whale areas. This could significantly reduce the potential for ship strikes and acoustic disturbance on areas with high concentrations of bowhead whales.

(2) Stronger Shipping Regulations

According to WWF-Canada president David Miller, "shipping can have a very light environmental impact, but you do need to consider issues of fuel and the routes, and the intersections with marine mammals."[53] Despite efforts to regulate shipping under Goal 5, Objective 9 of *Canada's Arctic and Northern Policy Framework*, much of the shipping industry is still using highly toxic sulfur fuel oil, which releases harmful emissions including black carbon.[54] In the event of a major spill, the pollutant forms a molasses-like sludge on the ocean surface that is extremely difficult to clean up.[55]

As of January 2020, the International Maritime Organization (IMO) has mandated that ships fuel with a sulfur content no greater than 0.5%, as opposed to the previous limit of 3.5%.[56] While this is a major step towards reducing harmful emissions in the Arctic, ships are still permitted to use fuels with higher sulfur contents so long as they install cleaning devices known as scrubbers.[57] Closed-loop scrubbers retain most of the water used for sulfur removal for disposal at ports, but open-loop scrubbers pump the water used for sulfur removal overboard.[58] This could introduce harmful nitrates, cancer-causing hydrocarbons, and acidic sulfur to marine life.[59] In order to avoid this risk, I propose eliminating the installation of open-loop scrubbers, which will reduce sulfur deposits in Arctic waters.

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[51] Dawson, Jackie & Carter, Natalie & Luijk, Nicolien & Parker, Colleen & Weber, Melissa & Cook, Alison & Grey, Kayla & Provencher, Jennifer. (2020). Infusing Inuit and local knowledge into the low impact shipping corridors: An adaptation to increased shipping activity and climate change in Arctic Canada. Environmental Science & Policy. 105: 19-36.

[52] Tetu, Pierre-Louis, Dawson, Jackie, Insley, Stephen J., Hilliard, R. Casey, Halliday, William D, Têtu, Pierre-Louis, Insley, Stephen J, and Hilliard, R Casey. "Tourist Vessel Traffic in Important Whale Areas in the Western Canadian Arctic: Risks and Possible Management Solutions." Marine Policy 97 (2018): 72-81.

[53] Sevunts, Levon. "Caribou Decline, Arctic Shipping and Renewable Energy: WWF – Canada Looks Back at 2016." RCI. Radio Canada International, December 16, 2016. http://www.rcinet.ca/en/2016/12/30/caribou-decline-arctic-shipping-and-renewable-energy-wwf-canada-looks-back-at-2016/.

[54] Humpert, Malte. "IMO Inches Forward With Ban on Heavy Fuel Oil in Arctic." High North News, February 26, 2019. https://www.highnorthnews.com/en/imo-inches-forward-ban-heavy-fuel-oil-arctic.

[55] Ibid.

[56] "Sulphur 2020 – Cutting Sulphur Oxide Emissions." International Maritime Organization, 2020. http://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx.

[57] Humpert, Malte. "IMO Inches Forward With Ban on Heavy Fuel Oil in Arctic." High North News, February 26, 2019. https://www.highnorthnews.com/en/imo-inches-forward-ban-heavy-fuel-oil-arctic.

[58] Ibid.

[59] Ibid.

With regard to vessel speed, ships typically travel at 25 knots.[60] Research suggests that lowering the speed limit of containers and cruise ships through northern sea routes would reduce acoustic disturbance and offer a greater reaction time in order to avoid collisions with bowhead whales.[61] In order to effectively act on these projections, I propose mandating the reduction of vessel speed through known whale areas from 25 knots to 15 knots.

(3) Enhance Conservation of Currently Unprotected Caribou Areas

While Recommendation 6 under the *Actions for Arctic Biodiversity Report, 2013-2021* aims to reduce human disturbance around unprotected areas home to marine and terrestrial animals, these areas are still nonetheless unprotected. This makes the migratory routes for caribou susceptible to maritime activity, including icebreaking. In addition to losing their migratory routes, caribou only have one calf per year at most.[62] Because their population numbers are slow to rebuild, it is imperative to protect their habitat. Thus, I propose declaring the migratory corridor of caribou and their calving grounds as conservation zones in order to better protect populations of northern herds.

(4) Continue Integrating Indigenous Voices in Policy

The goal of Recommendation 14 of the *Actions for Arctic Biodiversity Report, 2013-2021* is to better enhance collaboration between the Government of Canada and Indigenous leaders. While both *Canada's Arctic and Northern Policy Framework* and *Actions for Arctic Biodiversity Report, 2013-2021* acknowledge the need for reconciliation and a stronger Inuit presence in policymaking, there is still a lack of engagement with Indigenous leaders who are not included in pertinent forums and in scientific research. According to the authors of *Inuit Knowledge of caribou from Gjoa Haven, Nunavut*, "Despite co-management mandates to consider Inuit and scientific knowledge equally, the intertwined colonial legacies of research and wildlife management render this challenging."[63]

As demonstrated by several recent studies in which researchers and Inuit work together, the blend of traditional science and Indigenous knowledge yields new information that can be beneficial in policymaking. For example, in one study between 2000 and 2010, researchers worked alongside locals using Indigenous community-based monitoring programs to observe the population of the Porcupine Caribou Herd.[64] The ten-year study yielded an improved ecological understanding of the exact environmental factors influencing spring and fall caribou conditions that had not been previously understood by conventional scientific measures. Thus, it is essential to merge science and Indigenous knowledge in order to produce transformative field research and generate new multilateral policies that protect Arctic wildlife. Only then will the governing

[60] Acoustical Society of America. "How to reduce the impact of shipping vessel noise on fish? Slow them down." ScienceDaily. 2018. www.sciencedaily.com/releases/2018/11/181105122452.htm.
[61] Ibid.
[62] "Decline of Arctic Caribou One of Canada's Greatest Wildlife Concerns, WWF-Canada Says." WWF. WWF-Canada, October 12, 2016. http://www.wwf.ca/?22601/decline-of-Arctic-caribou-one-of-Canadas-greatests-wildlife-concerns-WWF-Canada-says
[63] Ljubicic, Gita, Simon Okpakok, Sean Robertson, and Rebecca Mearns. "Uqsuqtuurmiut Inuita Tuktumi Qaujimaningit (Inuit Knowledge of Caribou from Gjoa Haven, Nunavut): Collaborative Research Contributions to Co-management Efforts." 54, no. 3 (2018): 213-33.
[64] Gagnon, Catherine A., Sandra Hamel, Don E. Russell, Todd Powell, James Andre, Michael Y. Svoboda, and Dominique Berteaux. "Merging Indigenous and Scientific Knowledge Links Climate with the Growth of a Large Migratory Caribou Population." *Journal of Applied Ecology*, August 2020: 1.

bodies of the Arctic be able to methodically and soundly safeguard what author Whit Fraser coins, "the great Arctic Serengeti."[65]

CONCLUDING THOUGHTS

Climate change in the Arctic and increased maritime traffic has led to a desperate call for the protection of the Arctic ecosystem. Current policies in place made to protect bowhead whales, caribou, and other Arctic wildlife advocate for mitigating the effects of climate change, adapting to current and ongoing changes, and integrating traditional Indigenous knowledge toward understanding and addressing these changes. While these measures are necessary to protect northern marine and terrestrial animals, they are not enough, and it is essential to continue strengthening them.

I have argued that we must construct a larger corridor completely outside of highly populated whale areas, implement stronger shipping regulations that all vessels must comply with, ensure greater conservation efforts within caribou migratory routes and calving grounds, and work to better integrate Indigenous voices in policy discussions. With these solutions combined and enforced, the governing bodies of the Arctic can best protect the environment and northern wildlife.

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Biography

Johnna Bollesen is a fourth-year undergraduate student at the University of Washington double majoring in International Studies and Communication with a focus in global media and technology. Johnna drew inspiration for her chapter from a short story she wrote about a polar bear cub. She hopes to combine her love for animals and passion for writing towards pursuing a career in environmental journalism.

[65] Whit Fraser (author of *True North Rising* and former CBC reporter), in-person interview, January 29, 2020.

Chapter 2: Arctic Solid Waste Infrastructure

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ABSTRACT

They [Inuit] struggle with trash every single day in every single community.
— Kevin Kablutsiak, Inuit Tapiriit Kanatami[66]

Climate change in the Arctic has exacerbated the ongoing waste-management crisis in Inuit communities.[67] Difficulties with funding, technology, remoteness, and system implementation lead the majority of Arctic communities to collect residential waste in uncontained dumps, often paired with contained or uncontained burning. Permafrost thaw has presented additional difficulties for waste management practices in most Arctic communities.[68,69] Increased precipitation (in the form of both snowfall and rain) on unlined and uncovered Municipal Solid Waste (MSW) landfills has created new threats to freshwater with increased leachate run-off (liquids in contact with waste).[70,71] Loss in snow and ice cover has increased the spread of trash in communities, making landfills an expanding source of pollution. A comprehensive waste management infrastructure plan is vital to the health and growth of remote Canadian Inuit Arctic communities. As climate change exacerbates the environmental health impacts of poor waste management methods, the need for comprehensive waste policy is ever increasing. Expansion in marine transport in Arctic waters has created a new opportunity for remote waste management methods, but also bring new challenges to Arctic waste infrastructure. Collaboration between territorial governments, federal government, and community leadership is vital to create and implement infrastructure plans which meet Canadian federal environmental code. There is strong desire in both Inuit organizations and communities, and the Government of Canada to increase the environmental health of remote Arctic communities, and invest in improved Arctic infrastructure.[72] Using these desired outcomes to strengthen partnerships and increase Arctic networks will have positive outcomes for all stakeholders in the future as Arctic marine traffic increases.

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[66] Kevin Kablutsiak, Interview by Author, Ottawa, January 29, 2020.
[67] Larsen, Joan Nymand, Oleg A. Anisimov, Andrew Constable, Anne B. Hollowed, Nancy G. Maynard, Pål Prestrud, Terry D. Prowse et al. "Polar regions." (2017).
[68] Doré, Guy., Morse, Brian, Technical Council on Cold Regions Engineering, and Canadian Society for Civil Engineering. *Cold Regions Engineering 2012: Sustainable Infrastructure Development in a Changing Cold Environment: Proceedings of the 15th International Specialty Conference on Cold Regions Engineering: August 19-22, 2012, Quebec City, Canada*. Reston, Va.: American Society of Civil Engineers, 2012.
[69] Warren, John A., James E. Berner, and Tine Curtis. "Climate change and human health: infrastructure impacts to small remote communities in the North." In *Impacts of Global Climate Change*, pp. 1-12. 2005.
[70] Brand, James, Kate Spencer, Francis O'shea, and John Lindsay. "Potential Pollution Risks of Historic Landfills on Low-lying Coasts and Estuaries." *Wiley Interdisciplinary Reviews* 5, no. 1 (2018): 1-12.
[71] Whyte, Chelsea. "Forget Snow, Rain Will Become Main Precipitation in the Arctic." New Scientist, March 13, 2017. https://www.newscientist.com/article/2124366-forget-snow-rain-will-become-main-precipitation-in-the-arctic/.
[72] National Inuit Climate Change Strategy, National Inuit Climate Change Strategy § (2019).

INTRODUCTION

We are facing the biggest crisis of infrastructure our country has ever seen.
— Stephanie Meakin, Inuit Circumpolar Council, Canada[73]

Heather Campbell, Nuliajuk in Mourning, 2018

Pictured in this painting by Inuit artist Heather Campbell is a mourning Nuliajuk, the Inuit mother of sea creatures. This painting showcases the intimate relationship between the wellbeing of animals (and more broadly, the environment), and the wellbeing of Inuit. The health impacts of waste in the environment go farther than the physical, disrupting centuries of traditional living. When addressing reconciliation, the Government of Canada must recognize that colonization has imparted unsustainable systems of living within Inuit communities, without providing basic services to protect Inuit livelihood and environment.

Like many developed nations, Canada struggles to provide adequate waste management services to remote communities. Although Canada has strong environmental protection standards, these standards are only upheld in southern provinces.[74] The *Canadian Environmental Protection Act* of 1999 specifies the necessary environmental health standards which all Canadian communities should have access to, but only through the lens of POP pollution. It does not define municipal solid waste (MSW) standards or best practices (ideal waste management and containment methods which protect the health of communities). [75] Because MSW collection is regulated at a territorial level, there are often allowances for poor waste management practices in remote

[73] Stephanie Meakin, Interview by Author, Ottawa, January 29, 2020.
[74] Giroux, Laurie. "State of Waste Management in Canada." Giroux Environmental Consulting, 2014.
[75] Canadian Environmental Protection Act, Canadian Environmental Protection Act (1999).

communities.[76] Special permits are given to allow for open burning and uncontained storage of waste. Open and unregulated burning of waste is an environmental health hazard as it often happens in close proximity to communities, with elderly and children at increased health risk. For example, dioxins and furans which are commonly found in MSW smoke led to an increased risk of cancer and liver dysfunction.[77] As climate warms there is increased precipitation, as well as increased permafrost thaw, both of which are contributing to an increased presence of leachates in watersheds. Rainfall is expected to increase by 60% over the next 70 years in the Arctic, at over double the rate than the rest of the world.[78] This contamination is an emerging threat to Inuit freshwater security and raises the costs of water treatment in the future.[79,80] It also adds to the long term costs of healthcare and wellness in the Arctic.

It is important to note that waste composition in Arctic communities is more dynamic and potentially more harmful to the environment than urban MSW, as special waste categories are not separated and individually disposed of. In the Arctic, waste items typically characterized and treated as hazardous waste are very likely to end up in the main waste stream without special treatment due to lack of capacity and lack of integrated best practice systems. It is a priority in communities which lack the capacity to implement contained waste management to prioritize systems to separate, contain and treat hazardous wastes.[81]

Canadian Inuit have comparatively poorer health than the majority of Canadians. For example, cancer and suicide rates in Inuit communities are incredibly high, and showcase how poor infrastructure (housing, energy, transportation, communication, healthcare) can have a profound effect on the overall health of a community.[8283] Access to health care for Inuit living in the Arctic is more difficult and more expensive in comparison to the majority of Canadian citizens.[84] The issues of Inuit health and wellness are also an issue of inequity. Inuit wellness is strongly connected to environmental wellness, so best practice standards for waste management are vital to improving Inuit health. Increasing amounts of ocean pollution (marine litter) and persistent

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[76] Hurley, Mary C, Whereto, Jill, MacKay, Robin, Canada. Parliamentary Research Branch, and Nunavut Surface Rights Tribunal. *Bill C-33 Nunavut Waters and Nunavut Surface Rights Tribunal Act -- Rev*. Rev ed. Legislative Summary; LS-408E. Ottawa: Library of Parliament, Parliamentary Research Branch, 2001.
[77] "Open Burning of Garbage: Health and Environmental Risks." Government of Canada, September 10, 2015. https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/municipal-solid/environment/open-burning-garbage-health-risks.html.
[78] Whyte, Chelsea. "Forget Snow, Rain Will Become Main Precipitation in the Arctic." New Scientist, March 13, 2017. https://www.newscientist.com/article/2124366-forget-snow-rain-will-become-main-precipitation-in-the-arctic/.
[79] Daley, Kiley, Rob Jamieson, Daniel Rainham, and Lisbeth Truelstrup Hansen. "Wastewater Treatment and Public Health in Nunavut: A Microbial Risk Assessment Framework for the Canadian Arctic." *Environmental Science and Pollution Research* 25, no. 33 (2018): 32860-2872.
[80] Martin D, Bélanger D, Gosselin P, Brazeau J, Furgal C, Déry S (2007) Drinking water and potential threats to human health in Nunavik: adaptation strategies under climate change conditions. Arctic 60(2):195–202
[81] Sebalo, Simone, and Lynn Zender. "Solid Waste Management in Small Arctic Communities." Barents Info, November 5, 2018. https://www.barentsinfo.fi/beac/docs/SWMinSmallArcticCommunitiesHELSINKInov5.pdf.
[82] Fraser, Sarah L., Dominique Geoffroy, Eduardo Chachamovich, and Laurence J. Kirmayer. "Changing Rates of Suicide Ideation and Attempts Among Inuit Youth: A Gender-Based Analysis of Risk and Protective Factors." *Suicide and Life-Threatening Behavior* 45, no. 2 (2015): 141-56.
[83] Carrière, Gisèlem, Michael Tjepkema, Jennifer Pennock, and Neil Goedhuis. "Cancer Patterns in Inuit Nunangat: 1998-2007." *International Journal of Circumpolar Health*71, no. 1 (2012): 18581.
[84] Martin, Colin. "Arctic Health-care Architecture." *The Lancet* 384, no. 9946 (2014): 845.

organic pollutants (POPs) have had a profound effect on wildlife. This in turn has had compounding effects on Inuit health as Arctic Inuit communities rely largely on subsistence sources of food. In order to increase environmental health and food security, Inuit communities must have contained waste management practices.

BACKGROUND

> *Whenever we found ourselves without a story, we could always write about the dump because there was always a crisis there.*
> — Whit Fraser[85]

Transportation is unsurprisingly one of the biggest barriers to implementing best practices in Inuit waste management. Only two out of the 52 Canadian Inuit communities are accessible by road, with other communities relying on transportation by plane, boat/ship, or ice roads.[86] It is difficult to coordinate waste hauling (shipping of trash to a place with more developed waste management practices) with these transportation barriers, and there is an immense cost that comes with this option. The Alaskan Backhaul Project, which facilitates partnerships to encourage suppliers visiting remote northern communities to haul out waste in Alaska, can be used as a model, but has limitations in the scope of Arctic Inuit communities.[87] Although it has been successful in some communities, it is expensive to coordinate and not a possibility for all Inuit communities. Because it is both difficult and expensive to haul waste to areas with adequate infrastructure to be properly handled, communities are left to manage waste on their own. This method is best utilized in the smallest communities where safe landfilling is not an option.

The capital city of Inuit Nunangat is a perfect example of the current pressures on Arctic community landfills. Although Iqaluit is the largest city in Inuit Nunangat in both population and size, with comparatively good access to transportation, they face the same problems of Inuit communities with populations of less than 1000 people and further North. The uncovered, unlined landfill which the city uses for all its waste was on fire for over a year in 2014, causing immense harm to the community and resulting in periodic shutdowns of school and work due to toxic fumes.[88] The fire was most likely caused by batteries (improper waste sorting), and fed by various combustibles in the landfill. Sadly, this is a common occurrence in Iqaluit (and other Inuit communities), with another major landfill fire in 2010 burning for over two months.[89] In 2012, this resulted in the city's water license being revoked by Aboriginal Affairs and Northern Development Canada (AANDC), as tested drinking water was shown to contain ammonia and

[85] Whit Fraser, Interview by Author, Ottawa, January 29, 2020.
[86] Du, Qianqian, Amy M. Kim, and Yunzhuang Zheng. "Modeling Multimodal Freight Transportation Scenarios in Northern Canada under Climate Change Impacts." *Research in Transportation Business & Management* 23 (2017): 86-96.
[87] Shirley, Jacqueline, and Johnson, Rhonda M. *The Management of Open Dumps in Rural Alaska-the Continuing Need for Public Health Action: A Policy Analysis*, 2011, ProQuest Dissertations and Theses.
[88] "Iqaluit's Infrastructure Struggles to Keep up with Growth | CBC News." CBCnews. CBC/Radio Canada, November 22, 2011. https://www.cbc.ca/news/canada/north/iqaluit-s-infrastructure-struggles-to-keep-up-with-growth-1.1096808.
[89] Zhang, Sarah. "A 'Dumpcano' of Trash Erupted in the Arctic and Won't Stop Burning." Gizmodo. Gizmodo, August 12, 2014. https://gizmodo.com/a-dumpcano-of-trash-erupted-in-the-arctic-and-wont-st-1618311907.

heavy metals.[90] Current uncontained waste management practices in the Arctic create additional barriers for planning future waste infrastructure due to their cost and extended environmental impacts. For example, the most recent landfill fire cost almost CAD $2.3 million, and was put out with methods that posed a serious pollution threat to groundwater.[91] Despite the obvious negative impacts on health and safety, Iqaluit residents feel continued pressures to openly burn trash after this incident because of the lack of capacity in the dump. There is no option to opt out of these harmful systems because there is a lack of support.

Informal landfills create a secondary issue as they have been built on permafrost which is thawing and becoming more unstable. It is common for dumps to be located near the community in depressions or gullies in the land since digging is not an easy option in permafrost terrain. Because these dumps are often placed in depressions in land, they are natural spaces for watershed runoff and collection, increasing the danger and impact of Arctic landfilling practices.[92]
Waste streams in the Arctic are primarily composed of goods shipped into communities by boat or plane, rather than being produced there.[93] Because of the remote nature of these communities, it is incredibly difficult to have manufacturer responsibility for the non- degradable or reusable packaging which is presenting a pronounced harm to Inuit environmental health. Recycling systems are simply not viable in Arctic communities as they are structured today. It costs more per ton for shipping than any repayment for materials, and there are limited opportunities for reuse in communities.[94] Canada's *Action Plan for Extended Producer Responsibility* of 2009, encourages manufacturer responsibility for product end of life. This policy has expanded recycling across Canada, increased deposit schemes for packaging (small compensation for return of packaging to manufacturers), and encouraged more accountability overall for producers.[95]This can promote partnerships between manufacturers and Arctic communities to the advantage of both parties.[9697]

As sea ice continues to melt and shipping seasons become longer, increased marine traffic will begin to have possible impacts on the waste characterization (make up of waste) in the Arctic. Ships will be in the Arctic for longer periods of time, meaning that there will be an increased demand to offload trash into community waste infrastructure, bringing onboard waste

[90] Worden, Peter. "A Volcano of Garbage in the Arctic Has Been Burning for Eight Weeks." Vice, August 2, 2014. https://www.vice.com/en_us/article/kz5yjy/a-volcano-of-garbage-in-the-arctic-has-been-burning-for-eight-weeks.
[91] Watson, Aaron. "Iqaluit's Long-Smoldering 'Dumpcano' Garbage Fire Finally Out." The Globe and Mail, May 12, 2018. https://www.theglobeandmail.com/news/national/iqaluits-long-smouldering-dumpcano-garbage-fire-finally-out/article20620273/.
[92] Sustainable Development Working Group. "Best Waste Management Practices for Small and Remote Communities." (2019).
[93] Sebalo, Simone, and Lynn Zender. "Solid Waste Management in Small Arctic Communities." Barents Info, November 5, 2018. https://www.barentsinfo.fi/beac/docs/SWMinSmallArcticCommunitiesHELSINKInov5.pdf.
[94] Worden, Peter. "A Volcano of Garbage in the Arctic Has Been Burning for Eight Weeks." Vice, August 2, 2014. https://www.vice.com/en_us/article/kz5yjy/a-volcano-of-garbage-in-the-arctic-has-been-burning-for-eight-weeks.
[95] Canada Wide Action Plan for Extended Producer Responsibility, Canadian Council of Ministers of the Environment (2009).
[96] Ibid.
[97] Mckerlie, K., N. Knight, and B. Thorpe. "Advancing Extended Producer Responsibility in Canada." *Journal of Cleaner Production* 14, no. 6-7 (2006): 616-28.

accumulated on journeys to local dumps.[98] It is common for vessels to dump trash in the Arctic (permitted or illegally), on ice or in the water, and it is expected that a growing number of boats will want to offload trash into Inuit communities as well, including the Canadian military.[99] As the Canadian Environmental Protection Act prohibits the dumping and offloading of waste from marine vessels, and requires responsible treatment of marine waste, it is important to grow the capabilities of northern waste infrastructure.[100] If southern based ships have needs to offload waste, they have the responsibility to support the growth of waste infrastructure in Arctic communities. This is essential so that increased presence of marine vessels (and their associated negative environmental impacts) do not have a compounding effect on the environmental health of Inuit communities, but rather a positive effect in supporting the growth of the communities they are working within.

