



universität
wien

MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„Canadian Sovereignty in
the Northwest Passage?“

verfasst von / submitted by

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angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of
Master of Arts (MA)

Wien, 2019 / Vienna, 2019

Studienkennzahl lt. Studienblatt /
degree programme code as it appears on
the student record sheet:

A 066 589

Studienrichtung lt. Studienblatt /
degree programme as it appears on
the student record sheet:

Masterstudium Internationale Entwicklung

Betreut von / Supervisor

ao. Univ.-Prof. Mag. Dr. Friedrich Edelmayer, MAS

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Abstract

The Northwest Passage is a lengthy waterway that connects the Pacific and Atlantic oceans. While it spent much of history completely covered in ice due to its location in the Arctic, the influence of climate change has resulted in longer timeframes in the summer months during which parts of the Passage are partially or completely melted. This has drawn the attention of many nations who wish to use the waterway for commercial purposes, particularly for shipping of goods from Asia. Canada has voiced its increasingly strong opposition to such suggestions, through rhetoric as well as legal actions. This progressively intensifying issue has not yet been assessed by a court of law such as the United Nation's International Court of Justice, who would be responsible for hearing such a case. This paper addresses the feasibility of a successful Canadian bid for total sovereignty in the Northwest Passage.

Die Nordwestpassage ist eine lange Wasserstraße, die den Pazifik und den Atlantik miteinander verbindet. Während früher die Arktis vollständig mit Eis bedeckt war, hat der Einfluss des Klimawandels in den Sommermonaten zu längeren warmen Zeiträumen geführt. In dieser Zeit sind Teile der Passage teilweise oder sogar vollständig geschmolzen. Dieses Ereignis hat viele Nationen aufmerksam werden lassen, die die Wasserstraße für kommerzielle Zwecke nutzen möchten. In diesem Fall besonders für die Nationen, die Waren aus Asien versenden. Kanada hat sich zunehmend gegen solche Vorschläge durch Rhetorik und rechtliche Schritte ausgesprochen. Dieses ernsthafte Problem wurde noch nicht von dem Internationalen Gerichtshof der Vereinten Nationen beurteilt, der für die Anhörung eines solchen Falls zuständig wäre. Diese Arbeit befasst sich mit der Machbarkeit eines erfolgreichen kanadischen Angebots für die totale Souveränität in der Nordwestpassage.

Keywords: Canada, Northwest Passage, Arctic, sovereignty, climate change

1. Introduction

The Northwest Passage is a waterway of strategic importance due to its position connecting the Pacific and Atlantic oceans to each other. The topic of Canadian sovereignty in the region has been discussed since the late 1960's, but is becoming increasingly relevant as climate change continues to alter the makeup of the Passage even more dramatically. As the Earth's temperature rises, ice caps and glaciers in the Arctic melt for longer periods of time each summer, thus opening portions of the previously frozen Northwest Passage into potentially navigable waterways. Countries and companies alike have taken note of this situation, and have great interest in using this route for shipping goods, as it would reduce the shipping distance between Asia and Europe by 7,000 kilometers (Parker & Zagros 2008, 337). However, Canada is adamant that the Northwest Passage not be used for economic activity, and has been continuously attempting to prevent this from becoming a reality.

This paper will take an in depth look into this geopolitical situation, analyzing Canada's goals and strategies to prevent the Passage from being used by other nations, as well as those of the countries advocating for Passage access. In short, Canada's main goal is to deem the waters of the Northwest Passage internal waterways, so that it may establish sovereignty over the area and regulate who may pass through it (Pharand 2007, 11). Other countries, particularly China, the United States, and European states, oppose this claim and are urging for this area to be deemed international waters. While this issue has yet to proceed to a court, the past legal decisions of the International Court of Justice (ICJ) do play important roles in this scenario, by shedding light onto the legal realities of each country's argument, and they will thus be of importance in the forthcoming pages. Due to the complex and ever-evolving nature of this discussion to the present day, the analysis of the Northwest Passage dispute presented in this paper will be limited to the developments unfolding through December 31, 2018.

The question being posed in this research paper is: ***will Canada's claims for sovereignty prevail and result in total Canadian control over the Northwest Passage?*** This query will be assessed through an objective, interdisciplinary approach that will place a strong focus on historical developments and international law. Environmental, macroeconomic, and microeconomic aspects are also integral for both understanding and properly assessing this debate. This impartial examination of the situation aims to provide an in-depth analysis of this increasingly important geopolitical debate.

To begin assessing the feasibility of Canada's claims, it is first necessary to understand the geography of the Northwest Passage, as well as the extent of the ice coverage, which will be detailed in chapter two.

Chapter three then presents a brief history of the Passage, as well as the events of recent history that propelled the region's sovereignty into a global debate in the late 1960's and 1970's. It will then go on to outline the national and international laws created during the 1970's that are central to the dispute surrounding the Northwest Passage. Chief among these is the United Nations Convention on the Law of the Seas; the international law that sets boundaries for littoral states, and is thus integral to this discussion.

Next, chapter four will outline the manifold grounds that make the Northwest Passage so attractive for all involved parties. In addition to using the waterways as a shorter shipping route between the Atlantic and Pacific, some states wish to deploy military vessels to the area or conduct research. Furthermore, the presence of natural resources is of great importance, particularly to Canada and the United States.

Chapters five and six define and analyze the arguments of the countries most vocal in this maritime dispute. The prior discusses Canada's environmental and legal claims to the waters. This chapter also offers a case study of Nunavut, the Canadian territory that borders a large portion of the Northwest Passage and is largely inhabited by the Inuit people group. The study assesses the potential threats to aboriginal livelihood that are posed by climate change and the potential of increased

maritime traffic in the region. To conclude the chapter, Canada's many claims are assessed for their durability in both international debate and potential legal proceedings. Subsequently, chapter six describes the arguments of Canada's primary opponents, namely the People's Republic of China, the United States, and the European Union.

Chapter seven then goes into greater detail regarding two multilateral platforms that are key to this issue; the Arctic Council and the International Court of Justice. As platforms for discussion, cooperation, and conflict resolution, they contribute substantially to the environmental, economic, and legal debates surrounding the Northwest Passage. Finally, chapter eight concludes with an assessment of the future of the debate, assessing potential next steps as well as the dispute's possible outcomes.

2. The Geography of the Northwest Passage

2A. Maritime Routes

The Northwest Passage stretches from Baffin Bay in the east to the Beaufort Sea in the west, a total of about 2,400 kilometers in total, including land and ocean. Along this path stretches what is called the Canadian Arctic Archipelago, which is about 1,900 kilometers in length and contains about 36,000 islands (AMSA 2009, 20). This extremely rugged coastline is sparsely inhabited, but does contain a number of aboriginal communities whose livelihoods are largely based on the surrounding natural resources, particularly the water.

The name "Northwest Passage" refers to the six recognized marine routes (see map on page 62) that stretch from the Pacific to Atlantic oceans along the Canadian Arctic Archipelago. Each route consists of a series of bays, sounds, and straits which vessels pass through on their journey from east to west, or reverse. Which route a vessel chooses to navigate depends on its size and icebreaking capabilities, and most importantly the depth, width, and current ice and weather conditions of the various straits.



*Figure 1 Map of the most commonly navigated routes of the Northwest Passage
(Source: Wikimedia Commons)*

The first two routes of the Passage are the most commonly navigated of the six, as their deep waters and wide passages best suit deep draft vessels. Both of these routes begin in the Lancaster Sound in the east, then proceed to the Barrow Strait, Viscount Melville Sound, Prince of Wales Strait, before reaching the Amundsen Gulf in the west. These passageways range in width from under 10 kilometers in the Prince of Wales Strait to 100 kilometers in the Viscount Melville Sound. The second route follows a similar route, except this journey substitutes the Prince of Wales Strait for the M'Clure Strait. While the M'Clure straight is much wider, spanning 120 kilometers, its more northern position results in the more frequent accumulation of multi-year ice (AMSA 2009, 21). Depending on weather and ice conditions at the time of voyage, deep draft ships will most likely choose between these two routes, as they are both the deepest and widest of the six.

While next three routes also begin and end in the Lancaster Sound and Amundsen Gulf, they are comprised of passageways that have somewhat narrower widths, as well as shallower waters, than the first two routes. For example, routes 3A, 3B, and 4 contain the Queen Maud Gulf, whose eastern and western entrances are 14 kilometers wide, as well as the Dolphin and Union Strait, in which measurements of less than 10 kilometer passageways have been reported (AMSA 2009, 21). Route 3B's Simpson Strait is approximately 3 kilometers wide at its narrowest point,

and route 4's Bellot Strait has a restrictive depth of just 22 meters (AMSA 2009, 21).

The final route begins much further south than all others, namely in the Hudson Strait, before continuing to the Foxe Channel. While this channel reaches a width of 130 kilometers, its northern end, the Foxe Basin, contains numerous small islands and rocks, making for difficult navigation. West of the basin, this route then proceeds to the Fury and Hecla Strait, which is not only narrow but also has a strong current, the combination of which can be even more dangerous when the Strait is filled with ice (AMSA 2009, 21). These difficult conditions, ranging from narrow and shallow passageways to rock obstructions and strong currents, result in routes 3A, 3B, 4, and 5 being restricted to vessels with a draft of less than 10 meters (AMSA 2009, 20).

2B. Ice Coverage

For a long period of history, the routes of the Northwest Passage were completely covered by ice and thus unnavigable. The past several decades have witnessed an increase in global temperatures which have resulted in dramatic melting of ice in the Arctic during the summer months, despite being frozen over during the cold winter months. Ice coverage in the Arctic Sea typically reaches its maximum in both thickness and extent between the end of February and early April. At that point it begins warming up, then melting, and eventually reaches its minimum extent around mid-September. Scientists have recorded record lows for the extent of ice coverage in both winters and summers in recent years (Scott 2015). Data from 2016 reveals that the Arctic ice receded to the second lowest extent in the satellite record (see figures 2 and 3 below), and suggests that even greater ice losses are to be expected in the summers to come (Scott 2016). This can be predicted by the steady increase of both atmospheric temperatures and water temperatures.

Updated data from 2018 reveals that the summer sea ice extent was the sixth lowest on record, and the winter extent the second lowest (Arctic Report Card 2018, 25). The Arctic Report Card, published by the

National Oceanic and Atmospheric Institute (NOAA) in the United States, compiles statistics from its own databases as well as from the National Snow and Ice Data Center, and the National Aeronautics and Space Administration (NASA), among others. The resulting Report Card provides a comprehensive assessment of the oceanic and atmospheric conditions of the Arctic region, including the state of the Arctic sea ice. This data reveals that the 12 lowest sea ice extents ever recorded have occurred within the past 12 years (Arctic Report Card 2018, 26).

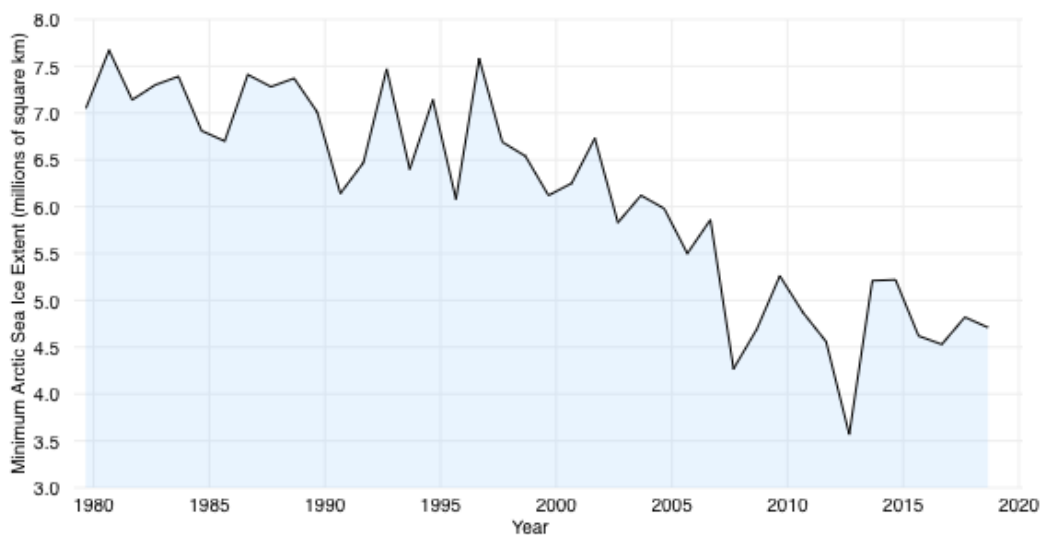


Figure 2: Minimum Sea Ice Extent in the Arctic.

Chart produced by NOAA, data provided by the National Snow and Ice Data Center (Source: Lindsey)

The melting of ice is a positive feedback loop. As melting occurs, the white, reflective surface area of the Arctic decreases, thus drawing more sun to its dark, open waters and increasing the heat index of those waters. As the sun beams down on yet more of these dark waters, they become increasingly warm, and the cycle of melting and warming is perpetuated (Lindsey). One area of the Arctic that is experiencing the largest increase in sea temperatures is Baffin Bay, the eastern point of entry to the Northwest Passage (Arctic Report Card 2016, 47).

The age of ice is another important factor in understanding the increased melting in the Arctic waters. Old ice is categorized as ice that survives its first summer without melting, and it is usually one to five meters in thickness. Most importantly, because air pockets drain out of the ice during the summer months, old ice is completely solid and thus extremely hard (AMSA 2009, 22). Due to its density, hardness, and thickness, old ice is far more resistant to any changes in oceanic or atmospheric conditions than young ice. As such, the loss of old ice in the Arctic waters only encourages the positive feedback loop of further melting. A study measuring ice four years and older found it to be present in 16% of the total sea ice coverage in the region in 1985, but only a mere 1.2% in March 2016 (Arctic Report Card 2016, 43). First-year ice, which refers to ice that has formed since the previous summer, is not only thinner but also has a higher salt content (Scott, Lindsey). These characteristics result in its vulnerability to warmer conditions and thus contribute to the positive feedback loop of ice melt in the Arctic. First-year ice now makes up approximately 77% of the total ice coverage in the region; a sharp increase from 55% in the 1980s (Arctic Report Card 2018, 29).