RECOMMENDATIONS

Current structures of Inuit and federal governments aren't working; we need to start working on finding a structure that empowers Inuit leadership. We need to put Inuit at the center...
— Frances Abele, Carleton University[101]

Unlike many of the problems facing the Arctic, waste management infrastructure has real tangible solutions which can be implemented to have an immensely positive impact on the environment and on the health of Inuit communities. Although there are barriers to funding and implementation, there exists creativity and dedication to address this problem. Here are four recommendations that could be readily implemented:

(1) Create programs to implement best practices for waste management in remote Inuit Arctic communities

Although best practices have been developed for waste management methods in the Arctic, there are still immense barriers to implementation that need to be addressed.[102] These programs should be co-developed in partnership between federal, territorial, and local governments, with the inclusion of key stakeholders for manufacturer responsibility. These efforts must be led within each community in order to have legitimacy and maintain Arctic sovereignty, but should be foundationally supported by larger institutions which have existing infrastructure to support these projects. Namely, the Arctic Council, Crown Indigenous Relations, and the Inuit Tapiriit Kanatami all will be essential partners in encouraging the implementation of new standards within Arctic communities. Best practices address the creation of new waste management systems of physical infrastructure, as well as creating standards in operations, and encouraging new norms for waste handling within the community.

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[98] Mallory, Mark L. "Marine Plastic Debris in Northern Fulmars from the Canadian High Arctic." *Marine Pollution Bulletin* 56, no. 8 (2008): 1501-504.
[99] "Inuit Oppose Rules Changes That Let Navy Dump Trash in Arctic." *The Canadian Press* (Toronto), 2007.
[100] Canada Wide Action Plan for Extended Producer Responsibility, Canadian Council of Ministers of the Environment (2009).
[101] Frances Abele, Interview by Author, Ottawa, January 27, 2020.
[102] Sustainable Development Working Group. "Best Waste Management Practices for Small and Remote Communities." (2019).

(2) Create a comprehensive Arctic clean-up plan in partnership with Inuit communities, key Arctic economic stakeholders, and government partners to mitigate existing environmental health damage

To address the current environmental health impacts of open dumping and burning, a clean start is needed in all Inuit communities. Current uncontained waste will continue to have impacts on land and water until there is an appropriate pollution response developed. This will be one of the biggest barriers to containing Arctic waste, as there are many challenges with the clean- up process in the Arctic. It will require an immense amount of engagement from community members and education on proper waste handling techniques. This process in itself will require best practices for procedures of safety and containment will need to be coordinated to ensure proper containment.

(3) Enforce stronger standards of Extended Producer Responsibility for producers shipping goods into remote communities in order to make Arctic recycling viable

All products with long post-consumer lives are being sent to the Arctic without the ability or possibility of recycling, meaning there is an increased accountability on the side of the manufacturer to support proper end of life practices for their packaging. Further, there are increased environmental health impacts from all materials shipped into the Arctic due to current waste management practices. An increase in deposit incentives for recyclable packaging sent to the Arctic, and remote places in general, would increase the viability of haul out programs in the Arctic. Partnerships in the Arctic with Inuit communities could be used to build brand recognition and respect for increasing environmental accountability.

(4) Increase waste creation and management standards for ships entering Canadian Arctic waters to ensure that no outside waste is being brought to communities without contributions to local waste infrastructure building

The environmental health of the Canadian Arctic is crucial to Inuit communities, and standards of environmental protection for those traveling within it should be tighter. Ensuring that ships plan appropriate waste management methods for longer or more frequent journeys in the Arctic, and requiring contributions to waste infrastructure for those intending to dump are necessary. As the Canadian Arctic is an emerging destination for tourism, fishing, shipping, and security operations, investment in infrastructure by those visiting will create a sustained ability for Arctic communities to host more visitors.

(5) Incentivize "haul-in/haul-out" programs with Arctic suppliers for small communities, using the model of the US "Alaskan Backhaul" programs

Haul-in/haul-out programs can be an extremely viable program for smaller communities in the Arctic with the logistical help of federal and territorial governments. The current barriers of incentivization for haulers, and planning in areas of limited communication, can be overcome by partnerships in urban areas.

CONCLUDING THOUGHTS

Waste management is an essential service for modern day life. Through enabling contained waste management practices in Inuit communities, one is enabling a basic standard of living which is already afforded to the majority of Canadians. Waste management systems are one part of a larger future for Inuit health. It is both possible and necessary to take action on this disparity

of basic utility access, and it is even more impactful on the health of Inuit communities. Because the Arctic is resource strained, partnerships are vital to support new infrastructure. While partnerships are necessary for the success of these final recommendations, all initiatives must be specified for and led by the communities they are being implemented in. Making waste management solutions Inuit led will re-impower Inuit autonomy in environmental health standards in the Arctic.

Biography

Gabrielle Coeuille is a senior at the Jackson School of International Studies, focusing on international environmental policy. She has a special passion for waste management, and hopes to work in circular economic policy after graduation. She believes each community of the world can be empowered, rather than burdened, by their waste management practices.

Part II: Closing Gaps in Societal Health

Part II addresses social issues surrounding climate change, permafrost thaw, and sea-ice loss. The loss of sea-ice increases access to natural resources in the Arctic. Many Inuit work in mines which extract these resources, such as the Mary River Mine. Though the extractive industry provides a major source of revenue for Inuit communities, it also has negative impacts including insecure working conditions for the contract workers and increased harassment and violence towards women in the surrounding regions. (Chapter 3). In Inuit Nunangat, a national housing crisis persists amid the changes in climate. In addition to a shortage of housing and insufficient funding, permafrost thaw is beginning to destabilize existing housing (Chapter 4). It is crucial to address these issues as they directly affect the health and well-being of Inuit, and act as a barrier to their path to self-determination.

Chapter 3: Mining in the Arctic — Problems Associated with Economic Opportunities

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ABSTRACT
Mining is an important source of income for Inuit communities in the Arctic region, especially as access to natural resources in the Arctic increases as sea-ice cover decreases. However, mining can bring major problems for people working at the mine and to communities near the mine. This chapter will focus on one of the biggest mines in the Canadian Arctic region, the Mary River Mine. Although the mine brings jobs and revenue to the area around it, it creates problems including dangerous working conditions for contract workers as well as increased violence and harassment of women working in the mine or living around it. In order to address the social problems that come with operating a mine, there must be action to improve the quality of life for Inuit affected by the mines.

INTRODUCTION
As global warming becomes more severe, Arctic sea ice is melting. The extent and thickness of sea ice is decreasing and this impacts shipping routes in the area. An article, *Climate Change: Arctic sea ice summer minimum*, published by the U.S. National Oceanic and Atmospheric Administration (NOAA) provides data showing that the area of ocean with at least 15% sea ice at the end of the summer melt season in the Arctic has decreased over two millions of square kilometers from 1979 to 2018.[103] This change increases water access for ships in the Arctic and majorly affects shipping routes in the Arctic. For instance, the NOAA article suggests that the "Northern Sea Route along the coast of Siberia has begun experiencing summertime sea ice declines that may transform it into a reliable shipping route."[104] This is not the only impact, as shipping lanes are beginning to open up as the melting sea ice leads to a longer shipping window between the spring, summer, and fall seasons. This opening of the shipping routes makes it so that more mineable resources can be exported in a given year. This makes it desirable for existing mines to expand, and also for new mines to open in the Arctic.

The first goal of Canada's *Arctic and Northern Policy Framework* (2019) is that "Canadian Arctic and northern Indigenous peoples are resilient and healthy."[105] It is crucial to protect everyone's physical and mental health regardless of where they live. However, the Icelandic Ambassador in Canada, Pétur Ásgeirsson, emphasizes the need to "recognize people in the Arctic need to have the opportunity to live like the people in the South."[106] We cannot ignore the economic benefits the mining industry has brought to the Arctic. The industry creates countless jobs and revenue to communities, which in turn improves livelihoods. Nevertheless, we cannot neglect the problems mining has brought to those living near the mines despite the economic benefits it creates.

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[103] Lindsey, Rebecca. Scott, Michon. "Climate Change: Arctic sea ice summer minimum." U.S. National Oceanic and Atmospheric Administration. Sep. 26, 2019. Figure "Arctic sea ice extent." https://www.climate.gov/news-features/understanding-climate/climate-change-minimum-arctic-sea-ice-extent
[104] Ibid, 6.
[105] Northern Affairs Canada. "Canada's Arctic and Northern Policy Framework." (2019), 150.
[106] Ásgeirsson, Pétur. Icelandic Embassy in Canada. (Jan 31, 2020).

This chapter focuses on the Mary River Mine, where Baffinland Iron Mines Corporation is considering expanding the mine, but also where two major problems are emerging. According to the report *The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory* (2016), there are a number of issues within the mine, including language conflict, loss of tradition, and lack of cultural understanding.[107] Of these issues, this chapter will focus on two that are less known and less reported on. First, women are harassed and going missing in communities close to the mine. Additionally, contract workers at the mine are not receiving the same pay and same rights as full-time employees. The reports *Reclaiming Power and Place: The Final Report of the National Inquiry into Missing and Murdered Indigenous Women and Girls* and *Assessment of the Mary River Project: Impacts and Benefits*, both published in 2019, stress that it is essential to improve the quality of Inuit lives at the same time as developing the economy in the area. These issues impact the regions around the mine negatively and it is crucial to develop strategies in response to the issues in order to achieve the first goal proposed in *Canada's Arctic and Northern Policy Framework.*[108] This report discusses these two problems in the context of current mine operations at Mary River Mine, as well as in the context of future mine expansion as sea-ice loss makes it possible to export more iron ore by ship.

BACKGROUND

There are numerous mines in Nunavut with various types of resources including base metals, diamonds, gold, and iron.[109] However, Mary River Mine is the only iron mine among them.[110] The location of the mine was first discovered in 1962, but did not begin operating until 2015 when Baffinland Iron Mines Corporation gained the approval of the Federal Minister of Aboriginal Affairs and Northern Development Canada in 2014. Being the only iron mine that operated all year, the enormous output of the mine emphasizes its importance. The report *The Economic Impact of The Mary River Project on Nunavut and The Provinces of Canada* states that the estimated direct investment toward the project is $4.1 billion from 2011 to 2040, while the estimation iron ore production of the project is worth $22.997 billion. In addition, "the project would use $1.685 billion of labour inputs, providing 21,080 person years of employment."[111] The Mary River Mine project serves as a major source of income for the communities around it.

Obtaining iron ore off the mine site is one of the most important steps for Arctic mines because of the harsh weather. For the Mary River Mine in particular, extraction of iron ore is made more difficult by its remote location and inconsistent sea-ice cover. According to the *Mary River Project Inuit Impacts and Benefits* (2013) report, the iron from Mary River Mine is mainly shipped from Milne Port on Baffin Island. Although there is a discussion about building a

[107] Pauktuutit Inuit Women of Canada and The University of British Columbia School of Social Work. "The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory." (2014). Figure 17.
[108] Northern Affairs Canada. "Canada's Arctic and Northern Policy Framework." Government of Canada; Crown-Indigenous Relations and Northern Affairs Canada, (November 18, 2019).
[109] Mineral Resources Division at CIRNAC's Nunavut Regional Office. "Nunavut Mineral Exploration, Mining and Geoscience Overview." (2018), 2.
[110] Ibid, 10.
[111] Howe, Eric C. "The Economic Impact of The Mary River Project on Nunavut and The Provinces of Canada." Baffinland Iron Mines Corporation. (Sep. 2010), 1.

railroad to Milne Port in order to increase the amount shipped, the expansion has not been approved due to protests from Inuit. There are several protests regarding the environmental impact the expansion will bring. As an alternative, the company wants to extend the shipping window as long as the open water season as defined by the Canada Shipping Act, approximately 79 days, from mid-July to October, although the actual time window will depend on weather and ice conditions.[112]

In the past few years, there have been several changes to how the company ships out mined goods. This includes transporting via roads or railroad year round, or through breaking up sea ice between November and March in order to extend the shipping seasons. In the proposed phase two expansion of mining operations, the amount shipped out from the mine will increase to 30 million tonnes per year, with 12 million tonnes per year shipped out of Milne Inlet during open water season. This additional export is made possible because sea ice around Milne Port is melting earlier and freezing later,[113] which increases the length of the shipping window. Unfortunately, there are problems associated with this expansion, as understood from documented problems related to current mining operations – this report focuses on two major problems.

Increased Violence Toward Women

One of the objectives discussed in *Canada's Arctic and Northern Policy Framework* (2019) is to reduce violence against Indigenous women and girls. It states that one of the reasons Indigenous groups have a projected life expectancy 10.5 years below that of the non-Indigenous population in Canada is "the likelihood of violent death being significantly higher for Indigenous than for non-Indigenous women."[114] Violence against Indigenous women has been an important issue that more people are beginning to pay attention to. Research suggests that this circumstance is especially more severe in the regions around mines in the North.

The report *The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory* points out that there are significant problems regarding discriminatory behaviors against women associated with mines. A questionnaire conducted in 2014 in the report states the rate of the violence is increasing, with the current rate of 49.2% women have been sexually harassed at the mines and 28.8% women have been sexually harassed in the community around the mines.[115] The high rates of these incidents is a critical issue that requires immediate response.

The intentional repeated abuses and violations of Indigenous rights are the reasons behind the high rates of violence toward Indigenous women and girls. Violence against Indigenous women can be found not only in the female workers at the mines, but also in those who live close to the mines. A "high number of transient workers at mining camps can create working and living

[112] Baffinland Iron Mines Corporation. "Technical Supporting Document 02: Project Description of Mary River Project Phase 2 Proposal." (2018), 64.
[113] NASA. "SVS: Weekly Arctic Sea Ice Age with Graph of Ice Age By Area: 1984 — 2019." NASA. Accessed February 21, 2020. https://svs.gsfc.nasa.gov/4750.
[114] Northern Affairs Canada. "Canada's Arctic and Northern Policy Framework." (2019), 150.
[115] Pauktuutit Inuit Women of Canada and The University of British Columbia School of Social Work. The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory. (2014), ii.

environments where sexual harassment and abuse of Inuit women take place."[116] One of the key findings of another report is that the problem is associated with the work camps of the mine. Most of the people who live in the work camps are "non-Indigenous young men with high salaries and little to no stake in the host Indigenous community."[117] These workers have little things to do outside of work, which leads to their harassment of women at the mines and in the neighboring communities. Furthermore, temporary workers are not physically or emotionally attached to the area; they have nothing to lose within the community and can leave at any time if they get caught. This situation leads to women at the mines or in surrounding areas being harassed more often than those who live in other places.

There are several experiences shared by the victims. For example, the *Aboriginal Peoples Television Network National News (APTN News)*, a Canadian national news television program, reported about harassment at Mary River Mine**.** Billie Jo Barnes, an Inuk woman working at the mine, shared her experience of being sexually and racially harassed at the fly-in camp where she worked in 2018.[118] The problem has attracted the public's attention. An organization, 'Me Too Mining Association', established in 2018, is documenting cases and is a source of support.[119] News companies including *Nunatsiaq News* and *APTN News* have been publishing stories to call for action, and there are art pieces that depict the situation, such as the piece *Untitled (There is no excuse for abuse)* by Inuk artist Ningiukulu Teevee. The changing communities and violence that women face in northern communities can be seen within the piece. Although more people are beginning to notice the problem, there is still much work to do in order to improve the environment for women that work or live around the mine. While this is a major problem that requires action as soon as possible, increased violence toward women is not the only problem that is caused by the development of the mine.

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[116] National Inquiry into Missing and Murdered Indigenous Women and Girls. "Reclaiming Power and Place", 521.
[117] Ibid, 593.
[118] Martens, Kathleen. "Inuk Woman Says She Is Being Harassed at Nunavut Mine Site." APTN News. (Jun. 28, 2018). https://aptnnews.ca/2018/06/20/inuk-woman-says-she-is-being-harassed-at-nunavut-mine-site/.
[119] https://www.metoomining.com/about.html.
[120] Teevee, Ningiukulu. "Untitled (There is no excuse for abuse)." (2015). Graphite, coloured pencil, ink and chalk pastel on paper. Accessed Mar. 3, 2019. https://www.inuit.wag.ca/artist/ningiukulu-teevee/.

[121]

Ningiukulu Tevee, *Untitled (There is no excuse for abuse),* 2015

Job Insecurity for Contract Workers

The unequal treatment of temporary contract workers in Mary River Mine is another major problem. Contract workers are the first to be laid off if the mine is losing money. For example, 48 Inuit contract workers were laid off in December 2019 due to the uncertainty of getting approval for phase two expansion. Although Baffinland said that there would be no more layoffs of Inuit contractors if phase two expansion is conducted successfully, there are no guarantees.[122]

The report *Assessment of the Mary River Project: Impacts and Benefits* discusses how the Nunavut Impact Review Board, an organization established in order to protect the environment of Nunavut Settlement Area through the Impact Assessment process, stalled the final hearing on the phase two expansion of Mary River Mine from Baffinland in November 2019.[123] The main goal of the phase two expansion is to gradually increase production from 6 million tonnes per year to 12 million tonnes per year before 2023, then eventually increase to 30 million tonnes from 2025 to 2035.[124] However, the Qikiqtani Inuit Association states that the mine will be used

[121] Idib., https://minusplato.com/2020/02/requited-flame-rf-for-ningiukulu-teevee.html.
[122] Bell, Jim. "Number of Laid-off Inuit Reduced from 96 to 48, Baffinland Says." Nunatsiaq News, Dec. 11, 2019. https://nunatsiaq.com/stories/article/number-of-laid-off-inuit-reduced-from-96-to-48- baffinland-says/.
[123] Bell, Jim. "Mary River: If Financial Viability Is a Factor, Then Prove It." Nunatsiaq News, Nov. 20, 2019. https://nunatsiaq.com/stories/article/mary-river-if-financial-viability-is-a-factor-then-prove-it/.
[124] Loxley, John. "Assessment of the Mary River Project: Impacts and Benefits". (2019), 7.

up in 2035 and cannot create a proportionate increase in benefits for Inuit if the expansion plan is conducted.[125] Contract workers will be the first ones to be laid off as the mine begins running dry.

In addition, Inuit have a smaller portion of the jobs at Mary River Mine, and expanding the development of the mine will only decrease Inuit work share.[126] Further development requires the company to prioritize hiring full-time laborers that are already familiar with the job; however, most of these workers are non-Inuit. Furthermore, Qikiqtani Inuit Association is not satisfied that Inuit workers do not make up the targeted 25% of total workers on the project.[127] Overall, phase two development does not maximize benefits to Inuit, especially Inuit contract workers.

CONCLUDING THOUGHTS

Mining creates revenue, but also creates problems. The Government of Canada and Inuit organizations must work together to improve the situation for Inuit working at mines and living near mines. As the climate changes, melting sea ice brings both positive and negative impacts to the region. Although it can bring in more revenue to the region as more mined resources are able to be shipped out each year, mining brings social problems to communities like those mentioned in this chapter.

Injustice toward women working at or living around the Mary River Mine continues to be a serious problem. The rate of women that are harassed and abused is higher around the mining areas than other places in Canada. Although there are more organizations established to help the victims, they do not have power to enforce any regulations to change the situation. With regards to the Mary River Mine, the Government of Canada and the Baffinland company need to improve this situation; this work is important in order to reduce the chance of these incidents occurring at other mines. To date there is not enough understanding of the problem and more work is required in order to develop effective strategies and to implement policies to address this critical issue.

Job security for mine workers is another important issue. The companies running mines should develop thorough plans to help the workers transition to other secure jobs. This is important at Mary River Mine since there will be no more mine to extract after 2035 if Phase two is conducted. Phase two expansion is pending approval by the Nunavut Impact Review Board and it is likely to be approved. There needs to be a focus on addressing the problems this expansion will bring to Inuit workers.

These are only two of the problems that come with mining operations. We should not neglect the negative impacts even if it brings economic opportunities to the Arctic. In order to achieve the first goal of *Canada's Arctic and Northern Policy Framework* to ensure the health and resilience of the people in the region, it is crucial to provide safe and secure opportunities for work, which are two basic rights that should not be violated. This requires companies and governments to collaborate in developing and implementing new policies that benefit people and the economy.

[125] Ibid, 5.
[126] Ibid, 3.
[127] Ibid, 22.

Biography

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Chapter 4: Inuit Housing Infrastructure

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Housing is a fundamental right. If you don't have safe housing, you are losing your fundamental rights
— Stephanie Meakin[128]

ABSTRACT
Inuit are facing a national housing crisis. In Inuit Nunangat, there is a shortage of housing for the growing population. Additionally, many housing designers do not include Inuit cultural practices, such as hunting, in the design process. Changing foundations due to thawing permafrost threatens the stability of already existing housing infrastructure. Even if there are proposed solutions, funding is often insufficient and distributed inconsistently. As the population continues to grow, it is necessary for the Government of Canada to appropriately address this crisis, as secure housing is necessary for the health and well-being of Inuit communities.

INTRODUCTION
In 1959, Canada's Department of Northern Affairs and National resources initiated the *Eskimo Housing Loan Program.* This project intended to provide large scale housing for Inuit in newly forming permanent settlements.[129] However, the housing provided "lacked the research and planning necessary" to meet the housing needs in the North.[130] Homes were too small, too expensive, and not adequate for climate conditions in the North.[131] Unfortunately, 61 years later, the housing problems for Inuit remain the same.

The *Inuit Nunangat Housing Strategy* emphasizes Inuit Nunangat's lack of adequate housing as a "national crisis."[132] High construction and shipping costs paired with inadequate funding from the Government of Canada prevents families from obtaining housing "without significant subsidies".[133] At least 31.5% of Inuit homes "require major repairs" and as climate change furthers the thawing of permafrost, the percentage of damaged homes is expected to grow.[134] Finally, the report addresses a need for "diversified housing options" to better meet the cultural needs of Inuit in Inuit Nunangat.[135]

The housing crisis in Inuit Nunangat has monumental effects on the Inuit community. Without sufficient housing, families of up to 15 people live together, resulting in a faster decrease of

[128] Meakin, Stephanie (Senior Science Advisor, Inuit Circumpolar Council), in-person interview. 29 January 2020.
[129] Bonesteel, S., Anderson, Erik, Public History Inc, & Canada. Indian Northern Affairs Canada. *Canada's Relationship With Inuit: A History of Policy and Program Development*. Ottawa: Indian and Northern Affairs Canada. 2008. Print.
[130] Ibid, 61.
[131] Ibid, 61.
[132] *Inuit Nunangat Housing Strategy*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. Print
[133] Ibid, 6.
[134] Ibid, 6.
[135] Ibid, 7.

housing quality.[136] Overcrowding also results in an increased risk for infections, decreased mental state, and even decreased academic performance amongst adolescents.

Inuit have taken considerable measures in addressing the housing crisis. In addition to the *Inuit Nunangat Housing Strategy*, the *National Inuit Climate Change Strategy* identifies infrastructure as Priority 4 of their plan for addressing the effects of climate change. The report details the importance of closing the infrastructure gap and provide actions necessary for addressing the housing crisis. Furthermore, Inuit communities created reports to address and provide solutions for specific housing issues, such as *A Homeowner's Guide to Permafrost in Nunavut,* which details best practices for supporting housing infrastructure that is on thawing permafrost.