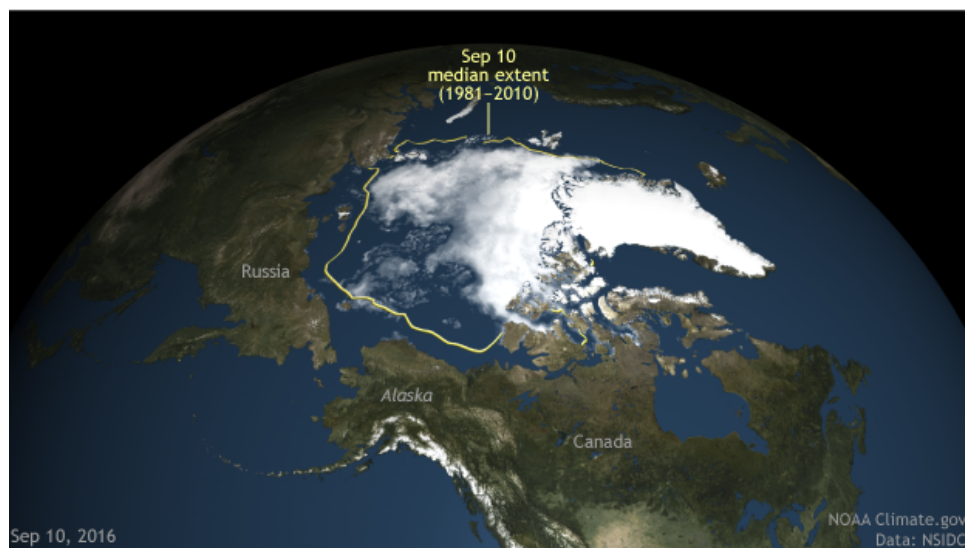


Figure 3: 2016 Arctic Sea Ice Summer Minimum - NOAA Climate.gov (Scott 2016)

Not only are glaciers and ice caps effected by the increased temperatures, but also the permafrost; the ground that is typically frozen year-round. Thawing permafrost effects the local ecosystem, and the local population which uses the frozen ground for transportation. In addition, enormous amounts of carbon dioxide and methane are released during the thawing process (Arctic Report Card 2016). These harmful greenhouse gasses then enter into the atmosphere and contribute to further atmospheric warming.

It is made clear above that the growing trend of increased atmospheric and water temperatures is having a significant impact on the entire Arctic region, including the Northwest Passage. The result is a downward trend in the minimum coverage of Arctic sea ice during the warmest months of the year, as reflected in figure 3 below. Since the first dramatic plunge in the extent of the sea ice coverage in 2007, the downward trend has continued, opening more of the Passage and for longer periods of time.

3. The History of the Northwest Passage

3A. Discovering the Northwest Passage

European explorers were long in search of a waterway above North America that would connect the Far East with the Atlantic. In the late 16th century, English explorers Martin Frobisher and John Davis each reached the eastern edge of the Canadian Arctic Archipelago on their journeys to the region, and reported having found the large landmass now named Baffin Island, as well as ice-blocked straits beyond it (Robinson). Shortly thereafter, explorers in the early 17th century reached the Hudson Strait, just south of Baffin Island, which led to the wide Hudson Bay. However, they were unable to find any passageways leading westward out of the Bay (Robinson).

At the start of the 19th century, British naval officer Edward Parry sailed north of Baffin Island and reached the opening of the Lancaster Sound. This sound, which then leads to the Viscount Melville Sound, is

the widest passageway through what is now known as the Canadian Arctic Archipelago, and is the one most frequently used by large vessels in the present day. However, during Parry's voyage in the summer of 1819, he reported the Viscount Melville Sound being obstructed due to thick, heavy ice moving eastward (Robinson).

A quarter century later, in 1845, Sir John Franklin began his last of several journeys to the Arctic region with the HMS Erebus and the HMS Terror (Neatby, Mercer). Since 1821, Franklin had been surveying and mapping large portions of the Arctic, and was thus an expert on the region (Neatby, Mercer). Despite both his expertise and the ships being designed for the harsh Arctic conditions, the expedition ended in a fateful disappearance of the crew and vessels. Historians have since determined that Franklin's journey westward ended when his ships were frozen in thick ice off of King William Island during the summer of 1846 (Neatby, Mercer). Although this journey ended tragically, and left much of the Northwest Passage untouched, it was essential in leading to the further discovery of the Passage.

In the twelve years following their disappearance, many expeditions set out in search of Franklin's crew. A result of this increase in expeditions in the region was the mapping of the coastal outlines of most of the islands in the complicated Arctic Archipelago (Robinson). Also during this period, English explorer Robert McClure, aided by new developments in knowledge of the Arctic region, became the first person to traverse the Northwest Passage. However, this journey was not completely by water, as the crew used sleds to traverse the portions of the ice-covered Parry Channel (Headland). Information of the voyages of the 19th century made its way back to England. Reports of Parry, Franklin, and McClure's journeys, all of which encountered thick, prohibitive ice, served to discourage English explorers from pursuing a commercial shipping route in the region (Robinson).

In 1903, Norwegian explorer Roald Amundsen set sail with his small, 21-meter long, personal vessel named Gjoa, in attempt to traverse the Northwest Passage (Headland). Like others, he entered through the

Lancaster Sound in the east, before continuing westward through the narrower straits of the Archipelago, namely on route 3B (AMSA 2009, 20-21). In 1906, Amundsen reached the end of his difficult journey in what is now named the Amundsen Gulf, and became the first person to successfully navigate the Northwest Passage solely by water (Robinson).

3B. The Manhattan Voyage

After Roald Amundsen's successful traverse of the Northwest Passage, the 20th century witnessed many more successful full or partial voyages through the region, with vessels that were increasingly larger in size. One such ship was the retired American oil tanker named Manhattan, which set sail in 1969. The voyage of the Manhattan is a significant milestone in Northwest Passage history, as it marks a change in Canadian sentiment towards vessels sailing in the region. Many scholars argue that Canadian aims for sovereignty in the Arctic and Northwest Passage largely stem from a strong sense of identity and pride that Canadians have with the region (Charron 2005, 833). This sense of collective identity first became evident in the aftermath of this 1969 voyage.

The Manhattan was a private venture of the Humble Oil Company, which was sent with the mission of assessing the feasibility of regular, commercial oil shipments through the Passage. Those responsible for the mission took all necessary precautions with the Canadian authorities, including obtaining voyage approval as well as a Canadian coast guard ship and a navigating officer to remain aboard throughout the journey. As a state, Canada viewed these formalities as an acknowledgement of the country's sovereignty in the Northwest Passage and surrounding waters. The public, however, was outraged that the vessel was permitted access to enter the Passage and saw this as exactly the opposite; a threat to the country's sovereignty (Parker & Zagros 2008, 336). Prior to this time, the Northwest Passage was largely "secure" from situations such as this, as the amount of ice in the region prevented ships from even attempting voyages. The 1969 voyage of the Manhattan marked the

beginning of a new era in which the Canadian government would need to respond to the public's outcry and defense of its northernmost reaches.

3C. Legal Aftermath: The Initial Protectionist Laws

This public outcry motivated Canadian lawmakers to take legal action in response to the Manhattan voyage. Lawmakers were swift to act, introducing the Pollution Prevention Act a mere seven days after the Manhattan began its journey (Charron 2005, 839). This act was not a legal attempt at establishing sovereignty over the region, but rather to show Canada's interests in the area by protecting the marine life, vulnerable Arctic ecosystem, and nature-based ways of life of indigenous Canadian communities. It did so by creating a 100-mile wide zone, which was measured from the nearest domestic land that was under environmental controls, and created within that area a 'pollution control zone' (Charron 2005, 840). This was a creative measure by the Canadian government for several reasons. First, its immediacy eased the public's anxiety about the voyage of the Manhattan, and assured the protection of the land and water that was clearly so beloved to the Canadian people. Second, without forbidding future voyages outright, it led some of the public to assume that such voyages would be unlikely, because the main aim of the legislation was to protect the waterways that would be used by vessels sailing through the Passage. Lastly, as a result of the two aforementioned points, the public felt the country had begun moving towards achieving sovereignty in the Arctic, although the act did not overtly do so.

However, Canada's legislative efforts to achieve sovereignty would begin just days after the Arctic Waters Pollution Prevention Act was introduced in April of 1970. Namely, an amendment to the country's existing Territorial Sea and Fishing Zones Act was proposed, which extended Canadian territorial waters from three to twelve nautical miles from the coast. By amending this domestic law, Canada substantially widened its maritime boundaries in the Northwest Passage, and gained complete sovereignty over the Barrow and Prince of Wales Straits

(Pharand 2007, 10). While Barrow Strait is quite wide, there are small islands within it, such as Lowther Island which is in the middle of the strait. When the amendment was confirmed and the twelve nautical miles were extended from either side of the strait to the island, the seemingly wide route became completely sovereign territory because of Lowther Island's placement (see figure 4 below).



Figure 2 Map capture of Lowther Island (Source: Google Maps)

While the 1970 amendment was a victory in this sense, many parts of the Northwest Passage would remain part of the high seas, based on the United Nations Convention on the Law of the Seas (UNCLOS). The conventions that resulted in the publication of UNCLOS began just three years after Canada's victorious amendment that closed off the waters to Lowther Island. The treaty would then define high seas as waters that "are open to all States, whether coastal or landlocked" (UNCLOS 1982, Article 87).

As such, much of the Passage remained outside of Canada's reach of sovereignty. Relatedly, the amendment did not confront the existing policy of right of innocent passage (Pharand 2007, 10). As such, warships and foreign vessels sailing under innocent passage, that is under peaceful circumstances, were still permitted to use the whole of the Northwest Passage, including the Barrow and Prince of Wales Straits. This is so because although the two straits are now under Canada's sovereignty, they are still deemed territorial waters, not internal waters (Pharand 2007, 11). Internal waters are those that are on the land side of the country's baseline, or also within the straight baseline drawn, a concept which will be expanded upon below. The key difference between internal waters and the territorial waters that lie beyond them is that a country is not obligated to allow innocent passage through its internal waters (UNCLOS 1982, Article 8). Because the straights mentioned above are *not* internal waters, Canada must still permit innocent passage in the area. Therefore, while the amendment to the Territorial Sea and Fishing Zones Act was a significant first legislative step in the campaign for Canadian sovereignty in the Arctic, much remained unchanged.

In 1973, the same year UNCLOS conferences began, Canada launched its first official legal claim to internal waters. This was done in the context of a letter addressing the question of historic bays and waters sent by the Bureau of Legal Affairs. In this letter, the Bureau claimed that the waters within the Canadian Arctic Archipelago "are internal waters of Canada on historic basis, although they have not been declared as such in any treaty or by any legislation" (Pharand 2007, 11). Because this claim was made in a letter and not in legislation, there was no further formal discussion of the matter. Then in September of 1985, Canada reinforced its commitment to this claim with a statement from the Secretary of State for External Affairs, which indicated that it would establish straight baselines around the Canadian Archipelago, in order to "define the outer limit of Canada's historic internal waters," (Pharand 2007, 11). Letters of protest then came from the European Commission

and the United States, but Canada would continue to lay claim to the territory in the years to come.

The concept of straight baselines stems from the 1951 *Fisheries* case between the United Kingdom and Norway, in which the International Court of Justice determined acceptable the use of such baselines in both the uneven and deeply indented coastline and the archipelago-like ‘skjaergaard’ coastline of Norway. Essentially, the 1951 *Fisheries* case concludes that drawing a straight baseline along the outermost points along a rugged coastline or archipelago is a valid method for determining territorial boundaries (Fisheries Case, 130). When UNCLOS was then drafted in 1982, this point was included in article 7, allowing signatory who are deemed to have similarly rugged coastlines the right to draw straight baselines (UNCLOS 1982, Article 7). Additionally, the ICJ functions on a case law system so that decisions made by the court serve as precedent that will influence similar cases in the future. As such, Canada has attempted to make the claim that its coastline is similarly rugged to that of the skjaergaard in Norway, in order to justify their use of straight baselines in its Arctic territory. The feasibility of Canada’s straight baseline claim is an ongoing debate, which will be expanded upon in detail in chapter 7B.

3D. United Nations Convention on the Law of the Seas

The aforementioned UNCLOS is an international agreement that was signed in 1982, after nine years of convention conferences on maritime law. The document both defines the rights of and establishes rules concerning the world’s oceans, and as of 2018, 168 nations are party to the treaty (United Nations Treaty Collection). While the discussion of UNCLOS in the context of this paper will focus primarily on its policies on maritime borders, the document also provides guidelines on natural resource management and the environment (UNCLOS 1982).

The treaty importantly stated that countries enjoy the rights of a territorial sea for waters that are within 12 nautical miles of its territorial sea baseline. This grants littoral states full sovereignty over the seabed,

water, and airspace within the 12 nautical miles. The next 12 nautical miles beyond the territorial sea are named a contiguous zone, in which the coastal state can both prevent and punish any infringements on immigration, customs or fiscal laws (UNCLOS 1982, Article 33). Next, the 200 nautical miles extending from the territorial baseline are called an exclusive economic zone, in which the coastal state may explore and manage natural resources. Beyond these 200 nautical miles, the state no longer has any form of jurisdiction over the waters; instead they are labeled high seas, where all states can enjoy the freedom of navigation (UNCLOS 1982, Article 87). This treaty was a landmark event in maritime policy, as it was the first time that specific sea boundaries were established. As a state that has ratified the treaty, Canada must respect these territorial delineations and frame its arguments for sovereignty within the context of UNCLOS.

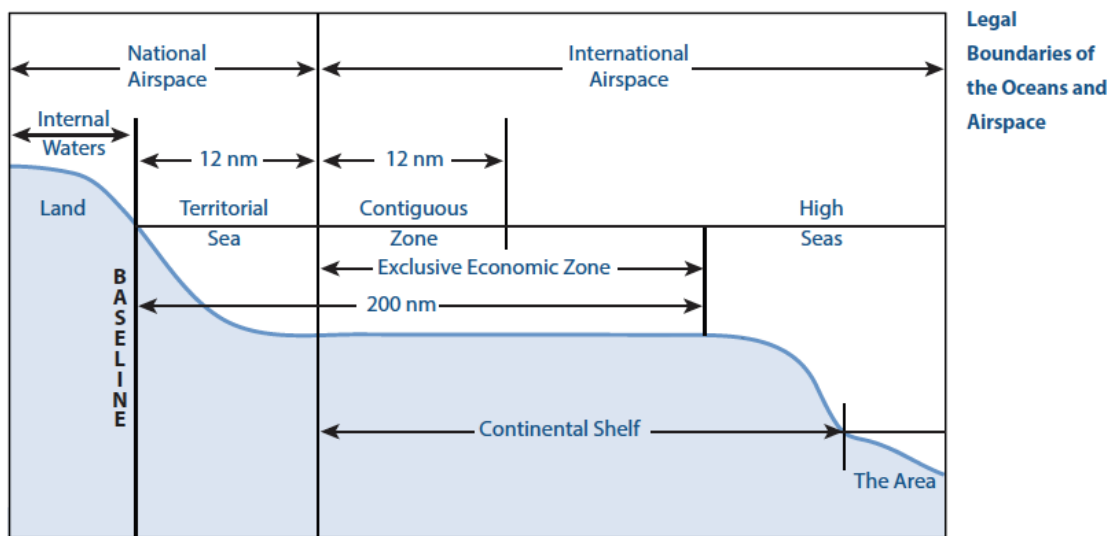


Figure 3 Maritime Zones Schematic (The Fletcher School, Tufts University)

Some coastal states, however, are eligible to extend the outer limit of their exclusive economic zone from 200 to 350 nautical miles. Article 76 of UNCLOS allows states to apply for the additional 150 nautical miles by submitting official claims to the Commission on Limits of the Continental Shelf (CLCS) (UNCLOS 1982, Article 76). The CLCS then reviews the claim and supporting evidence, to determine if the seafloor

in question is indeed a natural extension of the land territory (Pomerants 2012, 45). The decision reached by CLCS regarding the matter is binding and no longer subject to change (Pomerants 2012, 54).