This report will primarily focus on four issues within the housing crisis:1) the lack of amount of housing, 2) the lack of adequate housing design, 3) the emerging threat which permafrost thaw presents to infrastructure, and 4) the problem of consistent funding from the Government of Canada to address needs in regard to housing. This report also provides recommendations in addressing these issues, as well as provides examples that were successful.

BACKGROUND

Lack of Affordable Housing

While overall lack of housing infrastructure is a major problem in Inuit Nunangat, affordability "is one of the most significant issues affecting housing."[137]Affordability refers to the financial accessibility of housing for the average Inuit family. In Inuit Nunangat, houses are expensive to produce and therefore are expensive to buy. Additionally, maintenance and operational costs are much higher than in southern Canada. As a result, Inuit rely heavily on subsidized and public housing in order to have secure housing.

Living in Inuit Nunangat is very expensive. The cost of building in the North is "on average 150 percent higher" than the rest of Canada.[138] This is due to multiple factors. Nunangut must import their building materials from the South, as the North is limited in building supplies. Additionally, since Inuit communities reside in the high Arctic, sea ice limits the shipping season to a short period between "mid-summer to early fall."[139] Due to these factors there is a high cost to building new homes and Inuit are unable to afford them. In addition, heating systems can cost up to CAD $1000 a month, creating another cost-barrier for home-seekers. As costs become unaffordable, Inuit rely on subsidized rentals for housing. In Nunavut alone, 57% of Inuit live in public housing.

As a result of inadequate affordable housing, 52% of Inuit in Inuit Nunangat live in crowded housing situations compared to the 9% of all Canadians facing overcrowding.[140] Overcrowding can quickly decrease the quality of housing, for example as ventilation systems become

[136] We Can Do Better: Housing in Inuit Nunangat, Report of the Standing Committee on Aboriginal Peoples, Government of Canada. M2017, 5.
[137] Inuit Tapiriit Kanatami. *Youth Perspectives on Housing in Inuit Nunangat.* 2016, 4.
[138] Daley, Kiley. "Meeting the Northern Housing Challenge." Government of Canada, 2017.
[139] *Inuit Nunangat Housing Strategy*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. Print, 6.
[140] Inuit Tapiriit Kanatami. *Inuit Statistical Profile 2018.* Inuit Tapiriit Kanatami. 2018, 6.

overworked and mold develops from moisture build-up.[141]This can result in a multitude of health problems such as "respiratory infections, person-to-person transmission of pathogens, elevated measures of chronic stress and lower levels of self-reported general health".[142] Concerned parents in Igloolik have noticed painful sores develop on their kids due to persistent mold exposure.[143]For children, overcrowding also contributes to decreased academic success and lower rates of pursuing higher education.[144] Adolescents feel discouraged from pursuing higher education as there are less subsidized housing opportunities for Inuit with a higher degree than for Inuit who have children.[145]

The lack of affordable housing infrastructure for the growing population is one of the biggest factors contributing to the housing crisis. Affordable housing is a necessity for the growing population and is important to continuing the self-determination of Inuit.

Inadequate Housing Design

Alongside the lack of affordable housing exists the problem of poorly designed housing. Housing is currently not suitable for the northern climate and is not culturally conscious of how Inuit live and use their homes. The North has more snowfall and colder temperatures than the south. Yet, design methods and materials used for houses still imitate southern housing design. Inuit are driven by community and connection to family. They hunt together, eat together, and may live together for many generations. The current design of houses does not reflect the needs of this lifestyle. Housing, while being built for Inuit, is not being designed with Inuit and Arctic life in mind.

Houses are also missing essential features necessary for the northern climate. In *We Can Do Better: Housing in Inuit Nunangat*, the Government of Canada details some of the specific design flaws. For example, lack of insulation causes overheating in the summer and freezing in the winter.[146] This leads to higher costs for heating and higher mold accumulation. Many structures have only a single entrance door, which often freezes over in winter and restricts accessibility.[147] Construction materials such as wood, which are not resilient to Arctic conditions, are used to construct houses. The materials "bend and sag under extreme temperature variations," and increase water leakage within the houses.[148] This results in high amounts of regular maintenance and on occasion, abandonment of homes.

Housing infrastructure in the North has been described by the Government of Canada as "culturally unsuitable" for Inuit who occupy it.[149] In the Indigenous and Northern Affairs Canada 2008 report *Canada's Relationship with Inuit,* they detail how housing design "did not

[141] We Can Do Better: Housing in Inuit Nunangat, Report of the Standing Committee on Aboriginal Peoples, Government of Canada. M2017, 18.
[142] Daley, Kiley. "Meeting the Northern Housing Challenge." Government of Canada. 2017.
[143] Lockwood, Devi. "Igloolik children covered in sores because of black mould in public housing unit." Canadian Broadcasting Corporation, 22 November 2018.
[144] Inuit Tapiriit Kanatami. *Youth Perspectives on Housing in Inuit Nunangat.* 2016, 1.
[145] Ibid, 2.
[146] Ibid, 15.
[147] Ibid, 15.
[148] Ibid, 15.
[149] We Can Do Better: Housing in Inuit Nunangat, Report of the Standing Committee on Aboriginal Peoples, Government of Canada. M2017, 14.

necessarily reflect preparing country foods, repairing hunting and transportation equipment, and entertaining."[150] Inuit had to make adaptations, such as dissecting animals in the living room and storing their meat in bathtubs, to accommodate the special restrictions (See figure 1 for example).[151] In the Inuit Tapiriit Kanatami 2016 report, *Youth Perspectives on Housing in Inuit Nunangat,* Inuit youth identified culturally insensitive design as an issue and "emphasized that buildings must be designed for traditional Inuit activities."[152] The issue of cultural ignorance in design has remained a problem amongst Inuit, who recognize it as a barrier to cultural practices.

Figure 1: Annie Pootoogook, Three Men Carving a Seal, Three Women Cleaning, 2006

In the 2008 report, a study on the special needs of Inuit by anthropologist Peter Dawson details the importance of housing designed with Inuit cultural beliefs in mind. The report emphasized that such designs encourage "traditional cultural values of family solidarity, reciprocal assistance, and traditional renewable resource harvesting activities."[153] Inuit-specific housing designs are necessary for encouragement and continuance of their culture and need to be considered when designing housing for Inuit.

Permafrost Thaw

Permafrost thaw is an emerging threat to housing infrastructure. With Arctic temperatures "rising faster than the global average", permafrost is expected to continue to decline in the Arctic.[154] Inuit Nunangat is above the permafrost line meaning a majority of Inuit infrastructure is built on

[150] Bonesteel, Sarah., et al. Canada's Relationship with Inuit: a History of Policy and Program Development. Indian and Northern Affairs Canada, 2008, 63.
[151] Ibid, 65.
[152] Inuit Tapiriit Kanatami. *Youth Perspectives on Housing in Inuit Nunangat.* 2016, 4.
[153] Bonesteel, Sarah., et al. Canada's Relationship with Inuit: a History of Policy and Program Development. Indian and Northern Affairs Canada, 2008, 63.
[154] AMAP, 2017. Snow, Water, Ice and Permafrost. Summary for Policymakers. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway. 20, 1.

permafrost.[155] As permafrost thaws, existing housing infrastructure foundations will be vulnerable to cracking.

Permafrost is defined as "ground that remains at a temperature of 0 degrees Celsius or lower for at least two consecutive years."[156] It underlies roughly 50% of Canada and most of Inuit Nunangat.[157] But rising temperatures in the North have led to a rise in average permafrost temperature, leading to increased thawing. In Nunavik alone, the temperature of permafrost from 2000 to 2019 rose between 0.5 to 0.9 degrees C.[158] In winter, increased annual accumulation of the snow will also thaw permafrost, as snow insulates the surface from cold air temperatures.[159] [160] Scientists now expect the amount of permafrost to decrease twenty percent (20%) in the North by 2040.[161]

The effects of permafrost thaw can already be seen in Inuit Nunangat. A warehouse in Inuvik was torn down in 2017 due to shifting foundations from permafrost.[162] Former mayor, Jim McDonald, expressed concern for the town, as permafrost "is destroying buildings" and changing the ways construction crews operate.[163]

As permafrost thaw is a relatively new issue in Inuit Nunangat, research is limited on how to address it. The Government of Nunavut details best practices for managing infrastructure as permafrost thaws in their report *A Homeowner's Guide to Permafrost in Nunavut*. However, there is currently no report on best practices for housing affected by permafrost thaw. In Nunavut, housing infrastructure is still designed "with the understanding that ground and permafrost under the home will remain solid," despite acknowledgment that this may not remain true.[164]

Short Term Funding and Inefficient Resource Allocation

Regarding housing, Inuit are "involved in the direct management of housing in their communities." Inuit have institutions and strategies put in place to deal with threats to housing security. However, an estimate of CAD $2 billion is required to fully address the Inuit Nunangat housing crisis.[165] Territorial and provincial governments in Inuit Nunangat do not have these funds and must rely on the national government for assistance. In the Inuit Tapiriit Kanatami

[155] Sowder, Emma. "Infographic | Above the Permafrost: Flows of Goods and People." The Wilson Center. 24 January 2020.
[156] Canadian Permafrost Association. *"Permafrost 101: What is Permafrost?"* Canadian Permafrost Association.
[157] Harris, Stuart A. "Permafrost." The Canadian Encyclopedia. 10 August 2015.
[158] Bush, E, and D. S. Lemmen. *Canada's Climate Change Report*. Ottawa, ON, CA: Government of Canada, 2019, 236.
[159] AMAP, 2017. Snow, Water, Ice and Permafrost. Summary for Policymakers. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway. 20, 12.
[160] Government of Nunavut, *A Homeowner's Guide to Permafrost in Nunavut.* Government of Nunavut. 2013, 9.
[161] AMAP, 2017. Snow, Water, Ice and Permafrost. Summary for Policymakers. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway. 20, 12.
[162] Lamb, David. "'It Scares Me': Permafrost Thaw in Canadian Arctic Sign of Global Trend." Canadian Broadcasting Corporation. 17 April 2017.
[163] Ibid.
[164] Government of Nunavut, *A Homeowner's Guide to Permafrost in Nunavut.* Government of Nunavut. 2013, 2.
[165] Inuit Tapiriit Kanatami. *Barriers to Sustainable Housing Delivery.* Inuit Tapiriit Kanatami. 2016, 4.

report, *Barriers to Sustainable Housing Delivery*, lack of sustainable funding was identified as one of the key barriers to closing the housing gap.[166]

The Government of Canada provides funding through the Canada Mortgage and Housing Corporation. Two programs, the 'Social Housing Agreements' and the 'Investment in Affordable Housing Initiative', are meant to provide a variety of services, such as "new construction, renovation, homeownership assistance, rent supplements, shelter allowances, accessibility modifications and accommodations for victims of family violence."[167] Through short- and medium- term investments, the Government of Canada allocates money towards housing in various regions of Inuit Nunangat. Most recently, the Government of Canada budgeted a total of CAD $640 million to Inuit Nunangat over the course of 10 years, with CAD $240 million reserved for Nunavut and CAD $400 million for Nunatsiavut, Nunavik, and Inuvialuit. While a generous amount, it is committed over a relatively short period of time, with funding needs predicted to exceed this time period.[168]

Additionally, there is a need for new investments to efficiently reach Inuit communities and families. While there have been investments sent directly to Inuit organizations, the funding has been "slow to reach Inuit, resulting in housing delivery delays."[169] Direct distribution of funds to Inuit organizations is necessary to the development of housing that is Inuit focused. Delays can prevent the funding from being useful because Inuit communities are limited by the amount of time in which they can purchase building materials. If funding from the government is distributed slowly, it becomes increasingly unhelpful.

RECOMMENDATIONS

(1) Research on Affordable Housing Options

The 2019 Inuit Nunangat Housing Strategy identified enhancing research, innovation, and statistics as part of their action plan.[170] While generating affordable housing in an area where building costs are 150% higher than the rest of the country is a challenge, Canada is not the only country facing it. Nations with Arctic territories also face this issue and may be able to provide new solutions towards solving it. For example, lessons could be learned from Alaska's Cold Climate Housing Research Center, which works on a number of projects regarding housing security in Alaska. I recommend more collaboration between Arctic communities facing housing insecurity.[171]

(2) Invest in Culturally Conscious Design

In 2016, Architect Alain Fournier from the architectural firm EVOQ created a public housing unit in Nunavik. In addition to lowering heating costs by about CAD $2,000 and resistant to permafrost thaw, the houses are designed with Inuit way of life in mind. Kitchens are larger and have cutting boards which snap into the floor "like puzzle pieces" to make cutting their game or

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[166] Ibid, 8.
[167] We Can Do Better: Housing in Inuit Nunangat, Report of the Standing Committee on Aboriginal Peoples, Government of Canada. M2017, 12.
[168] *Inuit Nunangat Housing Strategy*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. Print
[169] Ibid, 11.
[170] Ibid, 19.
[171] Cold Climate Housing Research Center. https://cchrc.org/.

fish easier. Larger space allows for better storage of hunting gear. Fournier worked with the four major housing organizations in Nunavik and Quebec to design the housing and consulted Inuit for further design revisions. Fournier's work in Nunavik is a great basis for culturally sensitive design in housing and could be used as a model for future housing design plans.

(3) Explore New Permafrost-thaw resistant infrastructure

As thawing of permafrost is likely inevitable, new housing should be built to accommodate these changes. While drilling steel piles into bedrock is preferred in cases where traditional support methods fail, we need to consider new avenues. An example of this would be the use of thermosyphons. Thermosyphons are metal tubes which use pressurized carbon dioxide to maintain frozen ground. This passive system has already been used in mines, and also in parking lots in the North, and could be a viable option for future construction of houses. A firm called "Arctic Foundations" pioneered Thermosyphons and has used them for over 40 years.[172][173]

(4) Directly allocate financial resources to Inuit organizations

Funding is meant to be allocated for Inuit housing development and Inuit already have existing institutions for managing housing construction. Therefore, funding for housing should be directly distributed through a grant, to allow *Inuit* organizations and governments to have "sufficient flexibility, certainty, and transparency.[174] Furthermore, in agreeance with 2019 *Inuit Nunangat Housing Strategy*, the government must commit long-term funding for housing in Inuit Nunangat.

CONCLUDING THOUGHTS

The Inuit national housing crisis is complex and multi-faceted. A history of inadequate housing design and shortage of sustainable housing infrastructure decrease quality of life for Inuit. Changing landscapes due to permafrost thaw threaten existing housing infrastructure. Lastly, poor allocation of money slows the development of housing infrastructure in Inuit Nunangat.

It is important to note that the issues raised in this report are not the only factors contributing to the crisis. Problems, such as absence of a municipal waste system and urban Inuit homelessness also contribute to the Inuit housing crisis. Additionally, there are variances in the needs of Inuit depending on the region of Inuit Nunangat they live. Each settlement has its own strengths and weaknesses, which must continue to be considered when proposing solutions.

Above all, it is critical to note that Inuit have already created numerous reports on their proposed solutions for the housing crisis and have even implemented some solutions on a regional basis. As the Government of Canada continues to address the housing crisis, it is necessary to emphasize partnership with Inuit, not mere consultation. Inuit know what their community needs, they have experience tackling these issues, and are best suited to find solutions.

[172] Arctic Foundations, https://arcticfoundations.com/.
[173] *More inquiries into cost effectiveness is necessary as pricing is not listed.
[174] *Inuit Nunangat Housing Strategy*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. Print.

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Biography
Kimiko Boswell is a senior in the Henry M. Jackson School of International Studies at the University of Washington. With a focus on the effects of climate change on communities and an interest in information technology, she hopes to utilize her degree to address the issues faced by affected communities.

Part III: Mobilizing Inuit Knowledge

Part III will address the importance of incorporating Inuit knowledge into the discussion about human rights and international policy making in the Arctic. Human rights and environmental law are inseparable ideas in the Arctic, especially for Inuit communities, for sea ice constitutes a major role in Inuit culture, diets, traditional knowledge and livelihoods (Chapter 5). In order to protect this human right and to build upon IQ (Inuit Qaujimajatuqangit), Inuit traditional knowledge, an Inuit legal approach in the Arctic needs to be incorporated into international and domestic law (Chapter 6). The ultimate goal of bringing in IQ would be to enhance existing agreements, such as the Nunavut Land Claims Agreement between the Government of Canada and Inuit communities, in order to promote Inuit self-determination and self-government when discussing about the concerns over land use management, employment and education (Chapter 7). Proper collaboration between the federal government and Inuit is needed to achieve a successful Arctic policy that is inclusive of IQ, and the different means to express the complexity of this traditional knowledge creatively in the form of art (Chapter 8).

Chapter 5: Inuit and Rights of the Environment

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ABSTRACT

Where I live, the sea ice never stops. It's a living thing.
— Jayko Oweetaluktuk, Unkjuak, Nunavik.[175]

Human rights and environmental justice are closely linked together and Inuit are an example of this interconnectedness. Inuit depend on sea ice for much of their daily activities. Many animals which constitute their traditional diet live on sea ice. Sea ice also connects Inuit communities that would otherwise be isolated from each other.[176] Sea ice is enabling; it provides a foundation for most aspects of Inuit life and is central to Inuit culture and physical survival.[177]

Human rights and the environment also often depend on each other. A failure to protect the environment can threaten human rights. For example, as climate change leads to rapid melting of sea ice, Inuit rights to health, subsistence, culture, and more come under attack. Conversely, when considering the question of how to defend the environment, human rights instruments can be invoked to protect the right to a healthy environment. This rights-based approach has been the traditional method used to defend the integrity of the environment.

This chapter analyzes two attempts to protect the environment through legal instruments: 1) the Te Awa Tupua Act of 2017, also known as the Whanganui River Claims Settlement; 2) and Sheila Watt-Cloutier's 2005 Petition to the Inter-American Commission on Human Rights. Only recently passed by New Zealand Parliament, the Te Awa Tupua Act granted the environment itself rights of legal personhood, naming the Whanganui River in New Zealand as a legal person that could stand in court. Watt-Cloutier's 2005 petition used a human rights-based approach to protect the environment, accusing the United States of violating Inuit human rights by failing to curb carbon emissions.[178]

In both of these examples, traditional Indigenous knowledge was a driving force. The Whanganui River decision reflected an approach to handling the environment that incorporated an Indigenous understanding of the river, from which legal rights were derived. Likewise, Watt-Cloutier's petition built an Inuit understanding of sea ice into its argument that implies the need to recognize certain legal rights of sea ice. By integrating an Inuit understanding of sea ice with a uniquely environment-centered legal approach, more effective defense mechanisms for the environment can be developed that can be integrated into domestic and international policies.

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[175] Inuit Circumpolar Council, Canada, *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat* (Ottawa, Inuit Circumpolar Council, Canada, 2014), i.
[176] "The Sea Ice Never Stops – Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat | Inuit Circumpolar Council Canada," 6.
[177] Ibid, ii.
[178] Wagner, Crowley, and Goldberg, "Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States," 6.

INTRODUCTION

Issues surrounding environmental justice are often directly tied to issues of human rights. The right to a healthy environment is enshrined within the existing language of human rights, such as in the Universal Declaration of Human Rights and the International Covenant on Economic, Social, and Cultural Rights, as well as in other human rights documents. For example, Article 12 of the International Covenant on Economic, Social, and Cultural Rights states:

> The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. The steps to be taken shall include those necessary for the *improvement of all aspects of environmental and industry hygiene.*[179]

In other words, environmental rights are foundational to these basic entitlements; one cannot enjoy the full extent of their human rights without a healthy environment.

The right to a healthy environment first officially emerged from the United Nations Stockholm Conference in 1972, which laid out the the link between human rights, health, and environmental protection.[180] Principle 1 of the *Stockholm Declaration* declared:

> Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and wellbeing.[181]

Since the concept of the right to a healthy environment emerged, there have been several examples where human rights instruments have successfully defended the environment. In the case of *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria* (2000), the Nigerian government exploited local oil reserves with no regard for the environment or the health of local communities.[182] The African Commission on Human Rights found the Nigerian government in violation of the right to health and a clean environment, per Article 16 of the African Charter on Human and Peoples' Rights.[183] In *Guerra et al. v. Italy* (1998), the European Court on Human Rights successfully prosecuted an Italian factory that released toxic substances into nearby communities in the course of its production cycle, per Article 8 of the European Convention on Human Rights.[184]

However, the law is not static and it is constantly evolving to respond effectively to new challenges. The defense of the environment is one of these new challenges, as governments, transnational corporations, and other non-state actors encroach upon the environment in unique ways.

Melting sea ice in the Arctic is one of these new challenges. How do we defend an environmental entity that is simultaneously land, subsistence, and culture? How does one assign responsibility for carbon emissions when every human being is complicit in contributing to

[179] "OHCHR | International Covenant on Economic, Social and Cultural Rights," Article 12.
[180] Shelton, "Human Rights, Health & Environmental Protection: Linkages in Law & Practice," 3.
[181] Ibid.
[182] Icelandic Human Rights Centre, "Right to a Healthy Environment," at paragraphs 2-3.
[183] Ibid, at paragraph 4.
[184] Ibid, at paragraphs 9-10.

them? How do we reconcile our contrasting understanding of sea ice with that of Inuit? Defending the environment broadly also raises similar questions that are difficult to answer.

This suggests the need for a new understanding of rights and to what they are applicable — namely, the environment. Many examples exist of this shift in legal thinking; the governments of Ecuador, India, Bolivia, and New Zealand, have all begun to move from legal rights towards the environment to recognizing the legal rights *of* the environment.[185] While such an approach is hugely innovative, this chapter will attempt to complement that by focusing on the role that Indigenous (and specifically, Inuit) knowledge could play in developing such an environment-centered legal mechanism.

BACKGROUND

Existing Literature and Current Developments

Christopher D. Stone, the J. Thomas McCarthy Trustee Chair in Law at the University of Southern California, has already written extensively on the possibility of granting the environment legal personhood in his book *Should Trees Have Standing?* in 1972. In this collection of essays, he presents an argument for why the environment should be granted legal rights — he claims that anthropocentric centrality should be displaced and that legal personhood should be extended to natural objects, such as rivers and forests.[186] He also outlines a system of representation for the environment in which legal guardians are appointed to represent the environmental object's best interests.[187]

While *Should Trees Have Standing?* was published nearly a half-century ago, only recently has the notion of rights of the environment gained traction. Until the late 2000s, sporadic attempts had been made to give *animals* legal rights; examples include *Coho Salmon v. Pacific Lumber Company* (1999) and *Hawksbill Sea Turtle v. FEMA* (1996), where animal species were named as lead plaintiff.[188] However, the concept of granting rights to environmental bodies was not significantly explored.

The first notable recognition of natural rights emerged in 2008, when Ecuador implemented three articles devoted to 'rights of Nature' in its national constitution.[189] Since then, the figurative legal floodgates have opened; in 2010, Bolivia passed the Law for the Defense of Mother Earth, which eventually became the Universal Declaration for the Rights of Mother Earth.[190] In 2011, a legal guardian was designated to represent the interests of an Australian river in court.[191] All of these examples represent a changing definition of rights and their applicability to natural objects. However, for the purpose of this chapter, attention will be given to the case of the Whanganui River in New Zealand.