As the geopolitical situation in the Arctic was of high importance during the creation of UNCLOS, one article specifically addresses the Arctic waters. In 1973, the same year that Canada began making claims to internal waters in the Passage, a discussion of what would be named the “Arctic Exception,” an article within UNCLOS, began among UN member states. In contrast to most other UNCLOS negotiations, this was a smaller, primarily a three-way discussion between Canada, the United States, and the Soviet Union (Bartenstein 2011, 26). The main goal of this dialogue was to establish an article that would protect and preserve the Arctic marine environment; an issue in which all three states were deeply invested, due to either environmental concerns or geopolitical interests. The negotiations resulted in Article 234, the Arctic Exception, which specifically addressed ice-covered areas:

Article 234: Ice-covered areas:

“Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the production and preservation of the marine environment based on the best available scientific evidence.”
(UNCLOS 1982, Article 234)

As is evident above, the article is a rather vague protection of the ice-covered Arctic areas that leaves specific policies and political maneuvers

open to interpretation. One aspect of the dispute that was avoided entirely in the writing of this article is the debate of how to address the Northwest Passage; as internal waters or international straits. There was a great deal of tension between the United States and Canada regarding this issue. Since the 1969 voyage of the *Manhattan*, and the subsequent public outcry in Canada, the United States had expressed its opinion that the straits of the passage are international waters that ships from all states should be free to navigate. Yet during the discussions that led to Article 234, the issue was temporarily avoided by not placing either label on the Passage in this international document (Bartenstein 2011, 27). Another aspect of the Arctic Exception that was clearly outlined and not left to interpretation is that there is no established review process for measures that are implemented by coastal states. Instead, a review of policies will only take place if there is a specific dispute, and will only be a bilateral discussion between the coastal state and the state concerned with the policy (Bartenstein 2011, 37). Given the contentious nature of coastal states creating maritime policies in the Arctic, it is interesting that the negotiating states did not establish a review process for the policies that would be created in reference to the Article.

While the two implications of Article 234 identified above are clear, many more aspects are far less specific and are largely left to the interpretation of the reader or state. The Article concerns itself primarily with the environmental protection of ice-covered areas in the Arctic, but does not spell out what measures should or should not be taken. For example, it states that pollution could cause major harm to the ecosystem, but does not specify what could be considered as major damage (Bartenstein 2011, 38). Therefore, if a coastal state such as Canada were to implement policies such as traffic regulation in particularly vulnerable areas, other states may easily raise concern that policymakers are acting from a protectionist territorial perspective, rather than out of evidence-based concern for the environment.

The Article makes it very clear that measures taken by coastal states must be both based on scientific evidence as well as be non-

discriminatory (UNCLOS, Article 234). In the hypothetical situation above, other states could accuse Canada of creating discriminatory laws to prevent foreign ships from entering the Northwest Passage, and Canada could counter-argue that its policies are based on scientific data that proves the area's ecosystem to be particularly vulnerable.

At a fundamental level, the aim of Article 234 is to give coastal states relative freedom in creating unilateral policies on surrounding maritime activity in order protect their ecosystem (Bartenstein 2011, 46). In an era where multi-lateral decision making is viewed as both more favorable and more legitimate than unilateral policies, the Article remains somewhat elusive for the coastal states to which it is relevant. As a result, these states must be cautious in how they use it. Kristin Bartenstein from the Laval University Faculty of Law in Quebec, Canada, argues that Canada should be extremely cautious in invoking Article 234, as it could jeopardize its claim of full sovereignty in the Arctic Archipelago (2011, 46). This is due to the Article referring to waters outside of a country's boundaries. If Canada intends to further advocate for drawing of straight baselines and categorizing the waters as internal, invoking the Arctic Exception Article would undermine its aims. Instead, the author argues, it would need to create and enforce domestic policies regarding these waters (Bartenstein 2011, 46).

The voyage of the Manhattan oil tanker in 1969 was the catalyst for the modern debates surrounding the Northwest Passage and Canadian sovereignty in the region. It is clear from the ensuing events, legal actions, and multi-lateral debates that Canada has since treated the issue with gravity. The previous pages have provided an essential and foundational background on the legal situation surrounding the Northwest Passage in the first decades of the modern debate. With this key knowledge at hand, one can now turn to assessing the current state of the Northwest Passage and the reasons it has drawn increasing attention from around the world. Subsequently, the current arguments of Canada and its opponents will be assessed.

4. The Attraction of the Northwest Passage

The Northwest Passage has long been an attractive destination for explorers who wished to journey to uncharted territory. Since the late 1900's, the thawing ice in the region has opened opportunities for using the lengthy waterway in other ways as well. Commercial shipping opportunities have become increasingly attractive, as the route from Atlantic to Pacific is substantially shorter than the journey through the Panama Canal. Additionally, the discovery of vast amounts of natural resources in the area, including natural gas and petroleum, make the region extremely appealing to the surrounding states.

4A. Shipping

The drastic reduction of ice in the previous decades, and particularly in the past ten years, and the increasing length of time during which parts or all of the Northwest Passage is free of ice, have drawn the attention of actors looking to use the passage as a shipping route. Currently, shipping routes between Asian and European markets utilize the Panama and Suez Canals in order to avoid longer distances around the entirety of South America and Africa respectively. The use of the Northwest Passage could potentially decrease this distance by 7,000 kilometers, which would be both lucrative and time-saving for the countries and companies involved in trade (Charron 2005, 831). As inexpensive goods from Asia continue to become even more prominent in global markets, this drastic reduction in shipping distance will become increasingly attractive for the involved parties. As such, they have begun vocally advocating for use of the Northwest Passage as a shipping route on the basis that it is part of the high seas and therefore not Canadian territory. China has been by far the greatest advocate for this position, and has even sent research vessels to and published reports on the conditions and geography of the region for future commercial use. The interests and arguments of China and other actors will be expanded upon in the forthcoming chapters of this paper.

While debates about shipping in the Northwest Passage have increased in both number and intensity in recent years, maritime activity

in the Passage has already steadily increased. To be clear, this does not mean that the route is being used for shipping; on the contrary, cargo ships and oil tankers together make up two percent of the region's traffic. Instead, small vessels, coast guard icebreakers, and escort ships constitute 65% of the ships sailing through the Northwest Passage in recent years. It is noteworthy that 16% of the vessels are passenger ships and their icebreakers, as the Passage has seen an increase in Arctic tourism and cruise ships which travel through the region each year (ENR).

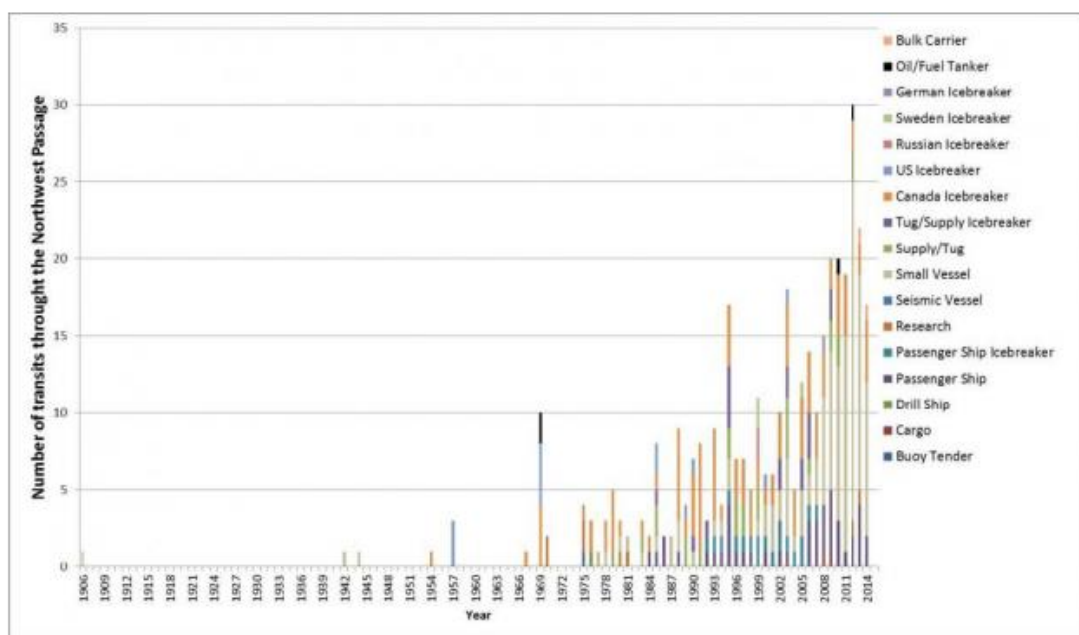


Figure 4 Number of Transits Through the Northwest Passage - NORDREG (ENR)

In 2016 and 2017, the luxury ship the *Crystal Serenity* made an annual voyage through the Passage with around 1,000 passengers aboard. This has indeed brought an economic boost to remote villages that lie along the *Serenity's* route. However, the environmental impact that these voyages have on the local marine life and environment should not be underestimated. The sewage treatment, fuel emissions, and the noise emissions from a ship of this size are concerns of both environmental activists as well as locals in these remote parts of Canada (Colombo). That Canadian authorities permitted this voyage to take place, given the potential environmental impact of a ship of this size and the country's

strict protection of the waters of the Northwest Passage, is noteworthy. There is potential economic benefit of a passenger ship spending 32 days in the country's most remote region that otherwise receives little outside tourism. But this economic benefit must be considered within the context of Canadian legislators' vocal opposition for commercial shipping in the same waters. This juxtaposition is worth contemplating, especially for countries such as China that are ambitiously pursuing regular commercial use of the Northwest Passage. Canadian lawmakers and the Canadian coast guard will need to consider the political impact of allowing large passenger ships to sail through the Passage, if the country intends to uphold its campaign for total sovereignty.

Canada has taken measures to regulate the vessels sailing through the Northwest Passage by distinguishing NORDREG, the Northern Canada Vessel Traffic Services Zone Regulations, as the responsible mechanism. As part of the Canadian Coast Guard, NORDREG is the regulating authority for waters north of 60°N. While this began as a voluntary mechanism in 1977, starting in 2010 all vessels passing through Canadian waters have been required to submit four types of reports throughout their journey to enhance the safe movement of maritime traffic across the country's Arctic region. Furthermore, the Canadian government has made it clear that the penalty for violating the measures outlined in NORDREG can be punished with a fine of up to \$100,000 Canadian Dollars and one year of imprisonment (Knight). This sharpening of regulatory measures shows Canada's growing concern with the increased number of voyages through the Northwest Passage and is a signal to the rest of the world that it is serious about protecting its territory. Not only are these regulations logistically beneficial to ensure maritime safety in the region, but they are a legal mechanism that supports the country's bid for sovereignty in the region.

4A.1. Logistical Hurdles

While the discussion of shipping in the Northwest Passage has increased and intensified, and the number of transits throughout the region have

increased steadily over the years, there are several pragmatic issues that regular, large-scale maritime voyages face by sailing in the region. These are related to logistics as well as safety, and pose major hurdles to shipping in the region. First, construction standards for tankers must be established and abided by, so that those sailing in the ice-filled Arctic waters are adequately built to withstand the elements and reduce the likelihood of an accident (Charron 2005, 845). The waters of the Northwest Passage remain largely uncharted; in fact, the Canadian Hydrographic Services has only surveyed and mapped about 10 percent of the Arctic waters that currently belong to Canada (Eamer). Because mapping the seafloor and coastline is such a costly, time consuming, and logistically difficult task, even the high-traffic corridors of Canada's Arctic remain largely unmapped; about 32 percent of those highly-frequented corridors have been sufficiently surveyed and mapped (Eamer). This illuminates the danger that the Canadian Arctic Archipelago's terrain poses for any type of vessel sailing in the region.

Furthermore, these passageways are littered with chunks of ice, including the incredibly hard and low-sitting "growlers" that are hard for captains to spot and are extremely dangerous to ships that hit them. Additionally, ocean spray can freeze onto the ship and cause it to become top-heavy and capsize, a phenomenon called "icing" that poses additional danger to any ship sailing in the region. Because of these natural threats that all vessels sailing in the Passage would face, Arctic-friendly construction standards would need to be made on a multi-lateral level, so that ships built and registered in other countries would abide by these important criteria. Furthermore, rules would need to be established for safe navigation in the Arctic waters in attempt to avoid these threats. Canada has already begun to implement such rules through NORDREG, and would need to continue strengthening regulations in a way that will protect the environmental concerns that will be outlined below. Canada currently has a limited number of icebreakers available, limiting the number of voyages that the Canadian coast guard can accompany. If voyages continue to increase in the Northwest Passage, the country

would need to invest in additional icebreakers, which would be very costly.

One of the largest pragmatic hurdles is regarding emergency response capabilities. If a ship runs ashore, crashes into rocks, encounters growlers or other types of ice, capsizes, or simply has a medical emergency aboard, emergency services and search-and-rescue capabilities will be demanded. However, Canada's current emergency response capabilities are not sufficient to support even current traffic levels. Several long-range helicopters are available, but would require more than a day's time and several refueling stops to traverse the nearly 2,500 kilometers to the Northwest Passage from their base. Additionally, there are C-130 Hercules planes available, but these aircraft can merely drop supplies and are unable to hoist people aboard. Furthermore, despite years of discussing the construction of one, there remain no ports along the Northwest Passage routes to which vessels can pull in to either seek mechanical help or take refuge in the event of a storm (Byers). Canada's distinct lack of capacity to cope with catastrophic incidents is highly problematic for those sailing in the waters of the Northwest Passage. Because of these limitations, if a small fishing vessel, cargo ship, or a passenger ship such as the *Crystal Serenity* were to encounter difficulty in a remote area of the Passage, rescue workers would need a minimum of a day to arrive (Byers).

Canada's claim to sovereignty is greatly weakened by its substantial lack of both emergency response capabilities and mapping and charting of the region. These not only pose pragmatic issues for those sailing through the Canadian Arctic Archipelago, but also illuminate a clear insufficiency of Canadian investment in the region. Canadian Professor of international law, Michael Byers, who specializes in Arctic sovereignty, emphasizes that for Canada to promote its legal position of total sovereignty in the Arctic, it must "provide infrastructure and essential services," such as search-and-rescue capabilities, that are necessary for such voyages (Byers). Until then, the sincerity of Canada's Arctic claims

can be questioned by other governments, which could argue that Canada is not acting as a responsible Arctic state.

4A.2. Environmental Concerns

Also of high importance are the environmental impacts of regular, large-scale voyages through the Northwest Passage. One group that is important in assessing environmental concerns in the region is the Arctic Council. The Arctic Council is an intergovernmental organization that was created in 1996 to serve as a forum for promoting cooperation between Arctic states (Arctic Council). The work of the Council primarily occurs in working groups, in which current data is analyzed and discussed in order to create publications and form recommendations for protecting the region's ecosystem. The Council also has a unique role in the discussion surrounding the sovereignty of the Northwest Passage, which will be elaborated upon in greater detail in chapter 7A. In the Council's 2009 publication, the Arctic Marine Shipping Assessment (AMSA), the member states assessed the state of the Arctic and the future of maritime activity, with a focus on safety and environmental protection. The report took a strong protectionist approach to the environmental threat that could be facing the region, which Canada, an Arctic Council member, endorsed.

The Arctic is a tundra region, and is home to a unique ecosystem of plants and animals. There are few species that can survive the extreme cold and short summer season, resulting in a lack of biodiversity in the region. Many plants have adapted to the conditions by growing shallow roots into the top layer of active soil and by flourishing rapidly during the warm summer months (Langlois). For the same reasons, there is also relatively low biodiversity in the animal population of the Arctic tundra. Similar to the plants, the mammals too have adapted to long periods of extremely cold temperatures. As a result, changes such as warming temperatures, increased ice melt, and the potential growth in maritime traffic can pose threats to animals as well. For example, many species of birds migrate to the region in the summer months to take advantage of

feeding opportunities and to breed. Disturbances from ships, the Arctic Council warns, could disrupt this annual occurrence (AMSA 2009, 138). The Canadian Wildlife Federation emphasizes that because of the low biodiversity of plants and animals in the Canadian Arctic, any changing conditions to the ecosystem can have magnified and long-lasting effects (Langlois). Because there are fewer species present, each one is very important to the food chain and ecosystem, so environmental disruptions that eliminate one species can have resounding effects on the rest of the system (Navigating the North 2017, 11). Understanding the delicacy of the Arctic environment, the AMSA report underscores to how ships and their noise, greenhouse gas emissions, and occasional accidental discharge could further endanger this fragile ecosystem (AMSA 2009, 134).

The report also points to the migration patterns of marine animals that largely coincide with main shipping routes through the region, and the fear of not only disruption of these patterns but the collision of ships with these mammals (AMSA 2009, 136). Also crossing paths with shipping routes are certain Arctic regions of particular ecological importance, such as the Bering and Hudson Straits. AMSA additionally highlights the disruptions related to increased noise, the release greenhouse gasses and particulate matter, and the potential release of hazardous substances as not only harmful for the ecosystem and wildlife, but for the local economy (AMSA 2009, 138). The regions of the far north rely heavily on natural resources for their livelihoods, particularly the harvesting of fish, and various aspects of increased maritime activity in the Northwest Passage could pose significant risks to these livelihoods. Lastly, the potential for a catastrophic event such as an oil spill is a major threat to the ecosystem and wildlife of the entire Arctic, and additionally threatens the livelihoods of the surrounding coastal communities (AMSA 2009, 7). There is no mechanism in place for containing such a spill in the Arctic, and the cleanup would be made extremely difficult due to the icy conditions of the region.

Another document that provides great insight on the impact of increased ship traffic in the Arctic is *Navigating the North: An*

Assessment of the Environmental Risks of Arctic Vessel Traffic, published in 2017 by the Ocean Conservancy. This document builds upon AMSA to provide detailed information on the various risks of increased maritime traffic in the region, including oil spills, emissions, discharges, and noise. First, the report explains that most large seagoing vessels use what is called heavy fuel oil (HFO), which is lower in cost and in quality, and consists of concentrated amounts of contaminants such as ash, sulfur, silicon, aluminum, and others. Given the contents found in HFO, this oil is likely to have far more damaging effects than other diesels. Unlike the latter, HFO breaks down very slowly in ocean waters: in an oil spill simulation, other fuels disappeared from the water's surface within three days, while almost all of the HFO remained on the surface 20 days later (Navigating the North 2017, 47). This not only highlights how dangerous fuels such as HFO can be in spill scenarios, but underscores the additional challenges of spills taking place in Arctic waters.

Next, the Ocean Conservancy's report details the vessel emissions that ships release in the Arctic and elsewhere. Carbon dioxide constitutes the majority of these emissions, and beyond that, the specific type of pollutants being released varies greatly depending on the type of fuel used. Due to the low quality of HFO, ships using it will produce exhaust with far more pollutants than those sailing with other commonly used diesels (Navigating the North 2017, 51).

The next type of contaminant highlighted in the report is discharge. Commercial and passenger vessels often discharge sewage and graywater into the waters in which they are sailing, either treated or untreated, or retain it for disposal upon reaching the next port. The practice of discharging into the water is a substantial and direct threat to all organisms existing in the ocean waters (Navigating the North 2017, 56).

Finally, the Ocean Conservancy details the threat of noise on marine mammals in the Arctic region. Until recent decades, the waters of the Arctic remained free of any anthropogenic noise. With the increase in sea traffic, this noise has increased due to ice-breaking voyages, use of sonar technology, resource extraction, and the sounds of the engines

themselves (Navigating the North 2017, 63). Since marine animals use sound for communication, echolocation, and the avoidance of predators, anthropogenic noise pollution can have significant impacts on mammal species. Specific disturbances include disruption in migration, feeding, breeding, and resting patterns, as well as hearing loss, and the masking of other important sounds (Navigating the North 2017, 63).

The reports of both the Ocean Conservancy and Arctic Council provide valuable evidence of the ways in which increased traffic in the Arctic impacts the environment of the region. Although the discussion of shipping traffic in the Northwest Passage has increased over recent years, there are clearly several logistical, safety, and environmental issues that stand in the way of both shipping and Canada's legal defense of its own sovereignty in the region. Shipping is not the only area that is drawing the attention of international actors as the Arctic ice continues to melt; the natural resources have also garnered increasing attention over the years, as studies begin to show just how abundant they are in the region.

4B. Natural Resources

The Northwest Passage and surrounding Arctic region are not only fresh new areas for commercial activity, but also for the potential extraction of natural resources. While resources in the area have not been a focus of media or academic coverage in the context of the sovereignty debate of the Northwest Passage, they certainly play an important role and must be considered. In 2008, the United States Geological Survey (USGS) published a report assessing the extent to which suspected natural gas and petroleum are present in the Arctic Circle, the area above of 66.65 degrees north. In its study, it determined that there are "approximately 90 billion barrels of oil, 1,699 trillion cubic feet of natural gas, and 44 billion barrels of natural gas as liquids" that have yet to be accessed in the Arctic Circle (USGS). Furthermore, 84 percent of this natural gas and oil is predicted to be located offshore, that is, in the sea floor below the waterways themselves (USGS). While this data is representative of the *entirety* of the

Arctic Circle and not specific to the Northwest Passage, further evidence supports that a significant portion of these resources are located along or within the Passage.

The neighboring U.S. state of Alaska has already proven to be a rich resource for natural gas as well as oil. In fact, in 2017 alone, an estimated 1.2 billion barrels of oil was discovered in the North Slope of Alaska, the state's northern coast that lies along the waters of the Northwest Passage (Eagan, CNN). Such a large discovery in terrain so similar and so close in proximity to Canada's northern territories only confirm expectations that the area would be rich in resources if drilled. Indeed, the USGS maps indicate the Beaufort Sea – the western reach of the Northwest Passage, located to the north and northeast of Alaska's North Slope – as one of the “resource basins” (EIA).



Figure 5 Resource Basins in the Arctic Circle Region - U.S. Geological Survey (EIA)

The resource-rich Beaufort Sea is also the site of an ongoing and unresolved maritime border dispute between the United States and

Canada. The disagreement originated after the creation of UNCLOS, which granted states exclusive economic rights over the waters reaching 200 nautical miles beyond their shores. Subsequent to the creation of UNCLOS, both the United States and Canada filed claims for their 200 miles in the Beaufort Sea, in 1976 and 1977 respectively (Griffiths). While the U.S. claims that the boundary follows the border between Alaska and Canada's Yukon Territory, Canada claims it follows the 141st meridian (Palahitsky 2016, 22). The conflicting claims result in a section of approximately 21,000 sq km. of ocean that remain a disputed maritime boundary (Griffiths). As stated above, evidence proving the existence of vast amounts of valuable natural resources in the seabed below the Beaufort Sea have drawn the attention of both the United States and Canada. No resolution has been reached on this maritime dispute, and an agreement is unlikely to be reached in the near future, as both countries consume significant amounts of oil and have geopolitical interests in the Northwest Passage (EIA FAQ).

While the statistics on natural resources in the area are significant, there are major logistical and environmental hurdles that stand in the way of potentially lucrative extraction. To start, the location of the natural resources in contrast to the manufacturers and consumers would create long and expensive supply lines in which transportation costs would be extremely high. Second, drilling in such brutal arctic conditions would be costly, as employees would expect higher wages and equipment would need to be engineered to sustain the elements. Environmentally, the unstable soil conditions in the Arctic would pose a threat to drilling structures sinking. Furthermore, extraction of natural resources could pose a threat to not only the vegetation but also the vulnerable arctic species. This threat would be increased exponentially in the event of an unforeseen accident at the drilling locations (EIA).

In the context of this research on Canada's claim to total sovereignty of the Northwest Passage, the most pressing question regarding natural resources is whether Canada would attempt to pursue extraction in the region. Canadian lawmakers would need to decide between either

protecting the territory even more to prevent environmental degradation, or taking advantage of the resources and allowing them to contribute to the domestic economy. The choice between these two political routes will have great bearing on how the country's protective position on the Northwest Passage is viewed by the international community. A decision to pursue extraction of gas and oil would jeopardize the legitimacy of the environmental claims that the country has used to protect against voyages through the passage. Furthermore, it would have significant bearing on the country's position on indigenous communities in the Arctic.

5. Canada's Arguments

5A. Environmental Claims

As is evident in the previous chapters, Canada's first measures to protect the region surrounding its Arctic Archipelago were legal steps regarding the environment. This was first done by creating domestic policies such as the Arctic Waters Pollution Prevention Act in 1970, and shortly thereafter voicing Canadian opinions in the discussion of Article 234 in UNCLOS in 1973. During the time in which this "Arctic Exception" article was being debated, Canadian policy makers advocated for very strict regulations to protect the country's coastal territory. Notably, officials even went as far as delaying discussions about the legal status of the Northwest Passage in order to focus their arguments on achieving maximum protection of the ice-covered areas of the Canadian Arctic Archipelago. These policies and debates regarding the environment were the foundation upon which Canada began arguing for sovereignty in the Northwest Passage, and continue to be present in Canada's current rhetoric to a certain degree. The country continues to actively participate in the Arctic Council and use the environmental information published in the Council's reports to support their protectionist position (AMSA).

If Canada intends to continue using environmental protection as a measure through which it can exert more control over the Northwest Passage, it will need to consider its position on the region's natural

resource abundance and the passenger cruise industry. Harvesting the natural resources purported to be within the Canadian Arctic Archipelago would have an extremely positive impact on the country's economy and gross domestic product, but would have major environmental consequences. Likewise, continuing to allow passenger ships to sail through the Northwest Passage will contribute to local economies in northern communities, but will cause environmental disruptions, as mentioned in the above chapter. For the country to continue using the environment as a valid argument upon which to base protectionist policies in the Northwest Passage, it will need to take a legal stance against both the harvesting of raw materials from the region and voyages by passenger cruise ships.

5B. Aboriginal People's Protection

An argument closely related to environmental policy is the protection of the lives and livelihoods of indigenous people living in the northernmost stretches of Canada, close to the Northwest Passage. Livelihood, according to Ian Scoones, is made up of capabilities, activities, and both the social and material assets required for a means of living (Scoones 1998, 5). In the Arctic, these livelihoods are primarily based upon the natural environment, particularly through wildlife and the fishing industry. Aboriginal households, particularly those in the Canadian Arctic Archipelago, rarely have great financial capital, and instead rely heavily on social capital, such as their trade networks. The Survey of Living Conditions in the Arctic explains that this livelihood system's ability to successfully function depends on a very precise combination of economic, environmental, and social contexts in which the livelihood is embedded (West 2011, 220). As a result, changes to the environment can have major consequences on the economic and social situation that these aboriginal communities find themselves in, and therefore can have significant financial implications.

The most imminent threat that climate change and increased activity in the Canadian Arctic pose for the aboriginals in the region is related to

the fishing industry. As conditions continue to change, it will continue to be increasingly difficult to procure the amount of seafood needed to both consume and sell, which has direct consequences for the livelihoods of these aboriginal communities. One study argues that as this happens, it also changes the social and economic makeup of the communities; when they can no longer rely on natural resources to feed their families, they are forced to turn to the supermarkets, which have high prices due to their remote location (Duerden 2004, 207). Duerden's research demonstrates that the adverse effects of disruptions to the natural habitat surrounding the Canadian aboriginals are felt deeply; they are not just physical, but also economic and social. Additionally, the physical impacts of global warming such as flooding, landslides, and permafrost thaw, will continue to threaten to damage piers, docks, roads, homes, and other buildings (CIER 2009, 12). Remote communities of the region will see piers and docks damaged due to water levels rising along the coast, which will inhibit the fishing industry. Roads, buildings, and other infrastructure will be damaged as permafrost thaws and the slumping of land occurs. Communities whose travel routes require traversing thick ice will be restricted in their mobility as the breadth and depth of the ice cover decreases (CEIR 2009, 12).

These conditions would arguably be worsened by the presence of large ships, whose emissions, noise, operational discharges, and potential oil spills could damage the ecosystem that local aboriginal communities depend on for their livelihoods. As mentioned in chapter 4A.2, the Arctic region contains far less biodiversity than other ecosystems on Earth, due to the harsh winter conditions and the short summer growing season. Given the decreased biodiversity, each species in the Arctic, ranging from phytoplankton to the human, plays a significant role in sustaining the food chain (Navigating the North 2017, 11). The presence, noise, and pollution created by large vessels could disrupt regular events that are important to this ecosystem, such as the migration of birds in the summer breeding season, the migration of marine mammals, and the summer growth of flora (Navigating the North 2017, 63 and AMSA 2009, 138).

The food security of the aboriginal population in the Canadian Arctic is largely dependent upon these natural occurrences. Maritime hunting and fishing is essential for these groups, for not only food but also for crafting clothing and other equipment, and for trade in this mixed-cash economy (Navigating the North 2017, 10). The next chapter will provide a detailed case study of the Canadian territory of Nunavut, which will further demonstrate the degree to which native populations depend on the land and ecosystem for their livelihoods.

5B.1. A Nunavut Case Study

The territory of Nunavut borders most of Canada's coastal area alongside the Northwest Passage. Nunavut, which is the northernmost territory in the country, contains much of the Canadian Arctic Archipelago; the geographical feature at the center of the debate surrounding the Northwest Passage. This territory is also Canada's geographically largest, with nearly two million sq km., yet it has the second smallest population with only 35,944 residents (2016 Census). Nunavut is not only of great geographical relevance to the Northwest Passage, but it also serves as a compelling case study for the recent developments in communities of the Canadian Arctic, regarding climate change and shipping activity.