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[185] Taylor, "There Are Now 3 Rivers That Legally Have the Same Rights as Humans" at paragraphs 2, 6.
[186] Stone, *Should Trees Have Standing?* 1-31.
[187] Ibid, 61-69.
[188] Ibid, 161.
[189] O'Donnell and Talbot-Jones, "Creating Legal Rights for Rivers," at paragraph 3.
[190] O'Donnell and Talbot-Jones, "Creating Legal Rights for Rivers," at paragraph 3.
[191] Erin L. O'Donnell and Julia Talbot-Jones, "Creating Legal Rights for Rivers: Lessons from Australia, New Zealand, and India," *Ecology and Society* 23, no. 1 (2018), https://doi.org/10.2307/26799037, at paragraph 6.

The Whanganui River in New Zealand was granted legal personhood status in 2017 through the passing of the Te Awa Tupua Act. This landmark decision illustrates how Indigenous knowledge can guide a shift in legal understanding that would allow the recognition of the rights of the environment.[192] In a similar manner, Inuit, with their crucial understanding of and interdependent relationship with sea ice, can lead the Government of Canada towards a shift of legal understanding that grants legal rights to the environment in a global effort to combat climate change.

What is an Indigenous knowledge-based understanding of the environment? 'Indigenous' itself is a generalization, so it would be unwise to assert singular values as holding true for all Indigenous groups. Instead, the following section will identify understandings, values and beliefs in Inuit and Māori knowledge that shed light on how they view the environment. This section will provide evidence for its conclusions in the form of Inuit and Māori testimonies and cultural practices.

Māori Knowledge and the Whanganui River

The granting of legal personhood to the Whanganui River in New Zealand can provide insight as to how an Indigenous knowledge-based approach to environmental justice might inform an environment-centered understanding of rights. Measuring 290 km long, the Whanganui River is a major river in New Zealand's North Island.[193] The river has enormous cultural and spiritual value for Whanganui tribes, which the *Whanganui River Report* of 1999 illustrates. In its executive summary, the report writes: "For nearly a millennium, the Atihaunui hapu have held the Whanganui River...The river was central to Atihaunui lives, their source of food, their single highway, their spiritual mentor. It was thee aortic artery of the Atihaunui heart."[194]' 'Atihaunui hapu' refers to the ancestors of Māori. This underscores the intertwined nature of Māori livelihood and the river.

Māori do not view the river — and moreover, the environment — as a resource that is to be divided up into parts for ownership. Instead, the river is to be protected, as its integrity is vital to the wellbeing of Māori. This belief manifests in traditional Māori family structures; the Māori organized their *hapū* (sub-tribes) around the river's guardianship *(kaitiakitanga)*, structuring their very existence around the preservation of the river.[195] In many ways, Māori's relationship with the Whanganui River illustrates the fundamental difference between an rights-of-the-environment-based approach, guided by Indigenous knowledge, vs. a human rights-based approach.

However, as a result of British colonialism, Māori have not been able to assert their ownership of the river. Historically, the New Zealand government (or Crown) has formally owned the river. With the arrival of British colonists in 1840, the river's Indigenous inhabitants — Māori — signed the Treaty of Waitangi, which both sides agreed ~~to~~ with the supposed end goal of peaceful

[192] Kenneth Warne, "The Whanganui River in New Zealand Is a Legal Person..." *National Geographic*, April 2019, at paragraph 6.
[193] O'Donnell and Talbot-Jones, "Creating Legal Rights for Rivers," at paragraph 26.
[194] The Waitangi Tribunal, "The Whanganui River Report", xiii.
[195] Hsiao, "Whanganui River Agreement — Indigenous Rights and Rights of Nature," 371.

colonization.[196] However, the Treaty was poorly translated, and the Māori and British versions came to have different 'descriptions of legal rights and obligations', further compounding innate 'differences between Māori and British law.'[197] The passing of this Treaty essentially handed river ownership to the Crown.[198] With river ownership, the New Zealand government made several alterations to the natural state of the river: headwater diversion, destruction of fisheries, metal extraction, and more all contributed to the deteriorating state of the river.[199]

With the passing of the Te Awa Tupua Act in 2017, the Whanganui River was granted legal personhood status — meaning that the river now is a living entity and a legal person with rights that can be judicially enforced by appointed guardians. Duties of the guardians include:

1. To act and speak for and on behalf of the river;
2. To uphold the river's recognition and values as an indivisible entity and as a legal person;
3. To promote and protect the environmental, social, cultural, and economic health and well-being of the river;
4. To take any other action reasonably necessary to achieve its purpose and perform its functions.[200]

In the example of the Whanganui River, Indigenous knowledge of the environment was a key driver in reaching an agreement that bridged existing worldviews. One indicator of this collaboration is the use of Māori's Indigenous language for certain subtitles of the agreement.[201] Another is the recognition of the inseparability of Māori's and the river's wellbeing; it proclaims, "Te Awa Tupua is an indivisible and living whole from the mountains to the sea, incorporating the Whanganui River and all of its physical and metaphysical elements.[202] The settlement also recognizes the river's own personality and life-force, proclaiming, "Te Awa Tupua is a singular entity comprised of many elements and communities, working collaboratively for the common purpose of the health and well-being of Te Awa Tupua."[203]Directly embedded in the language of the Te Awa Tupua Act is clear recognition of the relationship that Māori share with the river, and the environment as a whole — a relationship that embraces human and natural interconnectedness.

In the Canadian Arctic, Inuit share a similar relationship with sea ice. Sea ice is foundational to Inuit livelihood, culture, and physical survival — much in the same way the Whanganui River is foundational to Māori livelihood, culture, and physical survival. By following this parallel, the possibility arises where utilizing an Inuit understanding of sea ice might lead to a recognition of sea ice as a legal entity, and therefore give it a sturdier defense in the face of climate change.

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[196] New Zealand Government, "Whanganui Iwi (Whanganui River) Deed of Settlement Summary 5 Aug 2014," at Background paragraph 9.
[197] Charpleix, "The Whanganui River as Te Awa Tupua," 20.
[198] Stokes, E. 1992. The Treaty of Waitangi and the Waitangi Tribunal: Māori claims in New Zealand. Applied Geography 12 (2): 176-191.
[199] The Waitangi Tribunal, "The Whanganui River Report", 67-70.
[200] Argyrou and Hummels, "Legal Personality and Economic Livelihood of the Whanganui River," 753.
[201] "Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 No 7, Public Act – New Zealand Legislation," 1.
[202] Ibid, 15.
[203] Ibid.

Inuit Knowledge and Sea Ice

Incorporating an Inuit understanding of sea ice could inspire a similar movement in Canada, and more broadly, in North American legal thinking. Such a movement might take the form of sea ice being granted legal standing, or at least create legal mechanisms that could attempt to preserve sea ice. Inuit understanding of sea ice is uniquely equipped to guide a shift towards environment-centered legal mechanisms, for the relationship between sea ice and Inuit makes human rights and environmental wellbeing two sides of the same coin.

Sheila Watt-Cloutier's petition to the IACHR represents a human rights-based approach to defending the environment by tying melting sea ice to the infringement of Inuit human rights; the petition invokes human rights instruments to defend the environment. The petition was ultimately rejected by the IACHR, and while some have called it a failure, it was credited with bringing a human face to climate change.[204]

More importantly for the purposes of this paper, however, Watt-Cloutier's petition fleshes out the nature of the relationship between Inuit and sea ice. The petition depicts the same, uniquely Indigenous sense of human and natural interconnectedness present in the language of the Te Awa Tupua Act. Because of this interconnectedness, Inuit provide an excellent case study of the relationship between human rights and the environment, and how non-Indigenous policymakers can learn from Indigenous relations with nature. The following paragraphs will elaborate on this relationship, drawing directly from Watt-Cloutier's petition.

Traditional Inuit diet and means of obtaining subsistence, and traditional knowledge are only some of several aspects of Inuit culture that require sea ice in order to be enjoyed. In turn, melting sea ice threatens the Inuit ability to freely enjoy their culture, which is a right guaranteed by Article XIII of the American Convention on Human Rights.[205]

Watt-Cloutier points out that Inuit means of obtaining subsistence are central to Inuit cultural identity, and that climate change has damaged those means and may render them obsolete.[206] During winter, over sea ice is the primary mode of travel that Inuit use to find hunt their traditional foods, such as walrus, whales, and caribou.[207] As sea ice melts, travel over ice and snow becomes more dangerous, and has decreased as a result.[208]

Barry Pottle's *Setting the Table* demonstrates how important Inuit country foods are to their lifestyle. The photo captures traditional Inuit practices of preparing food within an urban, modern environment - as shown by the glaring Kirkland logo in the back. Even in a foreign environment, Inuit keep these traditional practices close, and diet is just one example.

[204] "It's Time to Humanize Climate Change Issues, Says Sheila Watt-Cloutier." October 19, 2018.
[205] OAS, "OAS — Organization of American States," at Article XIII.
[206] Wagner, Crowley, and Goldberg, "Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States," 76-77.
[207] Ibid, 77.
[208] Ibid.

Barry Pottle, *Setting the Table,* 2012

Inuit traditional knowledge – for example, being able to 'read' sea ice conditions based on experience and oral history – is another aspect of Inuit culture that relies heavily on sea ice. There are many examples of this traditional sea ice knowledge, passed down from generation to generation. Nathaniel Kalluk, an Inuit hunter residing in Inuit Nunangat, described in *The Sea Ice Never Stops* how he evaluated whether sea ice was safe to travel on: he would take a stick with a piece of iron attached to the bottom, and tap the ice. "One tap and it's hard and doesn't go through right away, kind of dangerous. Two taps, can travel with a snow machine but don't stop. Three to four taps, safe for travel and camping."[209] However, as sea ice melting and refreezing patterns are altered by climate change, this knowledge becomes less reliable, and is increasingly relegated to the cultural fringes of Inuit existence.

Sea Ice and Subsistence

The Inuit right to their own means of subsistence follows closely behind the right to enjoy the benefits of their culture. Aside from access to traditional foods being more difficult to access, food quality has decreased; Lizzie Ittinuar, an Inuk living in Nunavut, said "I get stomach problems, horrible cramps, when I eat seals and seafood...I know this is specific to our area, because when I went to Igloolik, I could still enjoy the traditional delicacies".[210] Inuit food security is being threatened in terms of access, quality, and safety.

[209] "The Sea Ice Never Stops – Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat | Inuit Circumpolar Council Canada", 8.

[210] "The Sea Ice Never Stops – Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat | Inuit Circumpolar Council Canada", 12.

As touched on previously, melting sea ice affects the migration patterns of animals that form the traditional Inuit diet. Jennifer Kadluk, an Inuit student at the Nunavut Sivuniksavut college program, is a direct witness to these changes. Her father is a traditional Inuit hunter and Jennifer noted the increasing challenges he faced while obtaining food: while it once only took him 30 minutes to hunt and bring back Caribou, it now could take him over three hours — and he might not even find Caribou.[211]

Sea Ice and Health

Watt-Cloutier draws from the Arctic Climate Impact Assessment, arguing that climate change profoundly affects Inuit mental health; "transformation of the once familiar landscape causes psychological stress, anxiety, and uncertainty."[212] Additionally, the loss of important cultural activities leads to a sense of purposelessness in Inuit: one older Inuit hunter and trapper explained that not being able to go out onto the ice and hunt felt "almost like a handicap. Like you got some kind of handicap when you cannot get away. It is your normal pattern of life and all of a sudden you cannot."[213] This quote illustrates the connection between Inuit health and sea ice.

The link between sea ice and key aspects of Inuit life — culture, subsistence, and health — clearly demonstrate an interconnectedness between humankind and nature that is comparable in importance to the average human's reliance on water, and arguably even more important to maintain for the sake of Inuit livelihood. This relationship has clear parallels with the relationship between Māori and the Whanganui River — suggesting that Inuit knowledge of sea ice can spark and spearhead the provision of rights of sea ice, and the rest of the Canadian environment, in the future.

CONCLUDING THOUGHTS

How successful might granting sea ice legal personhood be? There are many challenges that have risen in response to the creation of rights of the environment; while the Whanganui River's legal personhood remains mostly unchallenged, Ecuador's 2008 Constitution has been repeatedly tested — social and political realities of implementation have led critics to label the recognition of the environment's rights as little more than a political statement of aspirational nature.[214] Political will is another potential obstacle, as rights of the environment have come into conflict with the financial interests of corporations seeking to exploit natural resources.[215]

Another potential challenge is the balancing of environmental protection *with* the protection of human rights — in particular, social, economic, and cultural rights. Guaranteeing the right to housing requires forests to be cleared, animal populations to be displaced, and natural resources to be consumed for construction to take place. Guaranteeing the right to food requires either animal consumption or the use of land for agriculture.

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[211] Jennifer Kadluk, interview by author, January 27, 2020.
[212] Wagner, Crowley, and Goldberg, "Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States," 87.
[213] "The Sea Ice Never Stops – Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat | Inuit Circumpolar Council Canada", 23.
[214] Giraldo, Carlo Ruiz. "Does Nature Have Rights?" at paragraph 4.
[215] Ibid, at paragraph 6.

Conferring rights on the environment will not save the world unless there is simultaneously a united, global willingness to suspend the improvement of living standards.[216] Humans will have to give up material comforts that are beyond the most basic needs; eating out, travel, and luxury clothing are just a few examples of things we consider 'givens' that would need to be sacrificed.

However, like the principles laid out in many human rights documents, this sort of legal thinking is aspirational — and aspirations in a legal context are valuable. Implementing rights of sea ice would act as a directive principle and political statement, clearly pointing out in what direction future decisions regarding the environment will fall towards. A basic human truth is that we are more likely to achieve our goals if we record them in writing. While we would be unlikely to be successful in fully defending the environment's rights, step-by-step improvements would be made that could slow the inexorable march of climate change.

Granting rights to the environment would benefit Inuit enormously, as well as the movement for Indigenous rights as a whole. In fact, this discussion has clear implications for the protests currently raging across Canada in regards to the Coastal GasLink pipeline, a battlefield that environmental justice and human rights are currently clashing on.[217] Incorporating Inuit knowledge in defending the environment would empower other Indigenous groups to assert themselves as central to the destiny of this planet, as the Wet'suwet'en are doing at this very moment.

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Biography
Kendrick Lu is a junior at the University of Washington studying International Studies and English. He is especially interested in the intersection between environmental justice and human rights, and plans to pursue some sort of related graduate program. Outside of school, he enjoys soccer, rugby, and weightlifting.

[216] Stone, *Should Trees Have Standing?* 157.
[217] Colleta, Amanda, "Why Protesters Are Shutting down Canada's Rail Service."

Chapter 6: Inuit Legal Approaches in the Arctic

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Pierre Aupilardjuk, *Giving Without Receiving*, 2016[218]

> *The outstretched arms holding the lamp contrast eerily with the outsized grasping hand emerging from the base of the of the figure, suggesting the tensions between contrasting world views inherent in colonial relationships.*[219]

ABSTRACT
Since the beginning of colonization, Inuit in Canada and across the Arctic have often been denied their right to self-determination.[220] The denial of this essential right has resulted in a lack of Inuit perspectives in both international and domestic legal systems governing the Arctic. The omission of this vital perspective has been a significant oversight in the current legal approach to

[218] Shary Boyle & Pierre Aupilardjuk, "A Conversation with Shary Boyle and Pierre Aupilardjuk" *Inuit Art Quarterly*, Nov 13, 2019.
[219] Pierre Aupilardjuk, *Giving Without Receiving*, porcelain and smoke-fired stoneware, 2016, National Gallery of Canada, Ottawa, ON.
[220] Loukacheva, "Indigenous Inuit Law, 'Western' Law and Northern Issues." *Arctic Review on Law and Politics.* 3, no. 2 (2012), 206.

the Arctic region. Legal norms have helped to guide Inuit culture for thousands of years and continue to do so today.[221] However, international law in the Arctic does not fully recognize the significance of the knowledge that is held by Inuit in the circumpolar region.[222] Similarly, the national legal system of Canada was developed without any consideration of the vast Indigenous knowledge that existed on Canadian land long before colonization began.[223] Inuit have an inherent right to their ancestral territory, which includes land, water, *and* sea ice.[224] The vastly changing Arctic and increased global interest in the circumpolar region illustrates the urgent need for an Inuit understanding of the Arctic, a place where Inuit have lived sustainably for thousands of years. Arctic sea ice is drastically changing, or disappearing altogether, and an Inuit legal perspective on the Arctic is more important than ever in partnering with the international community to better understand the global importance of the Arctic environment.

BACKGROUND

What is an Inuit Legal Approach?

In order to evaluate an Inuit legal approach to the Arctic, one must understand that Inuit legal traditions exist in a very different form than what modern 'Western' culture considers law. Inuit legal norms developed in the Arctic as a type of societal moral code. Traditional Inuit legal order was not written down, meaning that most legal regulation occurred through social and cultural norms in Inuit society.[225] These norms exist through legends, myths, and storytelling, which all contain Inuit knowledge and are transferred down by oral tradition from shamans, elders, and leaders within the community.[226] Inuit knowledge, or Inuit Qaujimajatuqangit (IQ), incorporates many legal ideas that exist in 'Western' legal frameworks. One example of this is the Inuit term 'Papattiniq', which means 'the idea that nature is not a commodity.'[227] This is just one example of the many Inuit concepts that translate very well to 'Western' legal frameworks, especially relating to environmental law. This form of legal regulation, which is communicated through IQ, has continued to exist in Inuit culture even as colonization introduced an entirely different kind of legal approach.

Inuit have a unique perspective of their homeland, rooted in the sustainable practices that have allowed Inuit to continue thriving for thousands of years in a region that most would consider uninhabitable. It is this perspective of the Arctic that informs Inuit legal thinking and is critical to our collective understanding on how to govern the Arctic region.[228] Current legal systems affecting the Arctic do not consider this invaluable knowledge, contributing to a missed opportunity in the international community's legal approach to the Arctic.[229] I would like to argue throughout this chapter that Inuit legal thinking exists in the Arctic through Inuit Qaujimajatuqangit and is an integral aspect of achieving a peaceful and stable international

[221] Inuit Circumpolar Council. *The Sea Ice Never Stops:* ICC, 2014, 24.
[222] Shadian, "From States to Polities." *European Journal of International Relations*. 16, no. 3 (2010), 490.
[223] Alcantara, "Implementing Comprehensive Land Claims Agreements in Canada." *Canadian Public Administration.* 60, no. 3 (2017), 327.
[224] Inuit Circumpolar Council. *The Sea Ice Never Stops:* ICC, 2014, ii.
[225] Loukacheva, "Indigenous Inuit Law, 'Western' Law and Northern Issues." *Arctic Review on Law and Politics.* 3, no. 2 (2012), 204.
[226] Ibid, 203.
[227] Tester & Irniq, "Inuit Qaujimajatuqangit: Social History, Politics and the Practice of Resistance." *Arctic Institute of North America.* 61, no. 1 (2008), 51.
[228] Charlie Watt, "Inuit Rights to the Arctic" *LawNow*, May 7, 2015.
[229] University of the Arctic. *Philosophy of Law in the Arctic.* Brendan Tobin. Rovaniemi: UArctic, 2016, 132.

circumpolar Arctic. This paper will use the terms 'Inuit legal order', 'Inuit legal system', and 'Inuit legal thinking' interchangeably to describe an Inuit perspective of law in the Arctic.

The Akitsiraq Law School is an excellent model for engaging both Inuit legal systems and national Canadian law in the Arctic region.[230] The creation of the Akitsiraq Law School came about shortly after the Nunavut Land Claims Agreement created the territory of Nunavut in northern Canada. Through this land claims agreement, there was a strong desire to ensure that education was not only provided to residents of Nunavut, but that there was ample education and training opportunities for Inuit in Nunavut.[231] Over time, individuals in Iqaluit formed a coalition to create the Akitsiraq Law School Society, which eventually partnered with University of Victoria Law. The Akitsiraq Law School is unique in that it gives Inuit students the opportunity to not only learn and practice Canadian national law, but to also explore how an Inuit approach to law and IQ fit into the context of domestic law in Canada. This is an excellent example of two different legal perspectives being integrated into one approach to enhance the ability of each other. However, this approach has been one of the very few attempts to integrate IQ into the Canadian legal system. When more coalitions like the Akitsiraq Law School are supported in Canada, Inuit legal perspectives will begin to make a significant impact on domestic Canadian law. This improves Inuit self-determination and gives Canada the opportunity to learn from an Inuit understanding of the best way to govern the Canadian Arctic and sea ice.

Canada and Circumpolar Inuit Rights

The persistence of Inuit culture throughout the violence of colonization has allowed IQ across the Arctic to continue playing a crucial role in Inuit society. Inuit are one people whose traditional homelands have been divided into four different countries: Canada, Russia, Greenland, and the United States. Even though the Arctic today is divided and claimed by many different nations, each with their own legal system in place, "Inuit see themselves as one people."[232] Inuit legal thinking continues to exist across the Arctic regardless of the colonial law that has been implemented. This is because, as Inuit culture has persisted through colonialism, Inuit legal thinking and perspectives have endured along with it.

Canada is uniquely positioned to spearhead Inuit rights across the Arctic. While Inuit are a modern people who live all around the world, a very large percentage of the population continue to live within their traditional homeland, the Arctic. There are about 160,000 Inuit living across the globe. The largest proportion of Inuit, roughly 65,000, live in Inuit Nunangat or other parts of Canada.[233] This ongoing presence of Inuit in Canada underscores the continuation of Inuit legal thinking in the region. Canada is an ideal partner for supporting the rights of circumpolar Inuit due to the large Canadian Inuit population, many of whom continue to live within their traditional homeland. Acknowledging the importance of Inuit legal systems will further legitimize Canada's claim to the Arctic by supporting the perspectives of those who have lived there for thousands of years.[234]

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[230] Ableson, "Bringing Legal Education to the Canadian Arctic." *International Journal of Legal Education.* 34 (2006), 1-30.
[231] Ibid, 1-30.
[232] Stephanie Meakin, meeting with the author, January 29, 2020 at ICC Canada.
[233] Inuit Tapiriit Kanatami. *Inuit Statistical Profile*. Canada: ITK, 2018, 8.
[234] Simon, "Inuit and the Canadian Arctic: Sovereignty Begins at Home." *Journal of Canadian Studies.* 43, no. 2 (2009), 251.

While Inuit in Canada do share many commonalities and connections with Inuit all around the circumpolar Arctic, Kevin Kablutsiak, Director of Communications for Inuit Tapiriit Kanatami stated about Inuit in Inuit Nunangat: "We love Canada, we love being Canadian."[235] There is no desire to create an Inuit nation-state for Inuit around the world. Inuit are committed to defending their rights as both Indigenous peoples that live within multiple national boundaries, and as citizens of the states in which they reside.[236] This means that, as global interest in the Arctic continues to grow, Canada has the opportunity to be an international leader in ensuring that Inuit rights to their homeland are protected across the entire circumpolar region.

International Recognition of Inuit Rights

Inuit rights have been gradually recognized and strengthened on the international stage over time. In 2007, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) was adopted by the General Assembly of the United Nations, which affirmed the right to self-determination for Indigenous peoples all around the world. Article 27 of this document explicitly declares that states shall give "due recognition to Indigenous peoples' laws, traditions, customs and land tenure systems" as a fundamental aspect of Indigenous rights.[237]

Shortly after this document was adopted by the UN, the Inuit Circumpolar Council created *A Circumpolar Inuit Declaration on Sovereignty in the Arctic* in 2009. This declaration outlines an Inuit approach to Arctic governance that utilizes Inuit self-determination and knowledge of the circumpolar region. It was drafted in response to heightened global interest in the Arctic due to climate change and increased availability of resources that were previously buried underneath the frozen ocean. Inuit across the Arctic were consulted over the course of 6 months in the creation of this document and it incorporates these gathered perspectives.[238] Notably, this ICC declaration highlights Article 5 of the UNDRIP stating that Inuit have "the right to maintain and strengthen [their] distinct political, legal, economic, social and cultural institutions, while retaining the right to participate fully in the political, economic, social and cultural life of states.[239] The UNDRIP and *A Circumpolar Inuit Declaration on Sovereignty in the Arctic* are two examples of international frameworks that strengthen Inuit rights globally by acknowledging the importance of Inuit legal systems.