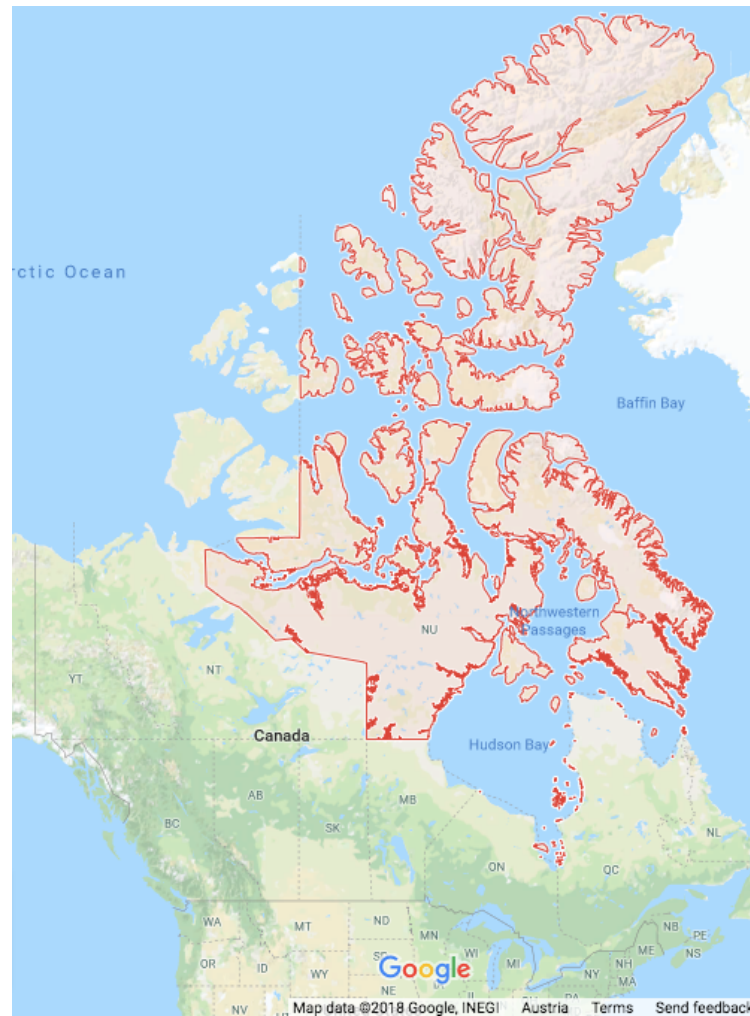


Figure 6 Nunavut, Canada's largest geographic territory, borders much of the Northwest Passage (Google Maps)

Nunavut is Canada's youngest territory, created in 1999 out of what was previously the eastern part of the Northwest Territories. Previous to this separation, the Northwest Territories made up more than one third of the country's total land mass. Throughout the 20th century, the native Inuit population in the Arctic region became increasingly politically active, advocating for land claims and for better governance in the remote area (Kikkert). This advocacy came to a climax in 1979, when the Inuit presented the Nunavut Land Claims Project to the federal government. After lengthy debates with Canadian officials, the proposal was accepted, and the idea of a Nunavut independent of the Northwest Territories gradually became a tangible possibility for the Inuit community (Kikkert).

A settlement was ultimately reached in the early 1990s, with both the Nunavut Land Claims Agreement Act (NLCA) and the Nunavut Act being signed on June 10, 1993 (Kikkert). While the Nunavut Act created the new territory of Nunavut, the NLCA gave Inuit governance over hunting and fishing activity in this new jurisdiction (Kikkert). Today, Nunavut's scarce population is 85 percent Inuit (Kikkert), which is the native population that has been living in this remote part of the world for over 4,000 years (Rea). While the territory is fully part of Canada, it has its own local government and Legislative Assembly which both play important roles in the day to day governance of the region, giving Nunavut residents the control of healthcare, education, and other services (INAC).

The native Inuit in Nunavut have a long history of basing their livelihoods primarily on natural resources. Long before the establishment of what is now modern day Canada, the Inuit people lived lives completely dependent on their surroundings in the Arctic. In the winter months, it was common for large villages to establish igloo villages atop sea ice to hunt for mammals such as seals. Then, during the summer season, they would return to land to fish and hunt for land animals such as caribou and geese (Kikkert). While there was diversity among hunting and migratory traditions of different Inuit groups, they all developed a vast knowledge of their local environments. In fact, as European explorers who began sailing to the Northwest Passage encountered these Inuit groups, they often relied on the regional expertise of the native population for hunting and mapmaking (Kikkert).

As stated above, the Inuit population in present day Nunavut still bases its livelihood on the surrounding ecosystem. Over recent years, the territory has seen an immense increase in poverty and food insecurity, resulting in major public health concerns. The most recent comprehensive survey of public health and livelihoods of Inuit in Nunavut was published in 2010 by a group of organizations and universities including McGill University in Montreal, Quebec. This study surveyed adults over 18 years of age in Nunavut between 2007 and 2008.

A total of 1923 individuals and 1374 individuals within 25 communities across the province participated (IHS 2010, 6). To start, the study found that 75% of its participants lived in public housing, and that 28% of homes needed significant structural repairs such as new roofs or plumbing (IHS 2010, 10). Overcrowding in housing is a prevalent issue, as many (18%) homes took in homeless people, and the average number of people living in one house was double the national average (IHS 2010, 10). These statistics are the first indicators of the severity and prevalence of poverty in the region, which is confirmed by the statistics on food insecurity. Over two thirds of households said that they do not have enough food to feed their families, whereas the national average for moderate to severe food insecurity in Canada laid at 9% (IHS 2010, 11). The authors of the report conclude that the root causes of this public health issue are high food costs, low income, and unemployment (IHS 2010, 12).

To better understand the food insecurity and its connection with the environmental changes in the land surrounding the Northwest Passage, it is necessary to consider the sources of nourishment for Nunavut residents. At the time of the study, over 75% of households obtained food through hunting, connections through friends and family, or community freezers/hunters and trappers organizations (CF/HTO) (IHS 2010, 12).

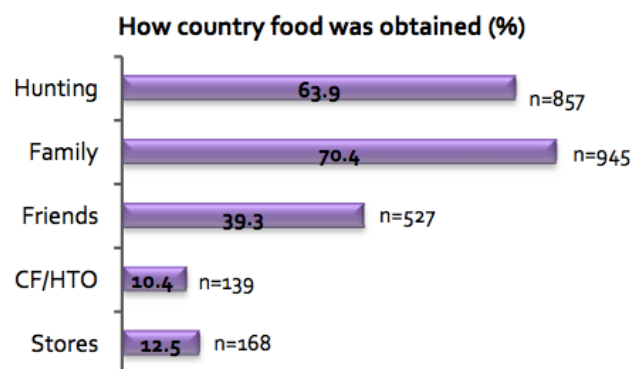


Figure 7 Methods used by Nunavut households to obtain food (Adult Report 2010, 12)

The number of households who reported using stores to meet their household food needs was just 12.5% (IHS 2010, 12). This is largely due to the traditional livelihoods of the Inuit people, whom the study shows prefer to consume local products. However, the unaffordability of food products in stores also inhibits residents from purchasing them. A Food Price Survey published by the Nunavut Bureau of Statistics in 2014 listed the cost of basic food products in various Nunavut towns, the average across the province, and the Canadian national average. At the time of the study, the average Canadian price for one package of butter (454 grams) cost \$4.52 Canadian Dollars (CAD), while the Nunavut average was \$6.96. The national average for 2.5 kilograms of flour was \$5.11, but \$13.32 in Nunavut. One kilogram of chicken could be purchased in Canada for an average of \$7.01, but in Nunavut the average cost was \$16.35 (NBS 2014). The study revealed not only the vast difference in the cost of food, but in other essential household products as well. The cost of 100 milliliters of toothpaste, for example, averaged \$2.40 in Canada, while the Nunavut average fell at \$6.07 (NBS 2014). The high prices are largely the result of the transportation costs between major Canadian cities and the inhabited regions of Nunavut. The products must be flown in by plane, resulting in high costs for the consumer.

Knowledge of both the poverty in the region and the extreme prices of products in stores makes it clear that most Inuit households in Nunavut cannot rely on supermarkets to fill their needs that stem from the scarcity of local food. Many aboriginals in the coastal region surrounding the Northwest Passage rely on not only hunting on land but also fishing to meet their household and community needs. As global temperatures rise, scientists predict that the number of Arctic cod will drastically drop, due to the disruption that higher temperatures will have on sea ice, plankton, and marine plants (Defenders). When changes in cod population occur, larger fish such as the Greenland halibut, Arctic char, and Atlantic salmon, which are commonly fished for subsistence fishing in Arctic communities, will have less to feed on and thus also diminish in population (Defenders). Additionally, the nonprofit

conservation organization Defenders of Wildlife states that an increase in maritime traffic in the Northwest Passage will have a similar effect on the supply of Arctic fish. These elements, combined with the unaffordability of grocery stores for aboriginal populations such as the Inuit to rely upon in absence of locally gathered food, will lead to an escalation of this public health crisis for aboriginal populations in the Canadian Arctic.

This case study of the Inuit in Nunavut provides a detailed assessment of the conditions in which aboriginal communities in the Canadian Arctic are living. Low income and food scarcity are increasingly widespread in Nunavut communities, resulting in a public health crisis in these remote stretches of Canada that line the Northwest Passage. If the presence of ships were to increase in this region, their wakes, emissions, and disruption to migration patterns would further disrupt the livelihoods and wellbeing of the vulnerable aboriginal communities living along the Passage (AMSA 2009). A report from 2014 confirmed this trend, when it assessed the number of families visiting the Niqinik Nuatsivik Food Bank on a bi-weekly basis. In 2001 that number was 30, while by 2014 it had increased to 120 families (The Canadian Press). This is just one example of the types of consequences that experts fear the rise in global temperatures and increased maritime activity will have on native populations in the Canadian Arctic.

5B. 2. Canadian Lawmakers' Actions

Canadian lawmakers have not always acted as protectors of these at-risk communities in the far north. In 2006, four years after agreeing to reduce gas emissions by signing the Kyoto Protocol, Stephen Harper was named the new Prime Minister of Canada, altering the course of the country's dialogue and policy making on climate for the coming years (Leahy). Namely, the sitting government would withdraw from the Kyoto Protocol, drastically cut funds to the federal environmental agency, fishery and ocean related groups, as well as ozone monitoring networks (Leahy). These measures taken by the Harper government meant that there were no adequate policies or frameworks for hindering Canada's

contribution to climate change. Additionally, there were then no policies in place to protect those most vulnerable to the impacts of climate change; the aboriginals living in Canada's Arctic region. Because of the fragility of the Arctic ecosystem, those communities would then feel the physical impact of the country's political failures.

As Harper's time as Prime Minister drew to a close in 2015 and Justin Trudeau took his place, moderate and liberal Canadians were given hope that policies relating to the environment and treatment of the aboriginal population would soon begin to shift. In late 2016, Trudeau's administration released the Pan-Canadian Framework on Clean Growth and Climate Change. The goal of this plan is to reduce pollution while emphasizing innovation in technology and prioritizing the production of clean energy. Notably, the Framework's outline states that it has been created in consultation with aboriginal groups and cooperation with various Canadian provinces and territories (Government). Furthermore, it openly affirms that the Canadians most vulnerable to climate change are the aboriginal communities in the Arctic (Government). The acknowledgement of this alone marks a major change in discourse from that of the Harper administration. The Framework goes on to emphasize the importance of translating traditional knowledge about the land into measures of action that will help protect the natural environment from the effects of climate change (Government). More than making general statements, the document also proceeds to state that "building regional expertise and capacity for adaption" will be essential, and that decisions on climate related policies "will be guided by consideration of scientific and traditional knowledge," (Government). This government's emphasis on including actors at the local level to achieve national goals provides optimism for the future for aboriginals living in regions so vulnerable to the effects climate change. While these recent developments provide hope for aboriginals, it remains to be seen whether the plans laid out in the Framework will indeed be implemented with such integration and consideration as is stated in the document. Integrating the expertise of small populations with so little political power is not commonplace in

politics, so leaders will need to be very intentional in their execution in order to meet the Framework's goals by the projected target date of 2030.

The current government in Canada is a vocal advocate for the protection of the vulnerable communities in the Canadian Arctic. If lawmakers follow through with the promises that have been made to these people groups, the livelihoods of these communities will continue to be part of the protectionist platform that Canada uses to support its protectionist policies in the Northwest Passage. Additionally, given the strong local governments in regions such as Nunavut, Canada could claim that local administration must be involved in any decisions relating to the use of the Northwest Passage for shipping. This would not only align with the Trudeau administration's vocalized pledge to support the aboriginal populations, but also give them a voice in national politics and a platform upon which they can defend their communities.

5C. Sovereignty First and Foremost

The arguments for sovereignty that have been outlined until this point have been tangible ones that relate to practical or legal concerns the country has regarding foreign ships accessing the waters within the Canadian Arctic. Dr. Andrea Charron, the director of the Centre for Security, Intelligence and Defence Studies at Carleton University in Ottawa, Canada argues that the country's sovereignty claims can be categorized into two distinct groups. The first, she states, is titled "sovereignty first and foremost," and reflects a sentiment of a deep-seeded sense of identity that the waters and remote lands in the far north are deeply connected to the country's identity. She names the second category "putting sovereignty to one side," which reflects the pragmatic arguments outlined in the above chapters (Charron 2005, 839). This includes environmental and natural resource concerns, protection of aboriginals, as well as logistical, safety, and security related issues surrounding the use of the waters surrounding the Canadian Arctic Archipelago. Charron argues that these pragmatic measures are where

the hope for successful advocacy lies for the country, versus placing emphasis on the sovereignty first and foremost category.

Scholars who study the sovereignty debate in the Canadian Arctic consistently point to the deep-seeded, symbolic nature of this topic in the hearts of Canadians. In fact, “many experts believe that the claim of sovereignty over the Arctic Archipelago is uniquely tied to the country’s sense of national pride and identity,” (Charron 2005, 833). The roots of this are evident when reflecting upon the public’s outcry in response to the 1969 voyage of the retired oil tanker named Manhattan; while the government approved the journey, the Canadian public responded in an uproar that would then be the catalyst for protectionist policies in the subsequent years. In September of 1985, then Secretary of State for External Affairs, Joe Clark, made a statement in the House of Commons that concisely summarizes the sentiments and arguments that constitute the sovereignty first and foremost position:

“The Arctic is not only part of Canada, it is part of Canadian greatness. The policy of the Canadian government is to preserve the greatness undiminished. Canada’s sovereignty in the Arctic is indivisible. It embraces land, sea, and ice. It extends without interruption to the seaward facing coasts of the Arctic Islands. These Islands are joined and not divided by the waters between them, they are bridged for most of the year by ice. From time immemorial, Canada’s Inuit people have used and occupied the ice as they have used and occupied the land.” (“Statement on Canadian Sovereignty” as reprinted in Charron 2008, 834 and Huebert 2011, 386)

This statement reveals the depth to which the country’s Arctic region is tied to the collective identity of the country. In fact, in 2002 Canada’s senate committee on defense embarked on a country-wide tour to hear from both citizens and experts about their deep concerns about this exact matter, confirming the continued relevance of Clark’s above remarks

(Charron 2008, 834). What is lacking in the Secretary's speech however, are distinct policies with which the Department of Foreign Affairs planned to defend this position, and this is where the weakness of the sovereignty first and foremost category of arguments lies; it is based on ideology and rhetoric, but has no firm legal foundation upon which these ideologies stand.

One argument that falls within the sovereignty first and foremost category, and is also present in Clark's above quotation, is the historic claims to waters. Canadian policy makers have made the claim that their sovereignty is just, based on their historic claim to these waters (Huebert 2011, 385). In a 2001 presentation in Canada's Yukon territory, an official from the country's Legal Affairs Bureau stated that the country's historic claim is based on a deed transfer in 1880, in which the Arctic Archipelago was officially given to Canada by the United Kingdom. Additionally, the official noted that the waters among the archipelago have been used by the Inuit since time immemorial, and since the Inuit people are Canadian, the country has therefore had uninterrupted use and sovereignty over the waters (Huebert 2011, 387). As there is little written documentation of the Canadian government's legal arguments regarding its historic waters sovereignty claims, this official's statements are used by legal scholars to analyze the situation.

This historic claim is likely based on the history of the Inuit living on the land of the Canadian Arctic Archipelago. Historians believe that the ancestors of the present-day Inuit population are related to the following indigenous groups: Yuit in Siberia and Western Alaska, Katladit in Greenland, and Inupiat in northern Alaska (Freeman). It is estimated that these ancestors began inhabiting the lands of what is now the Canadian Arctic in around 1050 AD (Freeman). It is important to note that while long-standing Inuit presence in this area is not contested, the lands have belonged to Canada for a much shorter amount of time. Indeed, Canada officially inherited the lands in question from Great Britain in 1880 (Pharand 2007, 10). But while the country gained a large degree of self-rule in 1867, it only became entirely self-governing in 1931 (Bercuson, et

al). Additionally, in the period between 1867 and 1931, matters of international diplomacy were not yet in Canada's hands, but remained in those of the British Crown (Bercuson, et al). Thus, despite the long-established Inuit inhabitancy in the lands surrounding the Northwest Passage, these more recent dates regarding Canada's sovereignty may pose an obstacle in advocating for historic claims.

One of Canada's leading legal jurists, Donat Pharand, has stated that these arguments of historic claims to internal waters would likely fail to protect the country's sovereignty claims in the region. He explains that the claims for historic waters have several basic requirements that they need to meet before being considered to potentially withstand any legal scrutiny (Pharand 2007, 5). These criteria are based on two specific documents, namely the 1957 Memorandum on Historic Bays, and a 1962 study of the "Juridical Regime of Historic Waters, Including Historic Bays;" two primary documents used to discuss historic claims to bodies of water. The three criteria stemming from these documents are as follows: exclusive exercise of state jurisdiction, long lapse of time, and acquiescence by foreign states (Pharand 2007, 7).

Exclusive exercise of state jurisdiction refers to the coastal nation's active role in asserting its sovereignty over the maritime region in question. Namely, the country in question, Canada in this case, should exercise its sovereign rights in the waters it claims in the same manner that it exercises sovereign rights on land. Most importantly, this must be done with actions and not just in legislation and rhetoric, and furthermore must prove it took all measures necessary to exercise its authority effectively (Pharand 2007, 7). For example, if defending fishing rights of Canadian fishers in a particular maritime area is in question, Canada must not only legally prohibit foreign vessels from fishing in those waters, but must actively patrol the waters and have an enforcement mechanism for violators of this policy.

The second of these criteria is that historic waters must have a history of "long usage," a concept stemming from a 1982 ICJ case between Tunisia and Libya (Pharand 2007, 7). In this case, which disputed the

maritime border between the two countries, Tunisia argued that it possessed historic rights to the waters in question, based on its longstanding tradition of fishing in the area (Continental Shelf). This criterion of “long” usage is of course less concrete, as it is not defined by a specific amount of time. Pharand suggests the terms “immemorial usage,” and “well-established usage,” as clarifiers for this ambiguity (2007, 7). This notion appears to be the foundation upon which Clark made the 1985 claims to foreign waters in the House of Commons. This makes Clark’s arguments rather weak, because it is the criterion that is the most subjective in interpretation and thus the least sturdy in the court of law.

The third requirement, acquiescence of foreign states, emphasizes the importance of the attitudes of the states who are affected by historic water claims. If there is evidence that a foreign state in question has acquiesced, the historic claims will be deemed to have materialized, Pharand explains (2007, 7). Furthermore, those foreign states do not need to formally consent or recognize the claim; in fact, even the absence of any protest is regarded as acquiescence (Pharand 2007, 8).

Pharand, who is one of the most prominent experts on the law of the sea, particularly in the Arctic region, goes on to conclude that despite longstanding Inuit use of the land, Canada would be unable to present sufficient burden of proof for all three of the above criteria (2007, 13). Central to Pharand’s arguments for this are the historic roots of Canada’s claims. The first and more significant of these is that neither Canadian nor British explorers ever gained possession of the waters in the Northwest Passage. Additionally, it was only as recent as 1973 that the country made its first claim that the waters within the Canadian Arctic Archipelago are historic waters. Furthermore, immediately after these 1973 claims were made, the European Commission Member States and United States voiced their protest (Pharand 2007, 13). Together, these two counterarguments reveal the failure of Canada to uphold the two criteria listed above regarding long usage and acquiescence of foreign states.

Since the writing of Pharand's extensive 2007 paper regarding the sovereignty of the Northwest Passage, Canada has however made progress on the criterion of exclusive exercise of state jurisdiction. With the enforcement of requiring ships who wish to enter the waters of the Canadian Arctic Archipelago to register and obtain permission with NORDREG, the country now has a reliable mechanism for regulating what ships have access to the waterways. This serves as one very positive argument for Canadian lawmakers. However, the country's failure to meet the first two requirements of claiming historic waters is a major weakness in the argument, and is not able to be altered, due to its historic nature. Canadian officials have needed to instead look forward into alternative measures for justifying its bid for sovereignty. Over the past decades, the country has indeed done this, as will be explored in greater detail in the final chapter.

6. Arguments Against Canada

Throughout this paper, the manifold arguments of Canada have been brought to light. The country has attempted to defend its position of total sovereignty in the Northwest Passage by invoking environmental protection, the defense of aboriginal communities, and even historically based legal claims. In the previous chapter, evidence from the conclusions of Canadian professor and legal expert Donat Pharand revealed the weaknesses in Canada's arguments. As the debate in the Northwest Passage intensifies, and other countries become increasingly assertive in demanding access to the waters, light will begin to shine through the cracks in Canada's arguments. The following chapter will detail the counterarguments brought forth by the state's most vocal opponents: the People's Republic of China, the United States, and the European Union.

6A. The People's Republic of China

China has shown increasing interest in the waters of the Northwest Passage as the waters have opened. Rather than taking legal measures to attempt to gain access to the waters, the country has instead demonstrated its interest in a more visible manner; by sending research vessels to the region and speaking openly in Chinese press about its intentions. The most noteworthy example of this was the Chinese Maritime Safety Administration's report released in April 2017; a 365-page Chinese-language document, the *Arctic Navigation Guide (Northwest Passage)*, that serves as a guide to traversing the waters of the Northwest Passage for shipping purposes. Chinese officials referred to this document as an "Arctic passage operating manual," because of the specific nature of the information provided (Vanderklippe). It combines statistics on sea ice and weather with information about previous voyages such as the Nunavik in 2014, to demonstrate that using the Northwest Passage as a shipping route is becoming increasingly feasible as the years go on (Vanderklippe).

In another bold measure, China sent a vessel, the Xue Long or "Snow Dragon", on an 83-day voyage through three of the Northwest Passage's main shipping routes during the late summer of 2017 (Zhou). This was the most recent of the country's eight missions to the region. After the journey, the Chinese government commented openly to its domestic press about the purposes of the mission, stating that it had helped them "acquire navigation techniques and experience in the complicated and frozen environment of the Arctic... and obtain first-hand information on its shipping routes" (Zhou). Canadian officials, along with the Canadian researchers who joined the Chinese aboard the ship, have believed that the Xue Long was strictly a scientific research vessel, and was surprised by the Chinese announcements about successful shipping reconnaissance in the Northwest Passage (Taylor). Voyages and comments such as these are a threat to Canada's defense of sovereignty in the Northwest Passage, but the country is indeed required to allow innocent passage through the waterways since they are not internal waters. This highlights one fragility

of Canada's protection of the area; while it wishes to prevent reconnaissance missions, there is no legal framework for doing so.

In addition to showing its interest and earnestness through research and reconnaissance missions, China has also made a name for itself by gaining observer status on the Arctic Council in 2013 (Zhou). Although observer status does not allow China to speak in ministerial meetings, its representatives are however permitted active participation in the Council's working groups, which meet more frequently. One additional regulation placed on observers of the Council, is that while they may propose projects, the financial contribution of the observing country cannot exceed that of the Arctic States (Arctic Council).

China has also taken to developing a closer relationship with Russia to pursue its Arctic shipping intentions. Chinese officials have voiced their intentions to have an open relationship with Vladimir Putin and develop an "Ice Silk Road" in order to achieve their goals in the Arctic region (Zhou). While Canada has no military bases or emergency ports to support maritime activity in the waters of the Northwest Passage, Russia has already completed construction on two of its first initial military bases in its Arctic territory (Pugliese and BBC). The most recently constructed base, called the Arctic Trefoil, is located deep in the Arctic on Franz Josef Land and will house 150 military personnel (BBC). Over the coming years, a military air strip will also be constructed nearby, and subsequently four additional military bases will be built in other locations throughout Russia's Arctic territory. The openness with which Russia announced these construction plans and proudly publicized the opening of the Arctic Trefoil base is notable for a country that is typically secretive about its military action. This suggests that Russian leaders have a deep understanding of the growing geopolitical significance of having personnel and resources in these Arctic locations. Military experts suggest that the construction of these bases serve three specific purposes: military defense, protecting the rich natural resources below ground, and control of international shipping (BBC). They could also provide weather and traffic information to nearby ships, as well as valuable support in the

event of an emergency. As such, China clearly stands a chance to benefit from a relationship with Russia, which is taking active measures to prepare for any increase in Arctic Sea activity.

China has made clear and substantial progress in demonstrating its intentions in the Arctic waters, specifically regarding its desired use of the Northwest Passage as a shipping route. While this has been provocative for Canada by stimulating discussion and causing experts to underscore the country's need for action if it wishes to protect the waters, China's actions have not risen to the level of causing serious political tension between the countries. Chinese ships have continued to abide by Canadian policies and have registered vessels with NORDREG. However, as the waters of the Passage continue to be open for longer periods of time each year and as China's vocal intentions for shipping in the region strengthen, is likely that this discussion will intensify.

6B. The United States of America

The United States has been deeply involved in the discussion surrounding the Northwest Passage since the event that catalyzed the global debate: the voyage of the retired American oil tanker, *Manhattan*, in 1969. The vessel aimed to complete a test voyage to determine the feasibility of sending regular, commercial oil shipments through the waters of the Passage. The journey ended unsuccessfully due to extensive ice preventing passage through the Parry Channel, and it marked the starting point of the international debate surrounding the sovereignty of the Northwest Passage (Bartenstein 2011, 25).

In the years following the *Manhattan* voyage, as Canada began making public claims to the waters of the Passage, the U.S. was an immediate and vocal opponent. In 1973, as Canadian officials made the first claim to the waters surrounding the Canadian Arctic Archipelago on the basis of historic waters, the United States immediately voiced its protest (Pharand 2007, 13). Such opposition continued, and in 1985 when Canada made its first official claim to draw straight baselines and deem the waters historic internal waters, the U.S. was the first country to write a letter in

protest (Pharand 2007, 12). Specifically, American officials argued, and continue to maintain today, that the Passage is an international strait in which ships as well as aircraft should have freedom of movement (Lalonde and Lasserre 2013, 30).

At the core of the U.S. argument against the Northwest Passage being deemed internal waters is its concern that this would set a precedent that could then be invoked by other littoral states in order to gain sovereignty over their local straits (Lalonde and Lasserre 2013, 30). Such actions could have a significant impact on the freedom of movement for both commercial and military vessels worldwide. The U.S. has actively protested several cases in which coastal states have deemed straits internal waters, including those within Japan and in the Quiongzhou Strait between China's Mainland and Hainan Island (Lalonde and Lasserre 2013, 40-42). Additionally, similar claims could be made in archipelagic states such as Indonesia and the Philippines. If the Northwest Passage were deemed to be internal waters, island nations such as these could use the Passage "as a pretext to unilaterally restrict the freedom of the seas in strategically sensitive areas," (Lalonde and Lasserre 2013, 30). These Asian states are all of strategic importance for American foreign policy in the region surrounding South China Sea, and as such, the U.S. has great interest in maintaining freedom of movement, including in all straits. Arctic expert Bruce McKinnon explains that the U.S. likely feels it cannot acquiesce to any issue involving a strait, as it will demonstrate to other states that it is willing to negotiate, and thus jeopardize its foreign policy elsewhere (Lalonde and Lasserre 2013, 30).

The United States has not only challenged Canadian sovereignty in the Northwest Passage in diplomatic statements, but also in more visible ways. In the summer of 1985, the U.S. Coast Guard icebreaker, the *Polar Sea*, was sent through the Passage on a re-supply mission without previously asking for Canadian permission. Both Canadian legal experts and officials were upset by this move which they saw as a clear threat to Canadian sovereignty, but American officials maintained that permission to sail the waters was not needed, since they viewed them as international

and not internal (Beeler). At this point, Canadian officials received criticism for not having done more to settle this issue after the similar 1969 voyage of the *Manhattan* (Fraser). The journey of the *Polar Sea* caused such public outcry for political action in Canada, that the issue was discussed at the meeting between Canadian Prime Minister Brian Mulroney and U.S. President Ronald Reagan in Ottawa in 1987 (Beeler). That day, Reagan agreed to enter into negotiations with Canada. The U.S. hoped that voyages through the Passage could continue in the future, on diplomatic terms, and Canada aimed to be informed of U.S. icebreaker voyages before they commenced. Months of subsequent meetings yielded a result in the form of the Arctic Cooperation Agreement. This treaty, signed on January 11, 1988, outlines the desire for cooperation between the countries and agrees that the U.S. will ask for consent prior to its icebreaker voyages (Agreement on Arctic Cooperation). Importantly, the treaty emphasizes that the agreement in no way affects either the U.S. or Canadian position on the Law of the Sea “in this or other maritime areas,” (Agreement on Arctic Cooperation)). The Arctic Cooperation Agreement has been deemed by Arctic and international law expert Michael Byers as “a stroke of diplomatic genius” that “allowed the two countries to agree to disagree,” (Beeler). As a result of this agreement, the U.S. can continue to sail the region, without compromising its position on this or other strait disputes globally.

It is important to note that the Arctic Cooperation Agreement was signed in 1988, a time in which it was only possible for icebreakers to sail the Northwest Passage (Agreement on Arctic Cooperation). As such, the agreement was made specifically regarding U.S. icebreaker vessels. In the two decades subsequent, the rise in Earth’s temperatures have led to far less ice coverage in the region, making it possible for other types of ships to sail the waters as well. This development puts the current relevance of the treaty into question, as the U.S. could continue to abide by the agreement while sending non-icebreaker vessels through the Passage without previously gaining Canadian consent. Such an assertive political move is unlikely, due to the immense ramifications it would have on U.S.-

Canadian relations, but it is nonetheless important to note in this analysis. At the time of writing, no re-negotiations of the 1988 have commenced between the two countries.