There have been many additional international developments in recent years on Inuit rights in the Arctic, most recently the Utqiavgik Declaration in 2018 that was drafted in Alaska on the 13th General Assembly of the ICC. This declaration highlights the most pressing issues for Inuit in the Arctic and specifically recognizes the importance of Indigenous knowledge.[240] Indigenous knowledge, or IQ in the case of Inuit, is an essential aspect of an Inuit legal approach because of the expertise that has culminated over thousands of years of Inuit presence in the Arctic.

[235] Kevin Kablutsiak, meeting with the author, January 29, 2020 at ITK Canada.
[236] Inuit Circumpolar Council. *Inuit Arctic Policy*. Canada: ICC 2010, 102.
[237] United Nations General Assembly. *United Nations Declaration on the Rights of Indigenous People.* Paris: UN 2007.
[238] Inuit Circumpolar Council. "Circumpolar Inuit Launch Declaration on Arctic Sovereignty" *ICC,* April 28, 2009.
[239] Inuit Circumpolar Council. *A Circumpolar Inuit Declaration on Sovereignty in the Arctic.* Ottawa: ICC 2009.
[240] Inuit Circumpolar Council. *Utqiagvik Declaration*. Alaska: ICC 2018, 6.

Canada's Recognition of Inuit Rights

Canada's domestic legal system has also gradually recognized Inuit rights over time. Starting in the 1970's, Inuit land claim agreements were negotiated between Canadian Inuit and the Government of Canada. There are now four land claim agreements that make up Inuit Nunangat in Canada. These regions are known as Inuvialuit, Nunavut, Nunavik and Nunatsiavut. These four regions make up 35% of Canada's land mass and half of the Canadian coastline. [241] They outline extensive rights of Inuit in their homeland and contribute to the importance of Inuit decision-making in the Arctic. These comprehensive treaty arrangements are legally bound by the 1982 amendment that gives constitutional recognition of Inuit as an Indigenous people of Canada.[242]

Furthermore, in the mid 1970's a study was conducted in Canada, which confirmed that Inuit utilize roughly 4 million square kilometers of land and ocean in the Northwest Territories.[243] This report set the precedence for the Nunavut Land Claim Agreement, which explicitly states, 'Canada's sovereignty over the waters of the Arctic archipelago is supported by Inuit use and occupancy'.[244] It has been argued by many Inuk scholars throughout Canadian history that Canada's best claim to international Arctic sovereignty is through Inuit historic use of lands and waters in the Canadian Arctic.[245] This is a compelling point and one that has been reiterated over time by both Inuit and non-Inuit scholars and leaders. This was recently discussed by Senator Charlie Watt in response to Canada's failure to include Inuit knowledge in their submission to the United Nations Convention on the Law of the Sea (UNCLOS) on Canada's extended continental shelf claim. Watt argues that:

> By not working with Inuit, Canada is missing the opportunity to strengthen its rights in the Arctic Ocean, as Inuit historical use and occupancy of the Arctic is a strong argument for Canada's sovereignty in the region.[246]

This is a conservation that has been ongoing for many decades. As Canada attempts to strengthen their international sovereignty in the Arctic, Inuit must be fully engaged throughout this process. Incorporating Inuit legal thinking into Canadian law is one way to engage Inuit in the strengthening of Canada's Arctic sovereignty.

The Importance of Full Implementation

All of these documents and agreements acknowledge and attempt to strengthen Inuit rights internationally and within Canada. However, the actual implementation of these promises has been less than fulfilling. Although the UNDRIP was adopted by Canada in 2016, it still has yet to be fully implemented into Canadian law. The Inuit Tapiriit Kanatami released a Position Paper in 2017 that addresses exactly this issue. The Government of Canada's failure to fulfill their promise on implementation of the UNDRIP inhibits Inuit ability to exercise their international

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[241] Inuit Tapiriit Kanatami. *National Inuit Climate Change Strategy.* Canada: ITK 2019, 29.
[242] Simon, "Canadian Inuit." *International Journal.* (2011), 885.
[243] Inuit Tapiriit Kanatami. *Nilliajut: Inuit Perspectives on Security, Patriotism and Sovereignty*, Terry Fenge. Ottawa: ITK 2013, 50.
[244] *Nunavut Land Claims Agreement Act,* Statutes of Canada 1993, art. 15.
[245] Simon, "The Role of Inuit in International Affairs." *Études/Inuit/Studies*. (1985), 34.
[246] Charlie Watt, "Inuit Rights to the Arctic" *LawNow*, May 7, 2015.

human rights and limits the scope of domestic law and treaties.[247] An example of this is the recent 2020 Wet'suwet'en protests in northern British Columbia opposing the natural gas pipeline by Coastal Gas Link. The land claim organization of Nunavut, Nunavut Tunngavik Incorporated (NTI) has sent a message of solidarity saying:

> Nunavut Tunngavik stands in solidarity with the Wet'suwet'en land defenders, and all the Indigenous nations supporting them for their inherent right to govern their own territory and to protect their ancestral lands.[248]

These are rights solidified in the UNDRIP, and Canada's failure to implement this international human rights instrument has contributed to the inability for these rights to be protected at the federal level in Canada. In order to truly protect Indigenous rights in Canada, the UNDRIP must be fully enforceable within domestic Canadian law.

Furthermore, there has been serious concern over the implementation of the promises made in the Inuit land claims agreements that currently exist in Canada. One example of this is the 2006 lawsuit by NTI against the federal government of Canada for their failure to fully and fairly implement the Nunavut Land Claim Agreement.[249] These land claims are comprehensive and complex and require considerable effort to be implemented both by the federal government and land claims organizations.[250] However, this does not change the fact that these agreements were made and are constitutionally enforceable.[251] The failure by the Government of Canada to fully and fairly implement Inuit land claim agreements has contributed to the lack of Inuit legal thinking in Canadian law. Inuit sovereignty is limited when resources are spent trying to navigate already existing rights, rather than exercising these rights on a daily basis.[252] These attempts to strengthen Inuit sovereignty globally and within Canada have been important steps in achieving Inuit self-determination. However, without actual implementation, they appear merely as tokenistic gestures by the Government of Canada.[253] Recognizing Inuit rights is a step, but implementing and defending Inuit rights is where the real change occurs.

Inuit Legal Approach in Canada

Canada's claim to the Arctic is greatly strengthened by Inuit occupancy of Inuit Nunangat.[254] This is why any approach to governance in the Canadian Arctic must incorporate Inuit legal systems. However, the Government of Canada is already committed to extensive domestic and international legal frameworks that are designed to govern the Arctic region. These frameworks provide an essential baseline in which future governance structures can build from. These two different legal approaches towards the Arctic region should be integrated together and united under the same desire to exercise sovereignty in the Arctic.[255] Both the Government of Canada

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[247] Inuit Tapiriit Kanatami. *Position Paper: Implementing the UN Declaration on the Rights of Indigenous Peoples in Canada*. Ottawa: ITK 2017, 3.
[248] Nunavut Tunngavik Incorporated. "NTI Stands in Solidarity with the Wet'suwet'en" *NTI*, Feb 21, 2020.
[249] Simon, "Canadian Inuit." *International Journal.* (2011), 887.
[250] Fenge, "Implementing Comprehensive Land Claims Agreements." *Policy Options.* (2008), 82.
[251] Simon, "Canadian Inuit." *International Journal.* (2011), 885.
[252] Inuit Tapiriit Kanatami. *National Inuit Climate Change Strategy.* Canada: ITK 2019, 30.
[253] Simon, "Canadian Inuit." *International Journal.* (2011), 887.
[254] *Nunavut Land Claims Agreement Act*, Statutes of Canada 1993, art. 15.
[255] University of the Arctic. *Philosophy of Law in the Arctic.* Dawid Bunikowski. Rovaniemi: UArctic, 2016, 14.

and Canadian Inuit have interests of sovereignty in the circumpolar Arctic, some of which are similar and some of which are not. One way these different interests can be represented is through a domestic legal system in Canada that incorporates essential Inuit legal perspectives on the Arctic. The Government of Canada is deeply committed to engaging Arctic Indigenous peoples in all aspects of governance of the Canadian Arctic.[256] This level of engagement, outlined in *Canada's Arctic and Northern Policy Framework* (2019), raises the question of *how* to engage with Arctic Indigenous peoples. Recognizing the significance of Inuit legal order in the Arctic is one means of achieving this desired level of engagement between the Government of Canada and Inuit.[257]

Inuit Perspective of the Arctic and Sea Ice

One way in which an Inuit legal approach can provide an entirely new perspective in domestic Canadian law is through the example of sea ice. There is an inherent understanding of sustainability in Arctic ecosystems that arises from thousands of years of Inuit relationship with the Arctic environment.[258] Within this extensive network of IQ exists an Inuit legal order that is distinctly tied to the existing relationship between Inuit and their homeland. This unmatched understanding of Arctic ecosystems by Inuit is extremely valuable to non-Inuit in understanding the importance of the Arctic globally. Inuit in the Arctic are significantly impacted by climate change. Sea ice thickness in the Arctic Ocean has declined by roughly 65% between 1975-2012. By some estimates, the Arctic may be completely ice-free in the summer by the late 2030's.[259] Inuit in the Arctic are acutely aware of the ways that climate change is and will continue to impact their homeland. This is detailed extensively in the *National Inuit Climate Change Strategy* (2019). Food security, knowledge systems, health and wellbeing in the Arctic are all being impacted by climate change and specifically sea ice melt.[260] Manager of Relationships at Crown-Indigenous Relations and Northern Affairs Canada, Christopher Penney said, "the people that actually understand the issues on a day-to-day basis are the people that know how to deal with the issues best." Therefore, as those with the most knowledge and understanding of the effects of climate change in the circumpolar region, partnerships *with* Inuit and leadership *by* Inuit must be a critical aspect of any efforts to combat the global climate crisis.

The interconnectedness of knowledge, law, and culture has helped to shape the Inuit perspective on the importance of sea ice as a point of access rather than a hindrance in their ability to move.[261] By understanding and applying Inuit legal thinking in regards to decision-making in the Arctic, the importance of sea ice can be better understood outside of the Arctic and especially to non-Inuit. Inuit view sea ice as an essential aspect of the Arctic environment. To Inuit, sea ice is a source of life, a highway, and a place for familial and cultural interactions.[262] This gives some insight into the way that Inuit legal thinking would approach sea ice. The land claim agreements that currently exist in Canada do not explicitly recognize sea ice and water as part of Inuit

[256] Crown-Indigenous Relations and Northern Affairs. *Canada's Arctic and Northern Policy Framework*. Canada: Ottawa, 2019.
[257] Inuit Circumpolar Council. *Utqiagvik Declaration*. Alaska: ICC 2018, 6.
[258] Inuit Circumpolar Council. *The Sea Ice Never Stops:* ICC, 2014, 24.
[259] Arctic Council. *Snow, Water, Ice, and Permafrost in the Arctic – Summary for PolicyMakers.* AMAP, 2017, 4.
[260] Inuit Tapiriit Kanatami. *National Inuit Climate Change Strategy.* Canada: ITK 2019, 10.
[261] Inuit Circumpolar Council Canada. *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat.* Canada: ICC, 2014, 6.
[262] Inuit Circumpolar Council. *The Sea Ice Never Stops*. ICC, 2014, 6.

homeland.[263] However, an Inuit legal approach would allow for an entirely different perspective and capability in the Arctic region, and one that has existed sustainably for thousands of years. The international community would greatly benefit by learning from those who have thrived in the Arctic for so long. Canada has the unique opportunity to spearhead this possibility through the extensive network of Inuit land claim agreements that already exist and laws that protect Indigenous rights to ancestral territory.

A Twofold Approach

Utilizing an Inuit legal approach in the Arctic through domestic Canadian law is one important aspect in addressing the lack of Inuit legal perspectives in Canadian law. Models like the Akitsiraq Law School are excellent generational solutions to the long-term issue of Inuit sovereignty and rights in the Canadian Arctic. However, sea ice is melting rapidly and at an accelerating rate.[264] Therefore, while long-term solutions are an essential part of any multifaceted approach to this problem, short-term solutions are just as important due to the urgency of the global climate crisis. The changes that are occurring in the Arctic due to climate change will not wait for the kind of generational shift that the Akitsiraq Law School and others like it aim to achieve. While these goals are essential and should be considered with equal importance, a more immediate approach is also necessary due to the urgency of climate change and melting sea ice in the Arctic.

RECOMMENDATIONS

Short Term: Implementation of Existing Frameworks

(1) The Government of Canada should fully and officially implement the United Nations Declaration on the Rights of Indigenous Peoples

This international human rights instrument is an essential document that must be fully enforceable at the federal level in Canada. The Inuit Tapiriit Kanatami released their *Position Paper: Implementing the UN Declaration on the Rights of Indigenous Peoples in Canada* in 2017. This Position Paper provides extensive information on the importance of this fundamental document and outlines an implementation strategy.[265]

(2) The Government of Canada must fully and fairly implement the promises made in the four existing Inuit land claim agreements

These comprehensive treaty agreements are supported by Section 35 of the Canadian Constitution and it is the duty of the state to maintain its commitment to these treaties. It has been many years, decades in some cases, since these agreements were made. It is time for the Government of Canada to fulfill the promises made in these agreements. Extensive literature exists on how to implement these treaties and should be consulted in this process.[266]

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[263] Charlie Watt, "Inuit Rights to the Arctic" *LawNow*, May 7, 2015.
[264] Arctic Council. *Snow, Water, Ice, and Permafrost in the Arctic – Summary for PolicyMakers.* AMAP, 2017, 8.
[265] Inuit Tapiriit Kanatami. *Position Paper: Implementing the UN Declaration on the Rights of Indigenous Peoples in Canada*. Ottawa: ITK 2017.
[266] Campbell et. al, "Implementing the 1993 Nunavut Land Claims Agreement." *Arctic Review on Law and Politics.* 2, no. 1 (2011), 25-51.

Long Term: Incorporate Inuit Perspectives

(3) Increase educational opportunities for Inuit following models like the Akitsiraq Law School[267]

Educational opportunities such as this are important aspects of including Inuit legal thinking into existing legal frameworks. By training Inuit lawyers, this vital perspective can be brought to the forefront of any new or developing Arctic law and governance. Highly trained Inuk scholars and leaders can contribute their unique perspectives of the Arctic in many different fields of scholarship throughout Canada, including law. These key Inuit perspectives must exist in every sector of Canadian society, including in the highest positions of authority.

(4) Prioritize Inuit knowledge through Inuit-led reports

Inuit self-determination can be supported through policies that incorporate Inuit perspectives on the issues that affect them most. There are many reports by the Inuit Tapiriit Kanatami, the Inuit Circumpolar Council and other Inuit organizations that should be heavily consulted in the creation of any policy that affects Inuit and the Arctic region. Examples include reports utilized throughout this chapter such as *The Sea Ice Never Stops* by the ICC and the *National Inuit Climate Change Strategy* by the ITK. Creating policy that defines and explains an Inuit perspective will reflect Inuit knowledge both within Canada and internationally.

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Biography

Caitlin Clarke is a fourth-year undergraduate student in the Jackson School of International Studies at the University of Washington. She has Minors in both Human Rights and Education, Learning, and Society. She is interested in law as well as the intersection of environmental and human rights and looks forward to seeing where this passion takes her personally and professionally.

[267] Ableson. "Bringing Legal Education to the Canadian Arctic." *International Journal of Legal Education.* 34 (2006), 1-30.

Chapter 7: From Vision to Implementation: Self-Government in Nunavut

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ABSTRACT

Inuit are stewards of their own land and are the largest private landowners of land, sea and ice.
— Kevin Kablutsiak, Inuit Tapiriit Kanatami[268]

The Nunavut Land Claims Agreement (NLCA) is a modern treaty established by the Government of Canada, the Northwest Territories, and what is now known as Nunavut Tunngavik Incorporated (NTI).[269] This Agreement was designed to establish Inuit ownership of land[270] and to build upon self-reliance for the 85%[271] Inuit in the eastern and most northern part of Canada. Through this agreement, there are collaborative efforts made by the territorial and federal government to increase and promote Inuit self-determination in land use management, as well as to incorporate Inuit Qaujimajatuqangit (IQ)[272] into education, employment, and social services.[273] As of August 2019, self-determination, through the process of devolution, now includes transferring province-like powers from the Government of Canada to the Government of Nunavut, where the final decisions over public land, seacoast and water will be made by Nunavummiut (Inuit in Nunavut).[274]

The goal of creating Nunavut was to establish a new territory with a government that would enable Inuit to work towards self-determination.[275] Although there are specific policies, such as NLCA's Article 23 that discusses "Inuit Employment Within Government"[276], NLCA 12 that pertains to "Development Impact"[277], and the most recent *Canada's Arctic and Northern Policy Framework (2019)* by the Government of Canada that puts forth a collaborative vision to

[268] Kevin Kablutsiak, interview by author, Paltep, January 29, 2020.
[269] Canada, Service. "Backgrounder — Nunavut Land Claims Agreement ¿ Settlement Agreement." Backgrounders. gcnws, May 4, 2015. https://www.canada.ca/en/news/archive/2015/05/backgrounder-nunavut-land-claims-agreement-settlement-agreement.html.
[270] Murphy, Michael, and Annis May Thimpson. *Canada: The State of the Federation 2003* (version https://www.queensu.ca/iigr/sites/webpublish.queensu.ca.iigrwww/files/files/pub/archive/SOTF/SOTF2003.pdf). McGill-Queen's University Ore, n.d. (2005): 210.
[271] André Légaré. "Canada's Experiment with Aboriginal Self-Determination in Nunavut: From Vision to Illusion." *International Journal on Minority and Group Rights* 15, no. 2/3 (2008): 339.
[272] Lévesque, Francis. "Revisiting Inuit Qaujimajatuqangit: Inuit Knowledge, Culture, Language, and Values in Nunavut Institutions since 1999." *Études/Inuit/Studies* 38, no. 1–2 (2014): 115–36. https://doi.org/10.7202/1028856ar.
[273] Légaré, André. "An assessment of recent political development in Nunavut: The challenges and dilemmas of Inuit self-government." *Canadian Journal of Native Studies* 18.2 (1998): 285.
[274] "Devolution | Government of Nunavut." Accessed February 28, 2020. https://www.gov.nu.ca/eia/information/devolution.
[275] André Légaré. "Canada's Experiment with Aboriginal Self-Determination in Nunavut: From Vision to Illusion." *International Journal on Minority and Group Rights* 15, no. 2/3 (2008): 343.
[276] Government of Canada, *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, Iqaluit, 1993, 191-195.
[277] Ibid, 101-121.

promote northern and Arctic people to thrive in strong and safe community[278], there is still work needed to be done to ensure that these policies are implemented. Additionally, under the *Arctic and Northern Policy Framework — Nunavut's Vision*, Nunavummiut's vision of having "protection and promotion of Inuit way of life in the modern world, with a strong sense of self-determination and control over Inuit governance"[279] should also be upheld by the federal and territorial governments. In order to address these concerns, the federal government must work toward fully implementing the NLCA and *Canada's Arctic and Northern Policy Framework (2019)*. This includes improving policies from Article 23 and 12 from the NLCA, as well as implementing Inuit self-government, which will allow Inuit to have the decision-making power to improve upon the infrastructures of employment, education, and incorporating IQ into government policies.

BACKGROUND

Nunavut is one of the four Inuit regions in Canada that make up Inuit Nunangat.[280] The Nunavut Territory is the largest political unit of Canada, covering one-fifth of Canada's land mass.[281] The Inuit Tapirisat of Canada, now known as Inuit Tapiriit Kanatami (ITK), put forward in 1976 the "Nunavut Project" that sought an agreement for Inuit land claim and self-determination.[282] The NLCA was formed in alignment with *Canada's Comprehensive Land Claims Policy*, where Inuit agreed to relinquish to the Crown the cession and surrender of aboriginal title throughout the settlement[283], in exchange for financial compensation that would be used towards social services under the NLCA.[284] Although there was controversy in relinquishing title, Inuit viewed this arrangement as an historic opportunity to develop a relationship with Canada to secure their socio-cultural, political and economic future as one people.[285]

Nunavut Land Claims Agreement

The NLCA was signed in 1993; the new territory of Nunavut was carved out of the central and eastern area of the Northwest Territories, and was established on April 1, 1999.[286] This new territory created the largest Inuit-owned land claim in the Eastern Arctic.[287] After the final negotiations, Nunavut encompasses 1.92 square kilometers of land and 157,000 square kilometers of water in northern Canada.[288] However, currently 17.7% of Nunavut is Inuit own

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[278] Canada, Government of Canada; Crown-Indigenous Relations and Northern Affairs. "Canada's Arctic and Northern Policy Framework." Policy, Section "A Shared Vision", para. #1, June 14, 2019.
[279] Government of Nunavut, *Arctic and Northern Policy Framework — Nunavut's Vision,* 2019, 6.
[280] Inuit Tapiriit Kanatami. "About Canadian Inuit." Accessed January, 2020. https://www.itk.ca/about-canadian-inuit/.
[281] André Légaré. "Canada's Experiment with Aboriginal Self-Determination in Nunavut: From Vision to Illusion*." International Journal on Minority and Group Rights* 15, no. 2/3 (2008): 337.
[282] Ibid, 343.
[283] Minister of Indian Affairs and Northern Development. "Comprehensive Land Claims Policy." (Ottawa, 1986), 12.
[284] Dalton, Jennifer E. "Aboriginal Title and Self-Government in Canada: What Is the True Scope of Comprehensive Land Claims Agreements." *Windsor Rev. Legal & Soc. Issues* 22 (2006): 51.
[285] André Légaré. "Canada's Experiment with Aboriginal Self-Determination in Nunavut: From Vision to Illusion." *International Journal on Minority and Group Rights* 15, no. 2/3 (2008): 345.
[286] Ibid, 336.
[287] Ibid.
[288] "Nunavut | The Canadian Encyclopedia." Accessed February 2020. https://www.thecanadianencyclopedia.ca/en/article/nunavut.

land[289] occupying 356,000 square kilometers based on the mutual exchange benefits with the Crown laid out in Article 1, section 7.1 where it states that "all their aboriginal claims, rights, title and interests…to lands and waters anywhere within Canada and adjacent offshore areas [is] within the sovereignty or jurisdiction of Canada."[290] In return, Canada has transferred $1.17 billion in compensation that would be used to fund socio-economic programs over fourteen years that would be controlled by Nunavut Tunngavik Incorporated (NTI).[291]

Under the NLCA, the Government of Nunavut operates as a public government, exercising a delegated authority to represent all residents of Nunavut rather than a more independent form of self-government.[292] The purpose of establishing a public government was to achieve certainty, clarity with rights to ownership and to lay out the specificity of land and resource management.[293] The NTI functions as the legal representative for Nunavummiut, working to ensure that the NLCA is respected and executed by both the federal and territorial government.