The United States and Canada disagree not only on the sovereignty of the Northwest Passage, but also on that of the Beaufort Sea. As mentioned in chapter 4B, this area has been disputed since the creation of UNCLOS, when both countries filed claims to what each saw as its 200-nautical-mile exclusive economic zone. This resulted in approximately 21 sq km. of sea over which both countries claim sovereignty (Griffiths). The presence of natural resources such as petroleum and natural gas in the area have only increased the value of this disputed area. The Beaufort Sea is also of great relevance to the Northwest Passage, as it sits at the westernmost point of the Passage. As such, possession of these waters is of great geopolitical value for both states.

Persistent United States claims for sovereignty over the Beaufort Sea and international rights in the Northwest Passage are complicated by the U.S. decision not to sign UNCLOS (United Nations Treaty Collection). As Ronald Reagan assumed the U.S. presidency, he ordered an inter-agency report to review what were at that time drafts of UNCLOS, within the context of American policy aims. This review found the draft to be largely agreeable, as it generally aligned with common practices in international law regarding continental shelves, navigation, and marine research. However, it also determined that several criteria were contrary to American political interests in international waters. These pertained largely to the U.S. desire to engage in natural resource extraction the deep seabed; something UNCLOS aimed to prevent on the grounds of environmental protection (Malone 1983, 30). Ultimately, under President Reagan's administration, the United States decided to abstain from signing the international treaty, and through today remains one of the few non-signatory countries.

As the Northwest Passage becomes increasingly free of ice during the summer months, the tension between Canada and the U.S. will likely rise,

due to its increased economic interests in commercial shipping. American policy makers will likely continue to advocate against Canada's use of straight baselines and historic claims to internal waters in the Passage. Although the country has not signed UNCLOS, it is nonetheless eligible to bring the case to the ICJ. However, as described in detail in the chapters above, legal experts believe that Canadian claims to drawing straight baselines would be upheld, and as such, it is unlikely the U.S. would bring this issue to the court.

6C. The European Union

Due to the Northwest Passage's dramatic reduction in shipping distance between Asia and Europe, the European Union (EU) stands to benefit substantially if the Passage were to be used regularly for commercial shipments. Formally, the Union's current position on the Arctic is laid out in a joint communication written on behalf of the European Commission (EC) to the European Parliament in April 2016. The document first acknowledges the speed at which climate change is affecting the region, and the fragility of the Arctic ecosystem (European Commission 2016, 2). Additionally, it emphasizes that the EU should encourage sustainable development by considering the traditional livelihoods of the communities living in the Arctic (European Commission 2016, 3). These terms serve to display continuity with current development rhetoric across the continent as European states include language of sustainability, livelihoods, and community-based approaches in their respective development projects around the world.

Ultimately, the joint communication underscores the urgency of managing activity in the Arctic waters and announces the EU's desire to advance ocean governance. It states that High Representative for Foreign Affairs and Security Policy, the EC's designated foreign affairs minister, has created a comprehensive framework for EU political and financial participation in the region, and outlines this plan (European Commission 2016, 4). It concentrates on three areas of priority: "(1) Climate Change and Safeguarding the Arctic Environment, (2)

Sustainable Development around the Arctic, and (3) International Cooperation on Arctic Issues,” all of which should align with the Sustainable Development Goals (European Commission 2016, 4). The first goal focuses primarily on continuing to reduce the emission of harmful greenhouse gasses, reduce the level of pollutants reaching Arctic inhabitants’ food, and precautionary measures to prevent oil and gas leaks in the region (European Commission 2016, 6-8). The second goal of sustainable development outlines the EU’s goals for protecting the livelihoods of those in Arctic communities, and the Union’s interest in creating economic opportunity in the region (European Commission 2016, 9-12). This specific measure can be criticized for its focus on economic investment opportunities for the EU and its member states. The document also lays out more practical measures, such as nations collaborating with one another as well as organizations to maintain thorough satellite coverage of the Arctic waters and improve search and rescue capabilities (European Commission 2016, 13). Lastly, the third area outlines ways in which the EU will continue to partner with the indigenous people of the various Arctic states, particularly by promoting renewable energy and entrepreneurship through existing programs in Canada, Russia, and Arctic regions of the EU (European Commission 2016, 15).

This document makes it clear that the EU is serious about its involvement in the Arctic region, both within its own littoral states as well as those outside of the Union such as Canada. The joint statement is consistent with other development-related documents in that it focuses on involvement in sustainable improvements to current conditions through the work of bilateral and multilateral partnerships and financial investment. Notably, the document does not mention the Northwest Passage by name. In this 2016 publication, the EC made the decision to not include this controversial issue, and instead only articulate its plans for cooperation and development in the general Arctic region. It is likely that this decision was made to avoid provoking conflict with Canada. Instead, it takes a safer political route by naming the entire Arctic as

important to the EU, and displaying the ways it wishes to protect the area. It does so in a manner that focuses on climate and development related issues in the area; not areas of international trade or governance. Because of the EU's unique position as a non-state actor, its voice in global governance is reduced to that of an observing member who ultimately cannot make legislative decisions.

The EU initially made its position known in 1985 when, on behalf of the European Community, the United Kingdom published a diplomatic protest of Canada's attempt to use straight baselines to enclose its Arctic water and thus create internal waters in the region (Huebert 2011, 389). This made the position of the European states clear to Canadian lawmakers. However, the EU is quite limited in its ability influence policy making in the region for several reasons. First, it is not a littoral state, so it has neither an exclusive economic zone nor does it have a seat at the table of the Arctic Council, the Arctic region's governing body. Second, as the EU is not a state-like actor, it has difficulty participating in global governance in the manner that a state would, in that it cannot contribute to decisions made on regulatory governance (Dijkstra 2011, 2). Furthermore, the Union is not a state member of the International Maritime Organization (IMO), the governing body that creates international standards for sea vessels (Dijkstra, 2011 6). The EC, the executive body of the EU, does however have an agreement of cooperation with the IMO, but this once again limits its participation to an observer status (IMO). Dijkstra argues that these conditions result in a situation in which the opinion of the EU does not influence the policies being made.

7. Multilateral Platforms for Discussion

Many of the assertions that Canada and other countries have made regarding the Northwest Passage have been in written or spoken statements by government officials, which then go on record and serve as the country's official position, as has been seen above. When this

occurs, opponents form their own rebuttals, which similarly go on record as official statements. This back-and-forth method of handling sensitive geopolitical issues such as that of the Northwest Passage make the views of all parties clear, but do not provide an environment in which the matters can be discussed proactively. As such, they do little to find solutions or agreements to the issue at hand.

In addition to this type of discourse, there has also been discussion within multilateral platforms that serve as venues for discussion, cooperation, and conflict resolution between countries. Two such entities have been particularly valuable for the discussion surrounding the Northwest Passage. The Arctic Council serves as a venue for cooperation, research exchange, and discussion amongst Arctic countries, and the International Court of Justice hears border dispute cases and uses past decisions to assess modern scenarios such as the Northwest Passage.

7A. The Arctic Council

The Arctic Council is an intergovernmental forum that serves as a venue for “promoting cooperation, coordination and interaction” between Arctic states and aboriginal communities (Arctic Council). The Council was created in 1996, during a time in which public outcry for environmental protection in the region was escalating (Dijkstra 2011, 3). Central actors in the Arctic Council include its eight member states, and its six permanent participants. The member states are Canada, Denmark, Norway, Russia, the United States, Sweden, Finland, and Iceland (Arctic Council). The permanent participants are six indigenous peoples’ organizations, each of which represents one or more indigenous people groups living in Arctic states. These groups include the Aleut International Organization, the Arctic Athabaskan Council, the Gwich’in Council International, the Inuit Circumpolar Council, the Russian Association of Indigenous Peoples of the North, and the Saami Council (Arctic Council). Although under the title of permanent participant and

not member states, these organizations have full participatory rights in the negotiations and decisions of the council.

Additionally, thirteen non-Arctic states have observer status. These states are China, Japan, India, Korea and Singapore in the east, and France, Germany, Italy, the Netherlands, Poland, Spain, Switzerland, and the United Kingdom in Europe (Arctic Council: Observers). States with this status are not permitted to participate in ministerial meetings, but may take part in the meetings and discussions of the six Working Groups. These Working Groups are a central facet of the Arctic Council; they are where the work of the Council primarily occurs. Organized into key areas of importance, the Groups' focus areas range from the conservation of flora and fauna, emergency prevention and response, to monitoring and assessment (Arctic Council). Each is tasked with analyzing and assessing data within its area of focus, and making recommendations to the Council. After these are presented, decisions are made by the member states and indigenous participant organizations (Arctic Council). These decisions range from publication of assessments on conditions in the Arctic, to policy recommendations in the region. However, the Council is unable to enforce its recommendations or guidelines, as it has no legally binding mechanisms.

Despite the nonbinding nature of its recommendations, the Arctic Council is essential for ensuring cooperation, publishing essential research, and creating space for collective decision making in the Arctic region. Because its work focuses on matters that directly affect all Arctic states, it has not concerned itself with the debate surrounding the sovereignty of the Northwest Passage. This national issue remains untouched by the council's Working Groups, and thus the Council has not published assessments or recommendations concerning the Passage's sovereignty. However, the Council's publications, such as the Arctic Marine Shipping Assessment (AMSA) of 2009, contain valuable statistics and analyses that confirm the negative effects shipping would have on the environment and aboriginal populations of the rural coastal communities in the Arctic (AMSA).

Based on the data collected and analyzed in AMSA, the Council presented three broad recommendations to guide the continued work of both the Council and Arctic states themselves. These were to enhance Arctic marine safety, to protect the Arctic people, and to build Arctic marine infrastructure (PAME). The first recommendation, enhancing Arctic marine safety, pertains to the safety of ships and their crews. The Council suggests that its members work together, and with the International Maritime Organization, to ensure ship safety, enhance search and rescue capabilities, and create more uniform regulations for shipping in the region. The report contends that streamlining such regulations would create a basis for protection measures that could be used by all Arctic states within their respective jurisdictions. The second recommendation, protecting Arctic people and the environment, involves guarding against threats such as oil spills and emissions, as well as the explicit protection of certain areas of cultural and ecological importance, in order to best protect human, plant, and animal life in the region. The Council's final recommendation in AMSA is the building of Arctic marine infrastructure. This includes developing an Arctic marine traffic system, improving response capabilities to environmental threats, and investing in systems to monitor oceanographic, meteorological, and hydrographic data (PAME). These comprehensive policy recommendations serve as goals for Arctic states to strive towards both individually and collectively, so that the region and vessels sailing through it can be protected.

It is possible that Canada may in the future use the Council as a platform within which it can advocate for its claims of sovereignty, particularly in relation to the environmental threat of shipping on the region and on the aboriginal population, as much of the Council's work is related to the Arctic environment. This could serve as a useful platform for promulgating Canadian claims and presenting supporting evidence. However, given the Arctic Council's position as a forum with no legally binding mechanisms, doing so would not result in the creation of compulsory regional policy that would protect Canada's claims.

7B. The International Court of Justice

The International Court of Justice (ICJ) is the legal body of the United Nations, established by the Charter of the United Nations in 1945 (ICJ-CIJ). Chief among its duties is to use international law to reach legal decisions on disputes submitted by UN member states. Fifteen judges, each elected by the United Nations General Assembly and Security Council for nine-year terms, process the submitted cases (ICJ-CIJ). These judges each represent different countries, and among themselves they elect the President of the Court every three years (Peace Palace). Among other areas of dispute, the ICJ is responsible for hearing cases related to land boundaries and maritime borders (Peace Palace). Furthermore, it functions as a case law system, such that past decisions made by the court serve as precedent for future cases.

One case relevant to the debate surrounding the Northwest Passage is the aforementioned 1951 Fisheries case between the United Kingdom and Norway. There had long been controversy between the two states over the waters along Norway's rugged coastline. In 1935, Norway issued a decree in which it drew baselines along its many bays and fjords, to mark its territory and reserve the waters for its own fishermen's exclusive use. The United Kingdom then brought the issue to the ICJ, to answer the question of whether or not this decree and inclusive drawing of straight baselines along the coast, was indeed reasonable and valid (Fisheries). Ultimately, the ICJ decided that straight baselines may be drawn along rugged coastline such as Norway's, to delineate the end of the country's land and the beginning of its territorial waters.

If the Northwest Passage case were brought to the ICJ, the Fisheries case would be used as a point of reference for making decisions on Canada's bid for sovereignty in the region. Canadian legal expert Donat Pharand explains that the geography of Norway's skjaergaard, or the islands and reefs along the country's coastline, is similar to that of the Canadian Arctic Archipelago (Pharand 2007, 13). In short, the Canadian archipelago possesses the fundamental geographic traits of its Norwegian counterpart: unity and proximity (Pharand 2007, 16). The islands of the

archipelago are unified, in that they are closely spaced, to the extent to which ice can unite them during the winter months. Additionally, they exhibit close proximity to the coast. Because of these shared geographic features, the Fisheries case would likely be deemed relevant, and be used by the ICJ to assess the claims of Canada and its opponent.

Furthermore, the 1951 decision states the criteria necessary for drawing straight baselines. The first two are mandatory requirements that the straight baselines being requested must (1) follow the general direction of the coast, and (2) the sea domain within the baselines must be very closely linked to the surrounding land domain (Pharand 2007, 17-19). In other words, the baselines must abide to the general shape of the land, and the waters they contain must be of significant value to the land around them, as is the case for a bay. The third criterion is an optional guideline a country may choose to invoke, which states that there are economic interests in the area whose importance can be proven using evidence of long usage (Pharand 2007, 21).

The geography of the Canadian Arctic Archipelago is different from that of the Norwegian skjaergaard in that Canada's islands run in a northern direction, and are not simply parallel to the coastline (see figure 10 below). Despite this uniqueness, scholars maintain that due to the interpretation of the law, it is likely that the archipelago would comply with the requirements (Pharand 2007, 19). Regarding the criterion of close linkage between the land and sea domains in question, Pharand references the Arctic Archipelago's land to sea ratio and nearly permanent ice coverage as fulfillments of this requirement (Pharand 2007, 19).