One of the goals of creating a new territory was to establish a new government that builds a strong foundation for Inuit self-determination, with the NLCA as starting point to bring Inuit into discussions with the Government of Canada.[294] Article 23 is the cornerstone of the NLCA where the stated objective is to increase Inuit employment in government to the representational level, applying to all grade levels and occupational groupings.[295] Under Article 23, Inuit ought to have 85% of the positions in public service, however, only 50% of government employees are Inuit as of December 2019.[296] The problem is not about the demand, but is instead about how to provide opportunities to qualify Inuit for these positions by increasing education initiatives, such as encouraging students to continue post-secondary education, for most job positions have unavoidable educational requirements.[297]

As of 2019, there are greater strides to achieve devolution in Nunavut that would give Nunavummiut greater control for decision-making and regional governance.[298] Devolution will give Nunavummiut a greater say in issues that affect them, for the final decisions will be made in Nunavut and not in Ottawa.[299] As of August 15, 2019, the Government of Canada, the Government of Nunavut and NTI has signed an AIP (agreement-in-principle), an agreement between parties that discusses main issues under negotiations, such as which parties will have

[289] Government of Nunavut, *Arctic and Northern Policy Framework — Nunavut's Vision,* 2019, 8.
[290] "Nunavut | The Canadian Encyclopedia." Accessed February 2020. https://www.thecanadianencyclopedia.ca/en/article/nunavut.
[291] Dalton, Jennifer E. "Aboriginal Title and Self-Government in Canada: What Is the True Scope of Comprehensive Land Claims Agreements." *Windsor Rev. Legal & Soc. Issues* 22 (2006): 39.
[292] Ibid.
[293] Ibid, 50.
[294] *Staking the Claim, Dreams, Democracy, & Canadian Inuit* . Nunavut Sivuniksavut Production , 2008.
[295] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, 16.
[296] Toward a Representative Public Services – Statistics of the Public Service within the Government of Nunavut as of December 31, 2019. Report December 31, 2019, 5.
[297] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, iii.
[298] Canada, Government of Canada; Indigenous and Northern Affairs. "Nunavut Devolution." Resource list, November 9, 2012. https://www.rcaanc-cirnac.gc.ca/eng/1352471770723/1537900871295.
[299] "Devolution | Government of Nunavut." Accessed February 28, 2020. https://www.gov.nu.ca/eia/information/devolution.

jurisdiction over which responsibilities, that will lead to the final devolution agreement.[300] This process will take approximately five years from signing the AIP to formally transfer responsibilities.[301] Nunavut is ready for devolution, and in order for this to be successful, there needs to be additional funding and development efforts to implement training efforts[302] in employment and in education before and after the transfer date.

Existing Controversies with Self-Government

The Government of Canada recognizes that self-government negotiations is one way to work toward advancing self-determination, for it is a fundamental right of Indigenous populations and it is recognized under Section 35 of the *Constitution Act, 1982*.[303] Extending on this act, *Canada's Inherent Right Policy* was launched in 1995 to help guide self-government negotiations.[304] From these policies, the Government of Canada recognizes that "Aboriginal peoples" have the right to govern themselves in relation to internal matters within their community in the Canadian federation.[305] Self-government is defined by the Government of Canada as putting decision-making powers into the hands of Indigenous governments, so that they can make their own decisions on how to deliver programs, services, protection of culture, education and how to manage their own lands, water and resources.[306]

The process of devolution, once it comes into effect, will work to "transfer control of Nunavut's public (Crown lands) and resources to the Government of Nunavut."[307] Devolution is an important process that started with the land claims settlement and shall be effected in a manner that respects existing rights of public lands, specifically land-fast ice and waters.[308] Through this process, the discussion about land use management should not only be exclusive to land-fast ice[309], ice that extends from land and is anchored to the shore or ocean bottom[310], but must also include sea ice, which is frozen ocean water that forms, grows and melts in the ocean.[311] Sea ice is part of Inuit identity because Inuit culture is dependent on the free movement of land.[312] It is

[300] Ibid.
[301] Ibid.
[302] Ibid.
[303] Branch, Government of Canada; Aboriginal Affairs and Northern Development Canada; Communications. "Self-Government." Administrative page, November 3, 2008. https://www.rcaanc-cirnac.gc.ca/eng/1100100032275/1529354547314.
[304] Ibid.
[305] Branch, Government of Canada; Indigenous and Northern Affairs Canada; Communications. "The Government of Canada's Approach to Implementation of the Inherent Right and the Negotiation of Aboriginal Self-Government." Reference material, November 3, 2008. https://www.rcaanc-cirnac.gc.ca/eng/1100100031843/1539869205136.
[306] Ibid.
[307] "Devolution | Government of Nunavut." Accessed February 28, 2020. https://www.gov.nu.ca/eia/information/devolution.
[308] Government of Canada, Government of Nunavut, and Nunavut Tunngavik Inc. *Nunavut Lands and Resources Devolution Agreement in Principle (Hereinafter Referred to as the "AIP"),* 2019, 1.
[309] Government of Canada, *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, Iqaluit, 1993, 1.
[310] "Fast Ice | National Snow and Ice Data Center." Accessed February 28, 2020. https://nsidc.org/cryosphere/glossary/term/fast-ice.
[311] "All About Sea Ice | National Snow and Ice Data Center." Accessed February 28, 2020. https://nsidc.org/cryosphere/seaice/index.html.
[312] Inuit Circumpolar Council, Canada, *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat* (Ottawa, Inuit Circumpolar Council, Canada, 2014), i, 7.

important to include sea ice into land use management, for it shapes Inuit culture and practices to hunt and travel for traditional foods on ice during the wintertime; during the summertime, the open sea is used for transportation, specifically for cargo ships that transport food and household goods to communities.[313]

Unlike Nunavut who is working toward self-government after its creation, the Government of Canada has awarded self-government in Nunatsiavut, one of the four Inuit regions, in January 2005 through the Labrador Inuit Land Claims Agreement.[314] With a strong stance of wanting to avoid future conflict with the Crown about land rights, employment, education, and where funding should go, self-government was reached, ushering a new regime of land ownership,[315] specifically adding a provincial agreement that includes "land and sea ice" in accordance with their own traditions and customs.[316]

The Government of Canada has recognized in Chapter 3, Part 3.1.1 of the Labrador Inuit Land Claims Agreement, that "Inuit…has traditionally used and occupied and currently uses and occupies the lands, waters and sea ice of the…Land Claims Area."[317] Additionally, Chapter 6, "Ocean Management"[318], Part 6.6 states that Canada and the Province shall consult the Nunatsiavut Government prior to any development projects in "Marine Protected Areas", and shall take into consideration Inuit rights under the Agreement.[319] Additionally, the Nunatsiavut Government may make recommendations to the Minister about any potential impact on the integrity of land-fast sea ice from development projects.[320]

These are the same goals Inuit have expressed through their land claims agreement, however, Nunavummiut, the NTI and the Government of Nunavut are currently discussing land use management. Under Article 15 of the NLCA that addresses "Marine Areas"[321], it is recognized that Inuit are traditional and current users of land-fast ice zones.[322] However, through this context, Section 15.3.4 "the Government shall seek the advice of the [Nunavut Wildlife Management Board] with respect to any wildlife management decisions…which would affect the substance and value of Inuit harvesting rights and opportunities."[323] Although it is important to have consultation around land use planning and wildlife preservation, it is vital that this consultation also works on preserving land-fast ice and sea ice, especially when it comes to shipping in basic necessities during open water season.

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[313] Ibid, ii.
[314] Nunatsiavut Government. "The Path to Self-Government." Accessed February 2020. https://www.nunatsiavut.com/government/the-path-to-self-government/.
[315] Alcantara, Christopher. *Negotiating the deal: comprehensive land claims agreements in Canada*. University of Toronto Press, 2013, 44, 57, 60.
[316] Government of Canada, *Land Claims Agreement between the Inuit of Labrador and Her Majesty the Queen in Right of Newfoundland and Labrador and Her Majesty the Queen in Right of Canada*, Nain, 2005, 1.
[317] Ibid, 30.
[318] Ibid, 88-98.
[319] Ibid, 90.
[320] Ibid.
[321] Government of Canada, *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, Iqaluit, 1993, 135-136.
[322] Ibid, 135.
[323] Ibid, 136.

The *Arctic and Northern Policy Framework — Nunavut's Vision* recognizes that during the one to four months when the ocean is free of ice, basic necessities, such as food and household goods, are shipped, adding to the territory's high cost of living due to the lack of deep seaports.[324] Article 12 of the NLCA addresses "Development Impact"[325], and it is the only article that includes shipping project proposals and "normal community resupply".[326] Additionally, insufficient marine infrastructure, most notably a lack of deep seaports, decreases the period when cargo ships can deliver and limits ocean access for Nunavummiut to participate in marine hunting, gathering activities and opportunities to participate in offshore fisheries.[327]

Falling Short of the Agreement

The relationship between Nunavummiut and the Government of Canada is still unfolding, and the NLCA was the first major step of decolonization and opening discussions about self-government.[328] To fulfill the visions of self-government, priorities must now be on employment, for public service must be at the representative level, and education, for Inuit must be qualified and have the ability to participate in government work, and land and resource management projects throughout Nunavut.[329]

Nunavut was to be an expression of Inuit self-determination; they did not seek for a government, but instead, through the Agreement, the public government was formed and public office is open to all residents.[330] One of the goals of the NLCA, under Article 23 is to "increase Inuit participation in government employment… [to the] representative level," with 85% positions fulfilled by Inuit.[331] However, in 2006, only 45% of employees were Inuit.[332] As of December 2019, the government employment rate in Nunavut was about 50%,[333] and as of October 2019, 13% of Inuit were unemployed.[334]

Because this quota was not fulfilled, in December 2006, NTI President Paul Kaludjak filed a lawsuit against the Government of Canada for breach of contract, which took nine years to settle.[335] The Government of Canada has gotten everything it wanted immediately after signing the NLCA, specifically gaining new land under Canada's jurisdiction, but Inuit were still

[324] Government of Nunavut, *Arctic and Northern Policy Framework — Nunavut's Vision,* 2019, 6.
[325] Government of Canada, *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, Iqaluit, 1993, 101-121.
[326] Ibid, 101, 119.
[327] Government of Nunavut, *Arctic and Northern Policy Framework — Nunavut's Vision,* 2019, 16.
[328] Ibid.
[329] Ibid.
[330] Ibid.
[331] Branch, Government of Canada; Aboriginal Affairs and Northern Development Canada; Communications. "Self-Government." Administrative page, November 3, 2008. https://www.rcaanc-cirnac.gc.ca/eng/1100100032275/1529354547314.
[332] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, iii.
[333] Toward a Representative Public Services – Statistics of the Public Service within the Government of Nunavut as of December 31, 2019. Report December 31, 2019, 5.
[334] "Statistics Home | Government of Nunavut." AccessedFebruary 2020. https://www.gov.nu.ca/executive-and-intergovernmental-affairs/information/statistics-home.
[335] May 04, CBC News · Posted:, 2015 11:15 AM CT | Last Updated: May 4, and 2015. "Ottawa to Pay Nunavut Inuit $255M in Settlement | CBC News." CBC, May 4, 2015. https://www.cbc.ca/news/canada/north/ottawa-to-pay-nunavut-inuit-255m-in-settlement-1.3057973.

awaiting full implementation.[336] Nunavut leaders and Thomas Berger, the appointed conciliator, wrote to the Minister emphasizing that there needs to be more funding to train more Inuit and youth to take government positions, for "the problem is that [the] supply of qualified Inuit is exhausted."[337] This nine-year dispute was settled in 2015 for $256 million for investments in educational training initiatives for the next eight years.[338]

Inuit Nunangat is the least developed geographical region in Canada[339], for there is a lack of basic infrastructure to address the long-standing and deep-rooted inequalities to education, language, employment and health.[340] Inuit are facing disadvantages to education to their Canadian counterparts as there are many reasons for low education attainment. In 2018, 68% of Inuit in Nunavut did not earn their high school degree, which in turn prevents individuals from gaining government employment.[341] What makes matters worse is the shortage of teachers in Nunavut who can speak both English and Inuktitut, the language of Inuit, and the education system is not producing graduates at a sufficient rate to replace any retirees.[342] For those who do go through the Nunavut Teachers' Education Program (NTEP), a program that qualifies teachers to teach grades 1 to 9 at McGill University, many do not get to teach and instead get recruited by the Government of Nunavut to work in non-teaching positions, for they have the minimum college experience needed to fill positions.[343]

The Government of Nunavut was created in part to emphasize IQ (Inuit Qaujimajatuqangit), Inuit knowledge in policymaking for Nunavummiut.[344] Inuktitut is used to define and promote IQ within communities in order to encourage members to learn about cultural and ancestral knowledge from their Inuit elders, and at the same time invite youth to gain modern training and education at school.[345] Given the demographics of Nunavut, Inuktitut should be the language of the governmental workspace and services, but it is not.[346] Although, 89% of Inuit can conversate in Inuktitut with 58% speaking Inuktitut at home[347], English is the language of government.[348] Because of this, Thomas Berger has recommended in his *Letter to Minister* on March 1, 2006 the "Nunavut Project", a specific project that aims to encourage the people of Nunavut to speak Inuktitut in homes and within communities. Through this project, Berger proposed that students should have Nunavut-specific curriculum that fosters a bilingual curriculum from Kindergarten

[336] Nunavut Tunngavik Inc. "NTI Launches Lawsuit Against Government of Canada for Breach of Contract." Accessed February 2020. https://www.tunngavik.com/news/nti-launches-lawsuit-against-government-of-canada-for-breach-of-contract/.
[337] Ibid.
[338] Ibid.
[339] Inuit Tapiriit Kanatami, *Arctic and Northern Policy Framework: Inuit Nunangat,* Ottawa, 2018, 2.
[340] Government of Nunavut, *Arctic and Northern Policy Framework — Nunavut's Vision,* 2019, 3.
[341] Inuit Tapiriit Kanatami, *Inuit Statistical Profile 2018.* Ottawa, 2018, 19.
[342] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, 51.
[343] Ibid, 45.
[344] Tester, Frank James, and Peter Irniq. "Inuit Qaujimajatuqangit: Social history, politics and the practice of resistance." *Arctic* (2008): 48.
[345] Ibid, 52.
[346] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, 34.
[347] Inuit Tapiriit Kanatami, *Inuit Statistical Profile 2018.* Ottawa, 2018, 21.
[348] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, iii.

to Grade 12 that would work toward establishing Inuktitut as the government language.[349] Additionally, Berger has also proposed that other options outside of attending college, such as trade and vocational schools, should be incorporated into the school system in order to provide the necessary training to qualify them for other employment.[350]

If one of the goals is to have 85% Inuit representation in government, the education system needs to incorporate IQ and the pathway to achieve a higher education needs to be supported within Nunavut. Through federal funding, Inuit students do have access to attain a secondary education at Nunavut Sivuniksavut (NS) in Ottawa. At NS, students are given the opportunity to take courses about Inuit history, land claims agreement, Inuktitut and Inuit cultural studies.[351] Students get the opportunity to participate in Inuit cultural activities and have the opportunity to travel abroad to perform international work. From NS, students can choose to continue their education at local universities, with the hopes of them returning to Nunavut to fulfill government positions[352] and to make the government office more conducive to Inuit lifestyle.[353]

RECOMMENDATIONS

The Government of Canada "vision[s] of a future where northern and Arctic people are thriving, strong and safe", and wishes to do so by ensuring that Arctic residents are secured and well-defended.[354] A first step toward incorporating these visions includes funneling additional funds to implement specific development projects and training efforts around land use planning, employment and education that will improve upon Article 12 and 23 of the NLCA. This new focus will provide a clearer perspective on implementing policies that is specific to the 85% Inuit in Nunavut, emphasizing the need for an immediate call to action in three policies.

(1) Support Inuit Self-Government and Self-Determination

The NLCA was an agreement that not only pertains to land claims, but to also open discussions about self-determination and self-government. Given the focus of this Task Force on sea ice, and in an effort to link sea ice to this discussion, land use management should not be limited to just land and sea, but it should specifically entail responsibility of "land and sea ice", as it is in the Labrador Inuit Land Claims Agreement. Inuit should have the ability to make decisions about land use management on their own. This decision-making power can be mirrored from Chapter 6, Part 6.6[355] of the Labrador Inuit Land Claims Agreement into Article 12 of the NLCA, specifically in Section 12.12[356] that would include a provision that encourages any

[349] Ibid, 45.
[350] Ibid, 53-54.
[351] Nunavut Sivuniksavut. "Courses." Nunavut Sivuniksavut. Accessed February 7, 2020. http://www.nunavutsivuniksavut.ca/courses.
[352] Murray Angus, interview by author, Paltep, January 27, 2020.
[353] Lévesque, Francis. "Revisiting Inuit Qaujimajatuqangit: Inuit Knowledge, Culture, Language, and Values in Nunavut Institutions since 1999." *Études/Inuit/Studies* 38, no. 1–2 (2014): 115–36. https://doi.org/10.7202/1028856ar.
[354] Canada, Government of Canada; Crown-Indigenous Relations and Northern Affairs. "Canada's Arctic and Northern Policy Framework." Policy, Section "A Shared Vision", para. #1. June 14, 2019.
[355] Government of Canada, *Land Claims Agreement between the Inuit of Labrador and Her Majesty the Queen in Right of Newfoundland and Labrador and Her Majesty the Queen in Right of Canada*, Nain, 2005, 90.
[356] Government of Canada, *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, Iqaluit, 119.

recommendations about land or water use projects, must also include assessing the potential impacts of the integrity of sea ice.[357]

With the overall goal to advance self-determination of Inuit in the Arctic, the lack of deep seaports that delivers basic necessities into communities must also be a priority in accordance with the *Arctic and Northern Policy Framework — Nunavut's Vision*.[358] Community resupply is expensive due to the combination of travel that cargo ships make, for major ports and markets are farther apart from one another.[359] The devolution process should also include self-government efforts to allow Nunavummiut to invest and use funds that would address this concern. Having the autonomy to make these decisions at home rather than Ottawa would foster both Inuit self-government and Inuit well-being, for Nunavummiut would have the decision-making capacity to invest, build and maintain more marine infrastructure.

(2) Increase Employability Opportunities

Article 23 of the NLCA has a stated objective "to increase Inuit participation in government employment in the Nunavut Settlement Area to a representative level."[360] The problem with fulfilling Article 23 includes the fact that there are not enough qualified Inuit. Thomas Berger emphasized the need to open additional positions that would encourage more people, specifically Inuit students to work in government. In order to encourage more students to work in government, Berger has suggested to have more summer internships available for high school students to work in government, and to offer career counseling that can help identify possible employment in different work forces.[361] By exposing government work at an early age, it could encourage more high school students to take an interest in government, teaching or other social-services. These interests would work to motivate students to continue their education at Nunavut Sivuniksavut (NS), McGill University to enroll in NTEP or at another institution with the hopes that they would come back and work in the appropriate sectors in Nunavut. These new positions could be funded through the NTI lawsuit settlement in 2015.

(3) Foster an Inuit Specific Curriculum

For more Inuit to qualify for government jobs under Article 23, the education system in Nunavut must be transformed from Kindergarten to Grade 12, specifically trying to incorporate a bilingual education system. Most of the positions in government require some sort of post-secondary or professional qualification; therefore, the central objective of the Nunavut education system must be to produce high school graduates who are bilingual. When students have the ability to speak English, it enables them to enter colleges in southern Canada and achieve academic success in their programs, for instruction is taught in English.[362] In reciprocity, the education system must also teach Inuktitut in order to encourage college graduated students to come back to teach

[357] Government of Canada, *Land Claims Agreement between the Inuit of Labrador and Her Majesty the Queen in Right of Newfoundland and Labrador and Her Majesty the Queen in Right of Canada*, Nain, 2005, 90.
[358] Government of Nunavut, *Arctic and Northern Policy Framework — Nunavut's Vision,* 2019, 6.
[359] Inuit Circumpolar Council, Canada, *The Sea Ice Never Stops: Circumpolar Inuit Reflections on Sea Ice Use and Shipping in Inuit Nunaat* (Ottawa, Inuit Circumpolar Council, Canada, 2014), 48-49.
[360] Government of Canada, *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, Iqaluit, 1993, 191.
[361] Berger, Thomas. "Conciliator's Final Report: Nunavut Land Claims Agreement Implementation Planning Contract Negotiations for the Second Planning Period." Report, 2006, 56-57.
[362] Ibid, 23.

Inuktitut in the classroom, and to enforce Inuktitut as the language of government when graduates take these positions.[363] It is important to foster a bilingual education that is equipped with a language curriculum because if Inuktitut is not practiced in schools, the language can get lost or cannot be translated into a student's ability to perform in Inuktitut for academic and professional situations.[364] In order for this curriculum to be reinforced, the "Nunavut Project" that Thomas Berger proposed should also be in effect by community members, parents and Inuit elders to speak at home.

Piliriqatigiingniq, An Embassy of Imagination project by Lachaolasie Akesuk, Parr Josephee, Aoudi Qunnayuaq, Cie Taqiasuk, Julieta Arias, and Moises Frank. (2015)

The goal of bilingual education will not be achieved unless schools have teachers trained in Inuktitut in their schools. Having a bilingual education system may take several years to get fully developed. Until there are more teachers who can speak both languages, teachers who want to teach in Nunavut should have training to become immersed in the community and language by partnering with local tradespeople, carvers and other specialists who can speak Inuktitut and give classes about their specialties.[365] This would give students and teachers the opportunity to practice their language in an academic and professional setting.[366] Additionally, this exposure can give students an insight about attending trade training or vocational school in order to gain employment in this realm.[367] This could also include inspiring many students to continue interests and inspirations, such as continuing a passion of art and combining that with cross-cultural collaboration and shared human experience in a material form of expression.[368]
This program could be funded by the NTI lawsuit in 2015 as part of the agreement to fund educational training. Through this effort, Inuktitut would be able to affirm Inuit identity, improve

[363] Ibid, viii.
[364] Ibid, 23-24.
[365] Ibid, 32.
[366] Ibid.
[367] Ibid, 32, 58.
[368] Embassy of Imagination. "About." Accessed March 2020. http://www.embassyofimagination.com/about.

Inuit educational achievement[369], and would foster IQ, which was one of the goals when creating Nunavut.[370]

ACKNOWLEDGEMENTS
I would like to thank the our professors who have spent countless hours teaching us about a topic that we did know much about at the start, and spending time giving us feedback for our specific chapters. Additionally, I would like to thank Whit Fraser who has agreed to be our expert evaluator and joining us in Seattle. I would also like to thank the Carnegie Corporation of New York that funded our unforgettable trip to Ottawa, and our two graduate students that helped plan some of our meetings. From this trip I had the opportunity to meet several government and Inuit organizations, as well as individuals who have inspired me to think more critically when writing my policy report. A special thanks to the students of Nunavut Sivuniksavut and Murray Angus who have cleared up any misunderstandings I had along my research, and helped consolidate my argument in this report. Lastly, I want to thank my Task Force teammates who have been supportive and encouraging throughout every step of this process.

Biography
Nadene Paltep is a current senior at the University of Washington studying International Studies (human rights track), with a double minor in Law, Societies and Justice, and Chinese. Nadene's hope is to combine the aspects of human rights and into future careers that involve research in support of policy outcome.

[369] Ibid, viii.
[370] Tester, Frank James, and Peter Irniq. "Inuit Qaujimajatuqangit: Social history, politics and the practice of resistance." *Arctic* (2008): 48.

Chapter 8: Inuit Art in Arctic Policy

BONNIE GREER
Henry M. Jackson School of International Studies, University of Washington

I'm so filled with belief and hope because when I hear your voices at the table, I hear and know that the responsibilities that our ancestors carried ... are still being carried ... even through all of the struggles, even though all of what has been disrupted ... we can still hear the voice of the land.
— Anishinaabe Elder Mary Deleary, Traditional Knowledge Keepers Forum, 2012[371]

ABSTRACT
The Truth and Reconciliation Commission of Canada (TRC) opened the door to the discussion concerning how Indigenous knowledge can be incorporated within governmental policy. Proper collaboration between Inuit and the Government of Canada is vital to the success of Arctic policy and requires deeper cultural understanding of Inuit. For Indigenous voices to be brought to the table and properly heard it is important for the Government of Canada to create systems that are conducive to different ways of knowing. For reconciliation to be effective in Canada it requires knowledge holders to be at the table to speak and share their cultural practices without the constraints of colonial violence. As the Government of Canada is in the beginning steps of reconciliation and reforming past detrimental laws such as the Indian Act, it is vital to the success of the project to prioritize Indigenous knowledge systems and accommodate for cultural gaps that exist.

The term Inuit Qaujimajatuqangit (IQ), which can be used to describe Inuit epistemology or directly translates to "that which Inuit have always known to be true" [372] needs to remain a vital pillar to the construction of Arctic policy. One of the common mediums to express IQ is art, "This philosophy, applied to the arts, underscores that for Inuit, the way to respect our ancestors is to maintain our living traditional knowledge and to be resourceful and creative."[373] Since the Government of Canada has stated clear goals of how they wish to prioritize IQ in the construction of Arctic policy, my team has worked together to place Inuit art throughout our policy recommendations. This paper argues that the presence of Inuit art in Arctic sea ice policy is one way to convey the complexity of the issue and will begin the conversation of how knowledge systems can be properly incorporated.

INTRODUCTION

Growing recognition and commitment of Inuit rights within the Trudeau government must go much deeper than the acknowledgment of wrongdoings. Indigenous communities around Canada are looking for collaboration and proper representation to create solutions to the existing

[371] Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future, Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future § (2015), 7.
[372]Tagalik, Shirley. "Inuit Qaujimajatuqangit: The Role of Indigenous Knowledge in Supporting Wellness in Inuit Communities in Nunavut." *National Collaboration Centre for Aboriginal Health* , January 2012. https://www.ccnsa-nccah.ca/docs/health/FS-InuitQaujimajatuqangitWellnessNunavut-Tagalik-EN.pdf, 1.
[373]Igloliorte, Heather. "Curating Inuit Qaujimajatuqangit: Inuit Knowledge in the Qallunaat Art Museum." *Art Journal* 76, no. 2 (March 2017): 100–113. https://doi.org/10.1080/00043249.2017.1367196, 103.

problems they face. As reconciliation is a new process and is preceded with a long history of violence against Indigenous Communities, the Government of Canada needs to acknowledge the lingering structures that are detrimental to Inuit communities and inconducive to Inuit documentation of knowledge. Although collaboration between Inuit and the Government of Canada is important to the process, it is still following a format of Western constructions of ideas and knowledge. Creating Arctic policy in which IQ is not filtered or constrained to Western constructs of information is vital to create informed policy. Although IQ is documented in a variety of ways, art is pivotal to Inuit traditions and the continuality of their ancestral practices, and can be widely understood by qallunaat (non-Inuit).

BACKGROUND

Acknowledging Previous History

Reconciliation and the prioritization of Indigenous knowledge is a new concept for the Government of Canada. As the country has historically participated in genocide (as mentioned 21 times within the Truth and Reconciliation Final Report)[374]and the destruction of Indigenous culture. Due to Canada's problematic history, the integration of Indigenous values within governmental structure is an extensive project. In 2014, six years after The Truth and Reconciliation Commission of Canada (TRC) was created, the UN Human Rights Council examined the Government of Canada's treatment of Indigenous communities and published the *Report of the Special Rapporteur on the rights of Indigenous peoples*.[375] They found that there were previous structures that still existed from the Indian Act in Canada that were unfavorable to the proper inclusion of traditional knowledge.

Canada's discriminatory history of the Indian Act demonstrated "notable episodes and patterns of devastating human rights violations, including the banning of expressions of Indigenous culture and religious ceremonies …[and] continues to structure important aspects of Canada's relationship with First Nations today, although efforts at reform have slowly taken place."[376] In order to understand the importance of effective inclusion of traditional knowledge, it is important to understand the previous structures and where they originated from. The Indian Act and its repercussions control most aspects of Indigenous life including "Indian status, land, resources, wills, education, [and] band administration"[377] was significantly harmful to Indigenous communities. Although the Indian Act did not directly apply to Inuit, it created a standard of the relationship between Canada and Indigenous affairs. The consequences of the previous structures from the Indian Act can still be seen today in 2020 as protests across Canada have broken out in support of the Wet'suwet'en people. Many are standing with the Wet'suwet'en people in solidarity including the University of Washington American Indian Studies department who have stated:

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[374] Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future, Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future § (2015).

[375] Anaya , James. "United-Nations-Special-Rapporteur-on-the-Rights-of-Indigenous-Peoples;Hr." *Human Rights Documents Online*, July 4, 2014. https://www.refworld.org/docid/53eb3b774.html.

[376] Ibid, 4.

[377] Montpetit, Isabelle. "Background: The Indian Act | CBC News." CBCnews. CBC/Radio Canada, July 14, 2011. https://www.cbc.ca/news/canada/background-the-indian-act-1.1056988.

> We request that Canada and the provincial governments respect Indigenous rights as outlined in the Canadian Constitution, in countless court rulings, in the United Nations Declaration of the Rights of Indigenous people (UNDRIP), and in 'Anuc niwh'it'en (Wet'suwet'en law).[378]

The continuation of violence against Indigenous peoples and historic banning of Indigenous culture shows lack of respect for Indigenous knowledge and way of life. Historical erasure of culture and knowledge systems must be addressed by the Truth and Reconciliation Act with special recognition and revitalization of Indigenous culture. When discussing the current structures that exist between Canadian and Indigenous communities, Frances Abele, a Carleton University Professor in Aboriginal-Canada relations and northern development policy, stated that "Current structures of Inuit and federal governments aren't working, we need to start working on finding a structure that empowers Inuit leadership. We need to put Inuit at the center and let everyone struggle to work around that."[379]As Canada is in the beginning steps of reconciliation it is important to acknowledge the lingering governance structures that exist and push beyond current understanding of knowledge sharing.

Reconciliation

Although the past historical relations between the Government of Canada and Indigenous Canadians shows that reconciliation will be a difficult and extensive process, the Government of Canada is working to set ambitious goals to foster effective collaboration and inclusion. In 2015, the Truth and Reconciliation Commission of Canada (TRC) released a final report that acknowledged past human rights violations as well as the need to reconstruct governance structures to ensure Indigenous voices are heard. As stated frequently within the TRC plan, Indigenous voices are necessary for any steps moving forward regarding the future of the Government of Canada. "Canadians have much to benefit from listening to the voices, experiences, and wisdom of Survivors, Elders, and Traditional Knowledge Keepers – and much more to learn about reconciliation."[380] In 2015, the Government of Canada stated their vision to see that Indigenous knowledge keepers would hold an important role within the restructuring of Canadian life. This shows their commitment to and prioritization of inclusion. The prioritization of Indigenous Knowledge continues to be a common theme for the Government of Canada within *Canada's Arctic and Northern Policy Framework,* which was recently published in 2019.[381] Within this document they state eight clear goals, one of them being "Reconciliation supports self-determination and nurtures mutually respectful relationships between Indigenous and non-Indigenous peoples." The policy framework promises to: "Change federal practices and processes in support of increased self-determination and representation of Arctic and northern Indigenous peoples and recognize the unique operating environment of various Indigenous and public governments in the Arctic and North." And "Reclaim, revitalize, maintain and strengthen the cultures of the Arctic and northern Indigenous peoples, including their languages and

[378] "American Indian Studies." AIS Stands in Solidarity and in Support of the Wet'suwet'en People | American Indian Studies | University of Washington. Accessed March 4, 2020. https://ais.washington.edu/news/2020/02/13/ais-stands-solidarity-and-support-wetsuweten-people.

[379] Frances Abele, meeting at Carleton University, 28th of January 2020.

[380] Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future, Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future § (2015), 9.

[381] Canada's Arctic and Northern Policy Framework, Canadas Arctic and Northern Policy Framework § (2019).

knowledge systems." [382] The Government of Canada understands the growing need to bridge cultural gaps that exist within knowledge regarding the Arctic. Indigenous self-determination and representation are outlined within Canada's government priorities which discuss their growing need to increase efforts of purposeful inclusion. The government of Canada, as expressed in this recent framework, is committed to the incorporation of Indigenous knowledge in the implementation of the Arctic Policy.

The Government of Canada plans to be a champion on the international stage of the incorporation of Indigneous Knowledge. Within the International Chapter or *Arctic and Northern Policy Framework* they state that "While there is a growing appreciation of how Indigenous knowledge improves our understanding of the Arctic and North, barriers remain to its equitable and respectful inclusion within international forums… Canada will champion the meaningful inclusion of Indigenous knowledge in international forums that make decisions affecting the Arctic."[383] The Government of Canada has a clear commitment to the inclusion of Indigenous knowledge in how we understand the Arctic and in being an international leader in promoting collaboration. As the Government of Canada recognizes the barriers that limit effective expression of traditional knowledge, it is vital to rework policy formats to be inclusive of various mediums of knowledge. To lead the international discussion around effective inclusion, it requires the Government of Canada to think beyond policy structures that are not conducive to IQ systems.

Inuit Art in Policy

One of the ways traditional knowledge can have an impactful role within policy is through art. The UK Policy Lab is an organization funded by the United Kingdom Government to create data-driven policy focused on people-centered design.[384] In an article discussing the role art could play within policy, a journalist named Stephen Bennett from the UK Policy Lab cites Olafur Eliasson, "Facts are one part; just as guilt does not inspire initiative, people will not act on facts alone. We are inspired to act by emotional and physical experience."[385] Action on an issue requires an emotional and cultural connection. As a result, art can be a beneficial addition as artists are skilled professionals in triggering these emotions and explaining cultural practices. Facts and data are overwhelmingly available when discussing the Arctic and sea ice melting, but in order to understand the connection to this land and bridge cultural gaps, Inuit art can play an important role.

Art in itself can support a critical role within policy, but the use of Inuit art is necessary when discussing the Arctic and the loss of sea ice. Heather Igloliorte, a PHD recipient from Concordia University in Inuit art, states that Inuit art " can be more accurately understood to encompass the complex matrix of Inuit environmental knowledge, societal values, cosmology, world views, and

[382] Ibid, objective 4.
[383] Arctic and Northern Policy Framework International Chapter , Arctic and Northern Policy Framework International Chapter § (2019), End of paragraph 4.
[384] Chari, Vasant, Becky Miller, Vasant Chari, Stephen Bennett, Nina Cutler, and Vasant Chari. "Blog Policy Lab." Policy Lab, January 13, 2020. https://openpolicy.blog.gov.uk/category/policy-lab/.
[385] Bennett, Stephen. "A Role for Art in Policy-Making?" Policy Lab, October 10, 2018. https://openpolicy.blog.gov.uk/2018/10/10/a-role-for-art-in-policy-making/.

language."[386] Inuit art holds a deep meaning beyond emotional connection, it is a gateway into culturally understanding Inuit perceptions of the world which is vital to the conversation when the Canadian Government discusses Arctic matters. Inuit art has been used previously in guiding international discussions around policy. In 1999, then-president of the Inuit Circumpolar Council (ICC) Sheila Watt-Cloutier brought an Inuit carving of a mother and child to UN negotiations in Nairobi, Kenya discussing the banning of Persistent Organic Pollutants (POPs).[387] John Buccini who was chairing the negotiations placed the statue in front of him during negotiations and made an impromptu speech stating "that Indigenous peoples were the 'conscience' of the negotiations."[388] This statue's presence at an international meeting discussing POPs which have a significant effect on Inuit way of life brought a human dimension to the meeting and assisted in the humanizing of this issue.[389] Art within policy holds an important role in informing policymakers of the emotional connection to an issue, and Inuit art is especially useful in explaining IQ and reconnecting artists with ancestral practices.

There is a need for further cultural understanding of Inuit traditional knowledge within policy and this need was greatly expressed within our meetings while our Task Force was in Ottawa. I had the opportunity to ask various organizations about how they view the use of art within Arctic policy and the responses were overwhelmingly supportive. Overarching Inuit knowledge can be visually represented and this allows for Inuit voices to be present within our chapters. Stephanie Meakin, the Senior Science Advisor at Inuit Circumpolar Council, stated that within any discussion regarding the Arctic "Knowledge holders have to be at the table to speak...if you want to express the voice of people then art is very important."[390] Recreating current structures is vital to the empowerment of Indigenous communities and will assist in cultural preservation. When our Task Force visited Crown and Indigenous Relations, I was able to ask Christopher Penney, a manager for Indigenous and Northern Affairs Canada, what he thought about the implementation of art in policy and his response was "I think it would be incredibly beneficial...absolute role there… its communication on a larger level."[391] Proper inclusion of IQ within Arctic policy is widely acknowledged by many of the experts we met in Ottawa, many of which acknowledged that the implementation of art within policy could be a step forward in the proper inclusion of IQ. Without proper inclusion and accommodation of cultural barriers, parts of IQ will be missing from the conversation.

While our Task Force was in Ottawa, I had the opportunity to interview a few Inuk artists as well. Barry Pottle laid the foundation for my studies as he explained his relationship to photography stating that "my medium is not traditional but I'm using my values of what I know and don't know in my work" and that "if you look at Inuit art its very romanticized but if you

[386] Igloliorte, Heather. "Curating Inuit Qaujimajatuqangit: Inuit Knowledge in the Qallunaat Art Museum." *Art Journal* 76, no. 2 (March 2017): 100–113. https://doi.org/10.1080/00043249.2017.1367196, 102.
[387] Johnson, Noor. "Thinking through Affect: Inuit Knowledge on the Tundra and in Global Environmental Politics." *Journal of Political Ecology* 21, no. 1 (January 2014): 161. https://doi.org/10.2458/v21i1.21130, 170.
[388] Ibid, 170.
[389] Berkes, Fikret (university Of Manitoba, Canada). *Governing the Coastal Commons — Communities, Resilience and Transformation*. Taylor & Francis Ltd, 2017, 242.
[390] Stephanie Meakin (Senior Science Advisor at Inuit Circumpolar Council), meeting at Inuit Circumpolar Council, January 29th 2020.
[391] Christopher Penney (manager for Indigenous and Northern Affairs Canada), meeting at Crown and Indigenous Affairs, January 30th, 2020.

progress, you see ownership and land."[392] Additionally, I interviewed Heather Campbell who explained that "part of the reason I do make art is because I want people to see it and feel something- I want them to have some kind of idea of what life is like in the North and what it would be like to have your oceans and land destroyed."[393] There is a wealth of knowledge that exists within Inuit artists regarding the Arctic that could be greatly beneficial to policymakers when making decisions affecting Inuit communities.

The implementation of art will not only be an informative addition to understanding Arctic matters, but it will also empower Inuit communities. As stated in the Final Report of the TRC:

> Art is active, and 'participation in the arts is a guarantor of other human rights because the first thing that is taken away from vulnerable, unpopular or minority groups is the right to self-expression.' The arts help to restore human dignity and identity in the face of injustice. Properly structured, they can also invite people to explore their own world views, values, beliefs, and attitudes that may be barriers to healing, justice, and reconciliation.[394]


Niap, 2019

As previously expressed within *Canada's Arctic and Northern Policy Framework*, reclaiming and revitalizing Inuit culture is one of the government's main priorities. Inuit art is a process of revitalizing Inuit identity and when added to Arctic policy, makes a clear stance that the Government of Canada will prioritize self-expression and culture. This act speaks volumes because expression of culture is the very thing that the Government of Canada tried to take from Inuit. When the Government of Canada banned expressions of Inuit culture, they banned the practice of tattooing.[395] Niap, an Inuk artist from Kuujjuaq, Nunavik, celebrated the practice of Inuit tattooing through her exhibit called Ivalu. This exhibit included paintings of Inuit women's tattoos, featuring her mother, her grandmother and her great-grandmother.[396] Her exhibit celebrated the revitalization of Inuit tattooing and featured a Nunatsiavut skin poke artist, Jessica Coffey, who created a traditional tattoo for Niap's arm and gave it to her live in front of the audience.[397] Inuit tattoos are an important example of the continuality of traditional knowledge and the revitalization of Inuit ancestral practices. Implementation of

[392] Barry Pottle, meeting in Ottawa, January 29th, 2020.
[393] Heather Campbell, interview over phone, February 21st, 2020.
[394] Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future, Final report of the Truth and Reconciliation Commission of Canada: volume one: summary: honouring the truth, reconciling for the future § (2015), 280.
[395] Allford, Jennifer. "Reclaiming Inuit Culture, One Tattoo at a Time." CNN. Cable News Network, October 23, 2019. https://www.cnn.com/travel/article/inuit-tattoos-culture-canada/index.html.
[396] "Niap – Ivalu: Tattooed." Feheley Fine Arts — Inuit Art Gallery, May 23, 2019. https://feheleyfinearts.com/niap-ivalu-tattooed/.
[397] Ibid.

Inuit art would allow for people outside of the Arctic to further understand Inuit communities and legitimize IQ knowledge systems.

Although the inclusion of Inuit art is not a replacement for Inuit to be at every step of the conversation, it will offer a possible solution to the cultural gaps that exist. Previous collaboration and prioritization has been beneficial to Inuit communities. For example, "*Canada's Arctic and Northern Policy Framework* was co-developed with rights-holders and stakeholders in the Arctic. It was not developed and then sent out for comments. This was a challenging and lengthy process but critical to the development of an effective policy."[398] Continued collaboration between Inuit and the Government of Canada is vital to the success of Arctic policy, and art would allow an additional level where Inuit cultural practices could be prioritized by the government.

Inuit Qaujimajatuqangit in Science

IQ has played a pivotal role in Arctic science. Priorities of the inclusion of IQ are outlined within *Canada's Arctic and Northern Policy Framework* as they state "Indigenous knowledge and scientific knowledge will be equally considered in decision-making."[399]This is one of the ways IQ has the potential to advance research in the Arctic and benefit policy development. Inuit hunters and elders in Clyde River, an Inuit community on eastern Baffin Island have been assisting a National Snow and Ice Data Center (NSIDC) researcher Shari Gearheard to understand environmental change. From this experience, she comments that "Inuit forecasters equipped with generations of environmental knowledge are helping scientists understand changes in Arctic weather."[400] Specifically the new facility called Canadian High Arctic Research Station (CHARS) located in Cambridge Bay, Nunavut was created as a place for scientists and Indigenous knowledge keepers to collaborate.[401] When asked about art and Indigenous knowledge within science, Jeannette Menzies from Global Affairs Canada used this facility as an example because of the design and art that is placed throughout, which assists the scientists in conducting research and reminding them of the importance of collaboration.[402] IQ has already played an important role within scientific research regarding Arctic sea ice and has encouraged productive collaboration.

RECOMMENDATIONS

Inuit voices in Arctic policy is a growing priority for the Government of Canada. As a growing need has been addressed for IQ within policy, the question still remains of how they will implement proper inclusion. Although discussion of the necessity for inclusion is present, it is important for the Government of Canada to take the next steps toward their ambitious goals of proper Inuit inclusion. Although this chapter follows previous structure of governmental policy and does not allow for a complete representation of Inuit voices, I believe that art is one of the

[398] Jeannette Menzies, meeting at Global Affairs Canada, January 27th, 2020.

[399] Canadas Arctic and Northern Policy Framework , Canadas Arctic and Northern Policy Framework § (2019), paragraph 3.

[400]"National Snow and Ice Data Center." Inuit knowledge helps science learn something new about Arctic weather | National Snow and Ice Data Center, April 7, 2010. https://nsidc.org/news/newsroom/20100407_gearheard.html.

[401] Walker. "The Canadian High Arctic Research Station Comes Online." Canadian Geographic, March 1, 2019. https://www.canadiangeographic.ca/article/canadian-high-arctic-research-station-comes-online.

[402] Jeannette Menzies, meeting at Global Affairs Canada, January 27th, 2020.

ways for us to begin the process of bridging cultural gaps when discussing Inuit land and is merely the beginning of the conversation. Government understanding of cultural significance is vital when making decisions regarding Arctic policy and must be inclusive in incorporating IQ.

As reconciliation is a main priority for the Government of Canada, it is important to begin thinking about ways the structure of governmental collaboration can be conducive to Inuit culture. In hopes to begin the conversation of effective inclusion of IQ, the Government of Canada needs to think beyond political structural norms. The following are a few recommendations of ways in which this could be achieved.

(1) Implement Art within Policy

Working with knowledge holders and artists to implement art in policy is important to the process of understanding cultural differences and the success of Arctic policy. Canada hopes to be an international leader in the prioritization of respectful inclusion on IQ, which requires pushing the boundaries of current governance structures and policy practices. Because of the goals stated, implementing art within policy could be one of the ways in which Canada attempts to push the boundaries and create a more inclusive environment. Implementation of art within policy could act in two ways, one by properly informing policymakers of cultural practices and IQ as well as empower Inuit cultural practices.

(2) Engage in a consultation process to identify effective ways of representing Inuit Qaujimajatuqangit

Working with knowledge holders to identify other ways traditional knowledge can be presented will allow for Inuit to discuss the ways they wish to be represented. As Inuit art is not the only platform where IQ can be represented, it is important that the Government of Canada to work with knowledge holders to explore various ways IQ is documented. Creating a space in which IQ can be represented in a variety of ways will ensure the presentation of IQ is beneficial to Inuit. Not only will this encourage proper representation but it will empower Inuit communities and show them the government is prioritizing the inclusion of IQ.

(3) Engage in a consultation process to identify past collaboration tactics that have been beneficial to Inuit

Identifying effective collaboration and learning from beneficial tactics is vital to creating new ideas. It is important to look at documents like *Canada's Arctic and Northern Policy Framework,* which includes efforts towards meaningful collaboration with Inuit communities. Facilities such as Canadian High Arctic Research Station also contribute to these efforts by implementing art throughout their facilities in order to bridge the gap between science and IQ. It is important for the Government of Canada to engage in an open dialogue with Inuit regarding the efficiency of these collaborations to ensure proactive bilateral partnership. By looking at tactics that have been beneficial to Inuit and the government, we can continue to build upon effective collaborative tools and move toward their goals of effective collaboration.

ACKNOWLEDGEMENTS

This project wouldn't have been possible without my two professors, Nadine Fabbi and Michelle Koutnik, who have helped encourage me, as well as the artists I had the pleasure of speaking with, Barry Pottle and Heather Campbell. Additionally, I would like to thank two influential

American Indian Studies professors at the University of Washington, Luana Ross and Joshua Reid, who introduced me to the topic Indigenous rights and continue to inspire me.

Biography

Bonnie Greer is an undergraduate senior majoring in International Studies and aspires to pursue a career in climate change activism. She aims to combat the environmental racism that exists with the Green Movement. She has garnered a strong understanding for proper collaboration within Indigenous communities and a great respect for the level of strength and activism that exists within Indigenous movements. This project nurtured her passion for elevating and supporting Indigenous voices within the climate change movement.

Conclusion: The Arctic: Reflecting and Moving Forward

CLAIRE COWAN AND JOHNNA BOLLESEN
Henry M. Jackson School of International Studies, University of Washington

We're more divided than ever, but we're not talking to each other.
— Whit Fraser

The title of our Task Force, *The Right to Sea Ice: Canadian Arctic Policy and Inuit Knowledge*, signifies the need for a greater Inuit presence in policymaking. As the Arctic polar region continues to change in the face of climate change and sea ice loss, it is crucial to embrace Inuit knowledge in research and policy discussions in order to implement long-term solutions that promote environmental sustainability and thriving northern communities. Each of our chapters addresses a critical issue related to sea ice in connection to human rights, environmental protection, and global awareness.

Our 2020 Task Force trip to Ottawa enabled us to engage in important conversations about international law, which helped us gain a new and unique perspective about northern affairs and climate change in the Arctic. Each of these interactions inspired the individual focuses of our chapters. We have strived to draw attention to the current key issues taking place, but it is necessary to acknowledge the ongoing challenges that continue to confront the health and wellbeing of the Northern region. As of the writing of this report, B.C. is pushing for the construction of the Coastal GasLink pipeline, which would cut through Wet'suwet'en territories and have detrimental impacts on the land, water, and community. Under Wet'suwet'en law, the hereditary chiefs have authority over these traditional lands. Despite never consenting to the construction of the pipeline, there are still plans for the project to move forward.

Hazardous projects like these and future human disruptions pose an immense threat to the state of the Arctic and local communities. This report advocates for the imperative need to listen to Indigenous voices and review land claims rights in the face of adversity. Only by unifying Inuit knowledge with traditional policymaking discussions can effective policies be implemented that safeguard Indigenous communities and sustain the indispensable Arctic polar region.

CHAPTER 1: Chapter 1 discussed the effects of climate change and increased shipping through the Northwest Passage on native Arctic wildlife. These environmental impacts have threatened endangered species, changed hunting and breeding grounds, and shifted migration patterns. For bowhead whales and caribou, two fundamental resources of Indigenous communities, these changes are especially destructive. While there are current policies in place to protect Arctic marine and terrestrial animals, it is necessary to continue strengthening these policies through greater environmental conservation efforts, shipping regulations, and adding an Indigenous presence in policymaking.

CHAPTER 2: Waste management has presented itself to be a major environmental health threat in Arctic Inuit communities. With the warming of the Arctic, the long used methods of open burning and uncontained landfilling is increasingly making a negative impact to both human and environmental health. This method is less viable and comprehensive, making contained waste infrastructure necessary. Comprehensive, contained waste infrastructure is necessary to allow for

Arctic communities to thrive in the face of climate change. As the Arctic opens to new and increased traffic from with ice extent loss, there are emerging opportunities to strengthen and standardize Arctic waste management. Solutions to the problem of waste could include creating haul-out programs with Arctic suppliers, implementing best practices for landfilling and burning, and coordinating clean-up initiatives to create a clean start within each community.

CHAPTER 3: As climate changes, the melting sea ice provides possibilities to expand the mining industry in the Arctic. The Mary River Mine is one of the mines that is in consideration to be expanded in the Canadian Arctic. Although this development will provide economic opportunities for Inuit communities, it will consequently create several problems as well. Two of the critical issues that will arise from this development are: 1) an increasing rate of women that are harassed in the region; 2) and the unequal treatment toward contract workers at the mine. In order to address these issues, it requires the collaboration between the Government of Canada and the Baffinland Iron Mines Corporation, the owners of the Mary River Mine, in order to solve the problems in the regions.

CHAPTER 4: Chapter 4 discussed the Inuit Nunangat housing crisis and the effects of permafrost on housing in the North. In addition to an overall shortage of housing in the North, the existing houses lack the infrastructural designs to support the ongoing changes in permafrost, which adds a self-conscious effect to Inuit lifestyle. Permafrost has already begun to threaten infrastructure in the North, and funding is limited and not distributed efficiently. While the Government of Canada, the Inuit Tapiriit Kanatami, and the various governments of Inuit Nunangat are working diligently address these issues, there is a need to increase consistent distribution of funding, create culturally conscious housing, and research best new methods of building on thawing permafrost.

CHAPTER 5: Chapter 5 explored the relationship between human rights and the environment and considered the feasibility of granting legal rights to the environment. Inuit livelihood and culture are closely tied to sea ice. That relationship with sea ice can potentially guide new understandings of rights and to whom they are applicable. This chapter analyzed two case studies of attempts at environmental defense: 1) Sheila Watt-Cloutier's 2005 petition to the Inter-American Commission on Human Rights; and 2) the Te Awa Tupua Act that granted legal personhood the Whanganui River in New Zealand. These two case studies identified Indigenous knowledge as a possible key element to successfully protecting the environment.

CHAPTER 6: Inuit legal perspectives have largely been missing from international law and the domestic legal system of Canada. This omission is a significant oversight and a missed opportunity for current legal approaches in the Arctic region. Inuit legal-thinking is a vital perspective to include in the governance of the Arctic region. An Inuit legal approach would provide a tremendous opportunity for the international community and the Government of Canada on Arctic governance. This would allow for an entirely new perspective and different capability in the Arctic, and one that has existed sustainably for thousands of years. The international community would greatly benefit by learning from those who have thrived in the Arctic for so long.

CHAPTER 7: The ultimate goal of creating Nunavut and settling the Nunavut Land Claims Agreement was to promote Inuit self-determination and self-governance. Under the Agreement, the federal and territorial government needs to uphold Article 23 and transform the current education system in order to reach an 85% Inuit representation in government, with IQ and Inuktitut at the center of this transformation. Additionally, the devolution process and the discussion about land use management needs to include the discussion about the integrity of sea ice that can be added into Article 12, as it is in the Labrador Inuit Land Claims Agreement.

CHAPTER 8: Given the past history of violence against Indigenous communities by the Government of Canada, reconciliation will be an extensive project. With the current existing governmental structure, it is important to rethink the ways in which we perceive traditional knowledge and its incorporation within policy. Art is one such way that we can incorporate IQ in Arctic policy and encourage the revitalization of Inuit culture.

APPENDIX A: OTTAWA PROGRAM

Saturday, 25 January 2020
8:10 am – Depart Seattle
6:11 pm – Arrive in Ottawa! Ashbury House Bed and Breakfast, 303 First Avenue

Sunday, 26 January 2020
8:00-9:00 – Breakfast discussion with Dr. Joanne Muzak, Professional Editor and Writing Consultant, "Taking Notes on the Go"
Student Host: Elizabeth Wessells, University of Washington

10:30-Noon – **Indigenous Walks** tour of Ottawa led by Hunter Mckenzie(Métis/Cree/Mohawk), Indigenous Walks Tour Guide, Âjagemô Art Space, 150 Elgin Street
Student Host: Bonnie Greer, University of Washington

Noon-1:30 – Lunch discussion with Dr. Muzak, Byward Market

1:30 – Free time, **Canadian Museum of History** or **National Gallery of Canada**

4:00-5:30 – "Policy Writing Workshop," Dr. Muzak, Ashbury House

5:30-6:00 – "Making Environmental Policy: Working with Stakeholders," Eric Finke, US Environmental Protection Agency (retired)

Monday, 27 January 2020
7:30 – Breakfast

9:30-12:30 – **Global Affairs Canada**, Robert Kadas, Deputy Director and Senior Advisor to the Arctic Council; Emma Jia, Policy Officer; and Eugenie Panitcherska, Coordinator for Organization of American States, 111 Sussex Drive, Room S7-214
Student Host: Ellen Ahlness, University of Washington

12:30-2:30 – Lunch discussion with Dr. Muzak

2:30-4:30 p.m. – **Nunavut Sivuniksavut**, Murray Angus, Co-Founder, Executive Director 450 Rideau Street, Suite 201
Student Host: Nadene Paltep, University of Washington

Tuesday, 28 January 2020
8:00 – Breakfast

10:00-11:30 – **Frances Abele**, School of Public Policy and Administration, Carleton University, Richcraft Hall, 5th Floor, 9376 University Drive
Student Host: Caitlin Clarke, University of Washington

1:30-4:00 – **Canadian Ice Service and Environment and Climate Change Canada**, Dr. Paul Yang, Associate Director of Prediction Services Operations, Atlantic and Ice Division; Scott Weese, Dean Flett, Suzanne D'Amours, Katherine Wilson, Tom Zagon, 719 Heron Road
Student Host: Claire Cowan, University of Washington

Wednesday, 29 January 2020
7:30 – Breakfast

9:30-10:30 – **Inuit Circumpolar Council**, Stephanie Meakin, Senior Science Advisor, 75 Albert Street, Suite 1001
Student Host: Kimiko Boswell, University of Washington

11:00-1:00 – **Inuit Tapiriit Kanatami**, Kevin Kablutsiak, Director of Communications, 75 Albert Street, Suite 1101
Student Host: Kendrick Lu, University of Washington

2:30-4:00 – **Whit Fraser**, author, True North Rising, Ashbury House
Student Host: Johnna Bollesen, University of Washington

5:00 – Dinner with **Barry Pottle**, Inuk photographer, Ashbury House
Student Host: Bonnie Greer, University of Washington

Thursday, 30 January 2020
7:30 – Breakfast

9:30-11:30 – **Crown-Indigenous Relations and Northern Affairs Canada**, Barry Pottle, Senior Aboriginal Awareness Officer, Learning and Well Being Directorate, Human Resources Work Services Branch; and Christopher Penney, Manager, Relationships. Inuit-Crown Partnership Directorate, Reconciliation Secretariat, Crown-Indigenous Relations and Northern Affairs Canada, 10 rue Wellington, Gatineau, Québec
Student Host: Kimiko Boswell, University of Washington

1:30-4:00 – **University of Ottawa Symposium**, "A Melting Arctic: Implications of Sea-Ice Loss on Governing the Arctic," University of Ottawa, Taberet Hall, 550 Cumberland Street, Room 319
Student Host: Winnie Chen, University of Washington

1:30-2:30 – **Military Operations and Arctic Sea Ice Loss**
Moderator: Mark Salter, University of Ottawa
Lieutenant Commander Sylvain Bernier, Royal Canadian Navy
Major Conrad Schubert, Vice Commander, Joint Task Force North

2:45 – 4:00 – **Arctic Reporting, Shipping and Governance**
Moderator: Nadine Fabbi, University of Washington
Eilis Quinn, Reporter, Eyes on the Arctic

Alison Cook, Post-doctoral Researcher, University of Ottawa
Mathieu Landriault, Research Associate, Center for International Policy Studies;
Research Fellow, Centre for the Study of Canada, Trent University

Sponsors: Centre for International Policy Studies, University of Ottawa; International Policy Institute, Canadian Studies Center and the Center for Global Studies, Henry M. Jackson School of International Studies, University of Washington; Institute for Science, Society and Policy, University of Ottawa; North American and Arctic Defence and Security Network; and Observatoire de la politique et la sécurité de l'Arctique, École nationale d'administration publique.

Friday, 31 January 2020
6:30 – Breakfast

8:45 – **Embassy of Finland**, Jyrki Nissila, Minister-Counsellor, Deputy Head of Mission, 55 Metcalfe Street, Suite 850
Student Host: Mackenzie Vezina, Carleton University

11:00 – **Embassy of Iceland**, Ambassador Pétur Ásgeirsson, 360 Albert Street, Suite 710
Student Host: Elizabeth Wessells, University of Washington

1:30-3:00 – **Embassy of the United States**, Lonzell 'Bud' Locklear, Special Adviser in Energy and Environment Section, 490 Sussex Drive
Student Host: Johnna Bollesen, University of Washington

3:30-4:30 – **Delegation of the European Union to Canada**, Thomas Gilbert, Communication Officer, 150 Metcalfe Street, Suite 1900
Student Host: Gabrielle Coeuille, University of Washington

7:00 – Celebration Dinner/Reception, Ashbury House

Saturday, 1 February 2020
9:00 – Breakfast
Noon – Leave for airport
2:00 – Flight departs Ottawa;
7:38 – Flight arrives at SeaTac airport Seattle!

APPENDIX B: OTTAWA HOST OFFICES AND DELEGATES

The Task Force wishes to thank the following offices and individuals for their time and their insights shared with the Task Force student delegation to Ottawa.

FEDERAL DEPARTMENTS

Canadian Ice Service, Meteorological Service of Canada, Environment and Climate Change Canada

Paul Yang, Associate Director, Prediction Services Operations, Atlantic and Ice Division, Meteorological Service of Canada
Scott Weese, Manager, Analysis and Forecast Operations of Canadian Ice Service, Prediction Services Operations, Atlantic and Ice Division, Meteorological Service of Canada
Dean Flett, Senior Manager, Applied Science and Development Section, Prediction Services Operations, Atlantic and Ice Division, Meteorological Service of Canada
Eric Vaillant, Training and Standards Manager, Ice Field Service, Prediction Services Operations, Atlantic and Ice Division, Meteorological Service of Canada
Tom Zagon, Acting Manager, Applied Science and Development – Ice, Prediction Services Operations, Atlantic and Ice Division, Meteorological Service of Canada

Crown-Indigenous Relations and Northern Affairs Canada

Barry Pottle, Senior Aboriginal Awareness Officer, Learning and Well Being Directorate, Human Resources Work Services Branch
Christopher Penney, Manager, Relationships, Inuit-Crown Partnership Directorate, Reconciliation Secretariat, Crown-Indigenous Relations and Northern Affairs Canada
Jyoti Bhargava, Senior Analyst, Intergovernmental and International Relations Directorate, Indigenous and External Relations Branch
Mackenzie Vézina, Junior Policy Analyst, Intergovernmental and International Relations Directorate, International and External Relations Branch, Crown-Indigenous Relations and Northern Affairs Canada
Marko DeGuzman, Student Policy Analyst, Crown-Indigenous Relations and Northern Affairs Canada.

Global Affairs Canada

Jeannette Menzies, Senior Advisor, Nordic and Polar Relations, Global Affairs Canada
Ana Maria Araujo, Senior Policy Analyst, Nordic and Polar Relations, Global Affairs Canada
Christina Nguyen, Senior Policy Analyst, Defense and Security Relations
Simon Cridland, Deputy Director, Oceans and Environmental Law, Global Affairs Canada

INUIT ORGANIZATIONS

Inuit Circumpolar Council (international Inuit organization)

Stephanie Meakin, Senior Science Advisor
Carole Simon, Executive Assistant

Inuit Tapiriit Kanatami (national Inuit organization)
Kevin Kablutsiak, Director, Communications
James Kuptana, Manager, Environment and Wildlife

Nunavut Sivuniksavut (Inuit post-secondary school)
Murray Angus, Co-Founder, Executive Director
Shelton Nipisar, Arviat, Nunavut, 2nd year student
Lilly Parr, Cape Dorset, Nunavut, 2nd year student
Mary Sarah Nikki-Pisco, Iqaluit, Nunavut, 2nd year student

UNIVERSITIES

Carleton University, Public Policy and Administration
Frances Abele, Chancellor's Professor of Public Policy and Administration, Academic Director of the Carleton Centre for Community Innovation, Fellow of the Centre for Governance and Public Management, and Research Fellow at the Institute for Research on Public Policy, Carleton University
Robert Hammitt, Ph.D. student, Public Policy and Administration

University of Ottawa Televised Symposium
A Melting Arctic: Implications of Sea-Ice Loss on Governing the Arctic
Panel #1: Military Operations and Arctic Sea Ice Loss
Moderator: Mark Salter, Political Studies, Faculty of Social Sciences, University of Ottawa
Lieutenant Commander Sylvain Bernier, Royal Canadian Navy
Major Conrad Schubert, Vice Commander, Joint Task Force North, Canadian Forces

Panel #2: Arctic Reporting, Shipping and Governance
Moderator: Nadine Fabbi, Canadian Studies Center/International Policy Institute, Henry M. Jackson School of International Studies, University of Washington
Eilis Quinn, Reporter, *Eye on the Arctic*
Alison Cook, Post-doctoral Researcher, University of Ottawa
Mathieu Landriault, Research Associate, Center for International Policy Studies; Research Fellow, Centre for the Study of Canada, Trent University

Sponsored by the Centre for International Policy Studies, University of Ottawa; International Policy Institute, Canadian Studies Center and the Center for Global Studies, Henry M. Jackson School of International Studies, University of Washington; Institute for Science, Society and Policy, University of Ottawa; North American and Arctic Defence and Security Network; and Observatoire de la politique et la sécurité de l'Arctique, École nationale d'administration publique.

EMBASSIES

Delegation of the European Union to Canada
Eva Palatova, Head of Political and Public Affairs Section, Counsellor (Czech Republic)
Thomas Gilbert, Political and Public Affairs Section (France)
Asa Corneliusson, Intern (Sweden)

Embassy of Finland
Jyrki Nissilä, Minister-Counsellor, Deputy Head of Mission

Embassy of Iceland
Pétur Ásgeirsson, Ambassador
Ólöf Dögg Sigvaldadóttir, Attaché

Embassy of the United States of America
Lonzell 'Bud' Locklear, Special Adviser for Energy and Environment
Robert Tibbetts, Environment, Science and Technology, and Health Officer, and Arctic Officer
Joseph Crook, Embassy Spokesperson (Jackson School alumnus)
Susan Bridenstine, Cultural Affairs Officer
Stephen Sztuk, Analyst, Legal Attaché Office

INDIVIDUALS

Eric Finke, US Environmental Protection Agency (retired), Bellingham, Washington
Whit Fraser, author, *True North Rising*, Ottawa
Hunter Mckenzie (Métis/Cree/Mohawk), Indigenous Walks Guide
Joanne Muzak, Professional Editor and Writing Consultant, Montréal
Barry Pottle, Inuk photographer, Ottawa

APPENDIX C: OTTAWA PHOTO ALBUM AND VISIT SUMMARIES

The following provides a short summary of each of the visits in Ottawa.

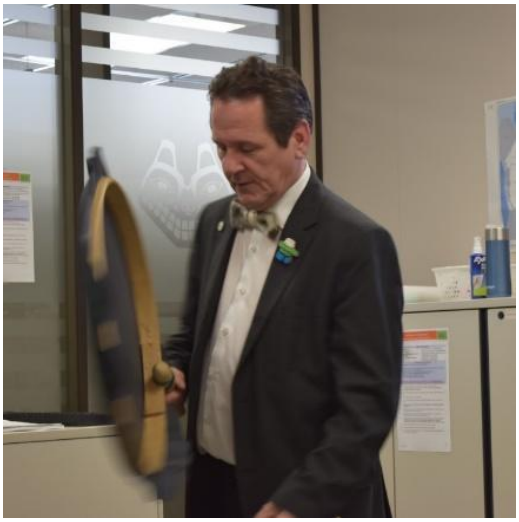
FEDERAL DEPARTMENTS

Canadian Ice Service, Meteorological *Service* of *Canada*, Environment and Climate Change Canada

"We were given the incredible opportunity to visit the Canadian Ice Services office, an organization that specializes in ice information regarding Canada's navigable waters. At this meeting, we had different presentations engaging us in the partnerships, work, and scientific research of the organization. Associate Director Paul Yang and his team provided us valuable insight into how abnormalities are detected and reported, ensuring the safety of Canadian travelers, their property, and the environment. This visit showed how Canadian Ice Services provides an important resource in data about sea ice and how that affects sea travel through the Arctic region." – *Claire Cowan*

Global Affairs Canada

"We spent a morning at Global Affairs Canada, hearing from senior policy analysts and advisors from Nordic and Polar Relations, Defense and Security Relations, and Oceans and Environmental Law. In these conversations, the Task Force learned about Canada's fundamental role in the creation of the Arctic Council, and its ongoing interests and activity in the intergovernmental forum. The insights and experiences the analysts shared during this meeting furthered the Task Force members' understanding of the interactions between the Canadian government's interests and commitments and those of the Inuit Circumpolar Council, and the broader Arctic community." – *Ellen A. Ahlness*



Crown-Indigenous Relations and Northern Affairs Canada

"We had the great honor of joining Barry Pottle at Crown-Indigenous Relations and Northern Affairs Canada. He began by introducing himself as the Senior Aboriginal Awareness Officer and giving a demonstration of the *qilaut*. He proceeded to give an overview of what Crown-Indigenous Relations and Northern Affairs Canada does and passed around materials on different Indigenous groups represented in Canada. We also had the opportunity to learn from both Christopher Penney and Jyoti Bhargava, who shared their involvement with the organization." – *Kimiko Boswell*

INUIT ORGANIZATIONS

Inuit Circumpolar Council (ICC)

"At ICC, Canada we had the opportunity to talk with Senior Science Advisor Stephanie Meakin, who guided us through a comprehensive talk on subjects ranging from housing to collaboration with the ICC. She spoke about the importance of representing all four Inuit groups, Inuit sovereignty, and the pragmatic approach of Inuit to access in the Arctic. She enlightened us on how Inuit are open to collaboration and access of the Arctic by non-Arctic entities, and their awareness of how their policies and actions may affect other people." – *Kimiko Boswell*

Inuit Tapiriit Kanatami

"We were welcomed by the Inuit Tapiriit Kanatami (ITK) to visit their offices in Ottawa, which was a wonderful opportunity to see the work of the national organization that is working to advance Inuit rights, health, and wellbeing across Canada. We spoke with Kevin Kablustiak, Director of Communications of the ITK, who gave us an overview of key events in the Inuit political movement during what is known as Canada's darkest chapter. Kevin also shared with us the current priorities of the ITK; as we had already read the ITK's *Arctic and Northern Policy Framework: Inuit Nunangat*, we were able to ask Kevin many

questions about ITK's current positions on important issues. Overall, the visit provided helpful insights into the way Inuit work with the Canadian government to advance Inuit wellbeing." – *Kendrick Lu*

Nunavut Sivuniksavut

"We had an amazing opportunity to visit Nunavut Sivuniksavut (NS), a school that is dedicated in continuing secondary education for Inuit students from Nunavut, and to talk with Inuit students studying there. At the school, we had the chance to watch performances that included throat singing and traditional dances. In our discussions with the students we were able to learn about why continuing education in college is important to them and what NS means to them. At NS students learn about Inuit history through courses that cater to their interests. The connections that we have made at NS is one that each of us will cherish as we continue to learn more about Inuit culture." – *Nadene Paltep*

UNIVERSITIES

Carleton University

"Our Task Force was given the wonderful opportunity to meet and speak with Dr. Frances Abele at Carleton University. Dr. Abele is an expert in northern policy and economic development, with her research mostly focusing on the political and economic wellbeing of the Indigenous peoples of the Canadian North. Dr. Abele helped us all acquire meaningful insight into the ways that modern treaty organizations utilize their rights through land claims agreements in Canada. This has had a significant impact on our policy writing and greatly contributed to our overall understanding of Inuit rights in Canada." – *Caitlin Clarke*

University of Ottawa Televised Symposium—A Melting Arctic: Implications of Sea-Ice Loss on Governing the Arctic

"The symposium included two panels discussing sea-ice loss from different perspectives, including security, media, and governance. The panels also addressed the role of Canadian government in the Arctic as well as insights as to how Indigenous peoples in the Arctic and the Canadian federal government can work together on major issues." – *Winnie Chen*

EMBASSIES

Delegation of the European Union to Canada

"Meeting with Eva Palatova and Thomas Gilbert was a true pleasure at the Delegation of the European Union to Canada. We discussed the complexities of the European Union's relationship to the Arctic Council, and the role and interest it has within the Arctic as a whole. This was an important and incredibly interesting perspective on Arctic sea ice policy, and most assuredly enriched our policy discussions." – *Gabi Coeuille*

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