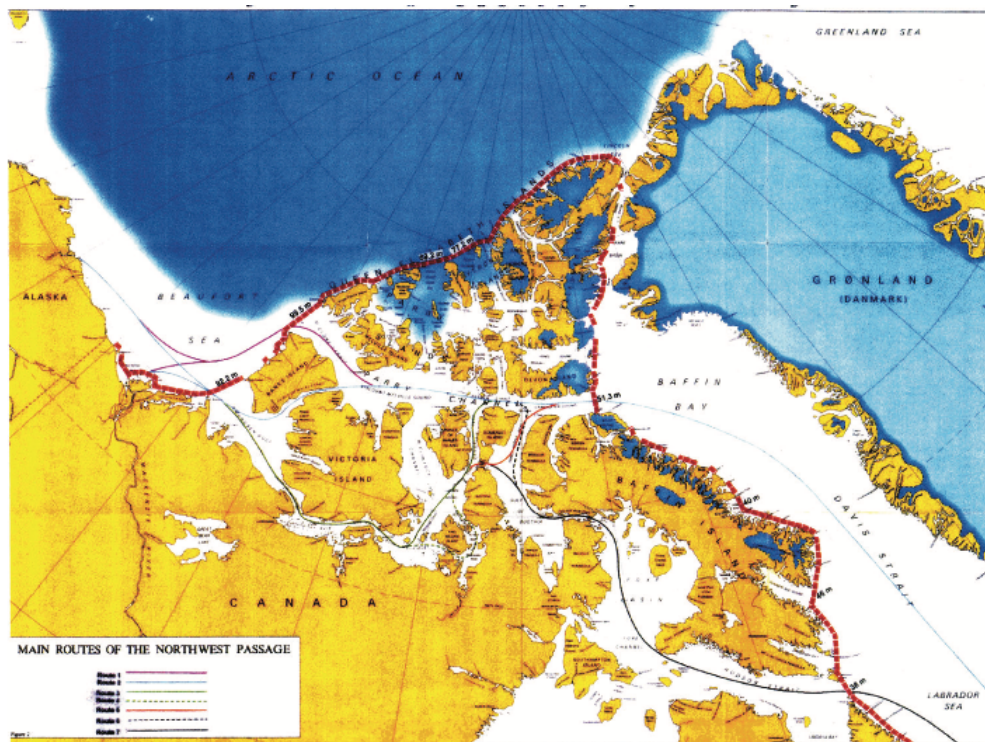


Figure 8 Potential outline of straight baselines around the Canadian Arctic Archipelago (Pharand 2007, 18)

Due to the fulfillment of the above criteria with which the ICJ allowed the drawing of straight baselines in Norway, it seems plausible that a similar decision would be made for Canada if the issue were brought to the Court. In this case, Canada would likely draw straight baselines along the rugged sections of its Arctic coastline and archipelago, protecting some of its costal territory.

Although such a ruling is probable, drawing straight baselines would only marginally augment the amount of costal territory Canada lays claim to, and thus would not extend its maritime borders by a substantial distance. Canadian legal experts would then need to provide additional legal arguments for extending such borders to a distance that would be beneficial for its defense of the Northwest Passage. As noted above, officials have voiced historic claims to the Arctic seas. These claims have not yet been voiced in courts, but as the assessment in chapter 5C

concludes, these arguments would not withstand legal scrutiny (Pharand 2007, 7).

Because Canada does not stand to benefit substantially from taking this case to the ICJ, it is unclear if this route would be pursued. However, this does not rule out the Northwest Passage dispute being brought to the UN court. Recognizing the weaknesses of Canada's legal arguments, another UN member state such as China could present the case to the ICJ. Such a case would likely focus on maintaining the title of *high seas* upon all Northwest Passage waters that do not fall within the exclusive economic zone of Canada, thus permitting states to sail freely through the waters. The success of such a case in the ICJ may lead to more frequent voyages in the Passage, but it would not ensure that the Canadian government would actively support the traffic. For example, it would not guarantee Canada's investment in the creation of the coastal infrastructure necessary support frequent commercial voyages in the region.

8. The Future of the Debate

The debate over the sovereignty and use of the Northwest Passage remains at a standstill, but will continue to intensify over the coming years as the climate continues to warm, freeing up ice in the region for longer periods of time. This chapter will now look to the future, to determine how the debate may develop in the next years.

8A. Canadian Continental Shelf Claims

In 2019, Canada is expected to release its continental shelf claims, which will likely intensify the debate between Canadian officials and the nations most invested in utilizing the Northwest Passage (Sevunts 2018). Canada ratified UNCLOS in 2003, and in doing so is also responsible for mapping its continental shelf (Sevunts 2016). In 2013, the country submitted partial claims to an Atlantic extended continental shelf to the UN, and at that time also indicated that it would later submit a detailed

claim for Canada's part of the Arctic ocean (Sevunts 2018). The head of Canada's UNCLOS Program, Mary-Lynn Dickson, stated that the research for this Arctic shelf claim, which has been ongoing since 2006, has been a slow process due to the harsh environment that limits research to the warmest six to eight weeks per year (Sevunts 2016). These conditions have even delayed the publication of the claims, which were originally expected to be released in the early months of 2018 (Sevunts 2016, Sevunts 2018). The research has been conducted in cooperation with the United States, Denmark, and Sweden, using tools specifically designed to sustain the Arctic conditions. Despite the difficulty of gathering data, Dickson states that the quality of the collected data is exceptional (Sevunts 2016). In a domestic radio interview in May 2016, Dickson explained that her team is working to "compile the scientific evidence that builds the case for Canada's extended continental shelf area," which will result in a document several thousands of pages in length (Sevunts 2016). The document will need to prove that the areas beyond 200 nautical miles are connected to the Canadian landmass for the country's claims to extended ocean territory to be legitimate in the eyes of the United Nations and UNCLOS. If researchers can prove that underwater elevations located 350 nautical miles beyond its baselines are indeed part of its continental landmass, it would then have claim to even further maritime territory (Sevunts 2016).

Russia and Denmark have submitted documents that claim areas stretching to the North Pole, and Dickson expects that the Canadian claims will overlap with those of the other two nations (Sevunts 2018). If an overlapping of claims does occur, the United Nations will not determine which claim is more legitimate. Instead, the countries involved are expected to engage in bilateral negotiations to reach an agreement (UNCLOS 1982, Part XV Section I). Irrespective of the potential for overlap in claims at the North Pole, it is likely that when the document is published in 2019, it will include portions or entire sections of the Northwest Passage, thus supporting the country's claim that the Passage is an interior waterway. This would then change the debate substantially:

the scientific data gathered over the last decade would likely replace “sovereignty first and foremost” and environmental claims as the chief arguments for sovereignty in the region. Armed with scientific measurements, Canada may then stand a better chance arguing for the protection of the Northwest Passage.

8B. Possible Outcomes

Based on the analysis of the previous chapters of this paper, it is unlikely that Canada would be able to successfully argue for complete sovereignty over the waters of the Northwest Passage until it publishes its continental shelf claims in 2019. As the arguments currently stand, the historic claims Canada has used to support its desire for sovereignty lack the criteria laid out in the 1957 Memorandum on Historical Bays and the 1962 study “Juridical Regime of Historical Waters, Including Historical Bays” and highlighted in the works of Donat Pharand. As such, it is also unlikely that Canada would proceed to the International Court of Justice to defend its position. However, as the debate intensifies, it is possible that, seeing the weaknesses in Canada’s arguments, another nation such as China could bring Canada to the ICJ over the issue. This is one possible outcome for the debate surrounding the Northwest Passage.

In addition to the ICJ, the Arctic Council will continue to be of importance, as it publishes research relevant to the claims of Canada and other Arctic states, and provides a forum in which these states can develop agreements with one another. Along with these multilateral platforms, Canada may look to begin bilateral or multilateral meetings with other states to form agreements similar to the 1988 Arctic Cooperation Agreement made between Canadian and U.S. officials, which allowed U.S. icebreakers to traverse the Passage, providing they first requested permission. If the Canadian exclusive economic zone remains its current size, and the ice melt continues at its current trajectory, advocating for such agreements with other states, such as China, may be in Canada’s best interests. Such a solution would go beyond NORDREG’s requirement of filing reports throughout the vessel’s

journey, by additionally necessitating a formal request for voyage, as the 1988 agreement between the U.S. and Canada outlined. While this solution will not prevent ships from sailing the Passage, it will appease Canada's desire to maintain a degree of autonomy over the waters. It may prove difficult for Canadian lawmakers to reach such agreements with countries who categorically deny Canada's claims in the region, but an agreement of this type would be of mutual benefit for maintaining friendly diplomatic relations between opposing nations.

The third solution, which at the time of writing is the most improbable outcome, is Canada gaining sovereignty over large parts of or the entirety of the Northwest Passage. If this were to happen, the country would then have the full authority to regulate those waters. The implication of this could result in the implementation of tariffs on ships wishing to pass through parts of or the whole of the Passage. These tariffs could be for financial gain, or simply to offset the immense costs of the maritime infrastructure that will become necessary in the region. Additionally, if Canada gains sovereignty over parts of the Northwest Passage that are rich in natural resources, it would then have the jurisdiction necessary to extract and capitalize upon these resources. Furthermore, a decision in favor of Canada would set a legal precedent that would likely encourage other archipelagic countries, such as the Philippines and Indonesia, to seek sovereignty over similar straits. As such, a win for Canadian sovereignty could have far-reaching impacts on freedom of navigation and global politics.

If Canada is not successful in its bid for sovereignty over the Northwest Passage, or if the debate persists for decades, the region will still witness a steady increase in traffic in the summer months due to the warming temperatures. In this scenario, the country must still decide if it will build along the Canadian Arctic Archipelago the infrastructure necessary to support this traffic. Construction of refueling, medical, and emergency docking stations would significantly enhance the safety of crews sailing the Northwest Passage. However, if unable to implement a tariff system, Canada would bear the cost of such

improvements. Additionally, these measures would be met with strong resistance from environmentalists and the aboriginal populations living on and near the coast.

Whether Canada adapts to the global pressure to allow shipping in the Northwest Passage and whether its lawmakers choose to extract the natural resources in the area, remains in question. As such, it is yet to be seen if the country will uphold its dedication to the preservation of vulnerable Arctic ecosystem. An analysis of the Trudeau government's Pan-Canadian Framework on Growth and Climate Change suggests that the country's current leadership is dedicated to protecting the area. However, with the 2019 elections on the horizon, it is questionable what protection of the Arctic region and its people will look like if new leadership takes office. The Northwest Passage will continue to play a central role in geopolitical conversations in the coming years as the global temperature rises and arguments of each party intensifies.

Bibliography

- 2016 Census. *Population and Dwelling Count Highlight Tables, 2016 Census*. Statistics Canada / Statistique Canada. 8 February 2018. <http://www12.statcan.gc.ca/censusrecensement/2016/dp-pd/hltfst/pdpl/Table.cfm?Lang=Eng&T=101&SR=1&S=3&O=A#tPopDwell> Accessed 26 March 2018.
- Agreement on Arctic Cooperation*. 11 January 1988. http://www.assidme.r.net/doc/1988_Canada_-_USA_Treaty.pdf. Accessed 9 February 2019.
- AMSA: Arctic Council: Arctic Marine Shipping Assessment 2009 Report. <https://pame.is/index.php/projects/arctic-marine-shipping/amsa/57-projects/amsa/amsa-2009-report>. 2009. Accessed 8 December 2018.
- Arctic Council. *The Arctic Council: A Backgrounder*. 13 September 2018. <https://arctic-council.org/index.php/en/about-us>. Accessed 4 February 2019.
- Arctic Council: Observers. 17 January 2018. <https://arctic-council.org/index.php/en/about-us/arctic-council/observers>. Accessed 4 February 2019.
- Arctic Report Card 2016. NOAA Arctic Program. December 2016. Accessed 2 February 2019.
- Arctic Report Card 2018. NOAA Arctic Program. December 2018. Accessed 3 February 2019.
- Bartenstein, Kirstin. The “Arctic Exception” in the Law of the Sea Convention: A Contribution to Safer Navigation in the Northwest Passage? *Ocean Development & International Law*, Volume 42, Issue 1, 2011, p.22-52. Accessed 10 November 2018.
- BBC. “Russia’s new Arctic Trefoil military base unveiled with virtual tour.” BBC. 18 April 2017. <http://www.bbc.com/news/world-europe-39629819>. Accessed 15 December 2018.
- Beeler, Carolyn. “Who controls the Northwest Passage? It’s up for debate.” Public Radio International. 4 September 2017. <https://www.pri.org/stories/2017-09-04/who-controls-northwest-passage-its-debate>. Accessed 9 February 2019.
- Bercuson, David J., et al. “Canada.” *Encyclopedia Britannica*, 5 February 2019, *Encyclopedia Britannica, Inc.* <https://www.britannica.com/place/Canada>. Accessed 7 February 2019.

- Byers, Michael. "Canada's Arctic nightmare just became true: The Northwest Passage is commercial." *The Globe and Mail*. 20 September 2013. <https://www.theglobeandmail.com/opinion/canadas-arctic-nightmare-just-came-true-the-northwest-passage-is-commercial/article14432440/?arc404=true>. Accessed 30 December 2018.
- Charron, Andrea. *The Northwest Passage: Is Canada's Sovereignty Floating Away?* Toronto, Ontario: International Journal (60:3), June 2005, p.831-848. Accessed 30 October 2018.
- Continental Shelf: (Tunisia/Libyan Arab Jamahiriya): Overview of the Case.* <https://www.icj-cij.org/en/case/63>. Accessed 5 February 2019.
- Colombo, Gabe. "Crystal's 'Serenity' Will Not Return to Nome for Years, If Ever; Locals Weigh Its Impact." KNOM Radio Mission. 18 September 2017. <http://www.knom.org/wp/blog/2017/09/18/crystals-serenity-will-not-return-to-nome-for-years-if-ever-locals-weigh-its-impact/>. Accessed 10 December 2018.
- CIER: *Climate Risks and Adaptive Capacity in Aboriginal Communities: Final Report. Assessment South of 60 Degrees Latitude.* Center for Indigenous Environmental Resources. June 2009. Accessed 7 November 2018.
- Defenders of Wildlife. "Reduced Numbers of Arctic Cod Due to Global Warming Could Cause Entire Arctic Food Web to Unravel, Put More Strain on Polar Bears and Narwhals." April 2007. <https://defenders.org/press-release/reduced-numbers-arctic-cod-due-global-warming-could-cause-entire-arctic-food-web>. Accessed 18 September 2018.
- Dijkstra, Hylke. *The European Union as an Actor in Arctic Governance.* European Foreign Affairs Review. January 2011. Accessed 3 November 2018.
- Duerden, Frank. *Translating Climate Change Impacts at the Community Level.* The Arctic Institute of North America. Vol. 57, No. 2, p. 204-212. June 2004. Accessed 28 November 2018.
- Eagan, Matt. "Massive oil discovery in Alaska biggest onshore find in 30 years." CNN Money, 10 March 2017. <http://money.cnn.com/2017/03/10/investing/alaska-oil-discovery-repsol-spain/index.html>. Accessed 8 October 2018.
- Eamer, Claire. "The Canadian Arctic Remains Dangerously Unmapped." *Hakai Magazine: Coastal Science and Societies*. 6 May 2016. <https://www.hakaimagazine.com/article-short/canadian-arctic-remains-dangerously-unmapped>. Accessed 16 November 2018.

- EIA: U.S. Energy Information Administration. “Arctic oil and natural gas resources.” <https://www.eia.gov/todayinenergy/detail.php?id=4650>. 20 January 2012. Accessed 9 December 2018.
- EIA FAQ: U.S. Energy Information Administration. “Frequently Asked Questions: What countries are the top producers and consumers of oil?” <https://www.eia.gov/tools/faqs/faq.php?id=709&t=6>. 3 December 2018. Accessed 4 February 2019.
- ENR: Environment and Natural Resources, Northwest Territories State of the Environment Report. “7.3 Trends in shipping in the Northwest Passage and Beaufort Sea.” <http://www.enr.gov.nt.ca/en/state-environment/73-trends-shipping-northwest-passage-and-beaufort-sea>. 29 May 2015. Accessed 6 November 2018.
- European Commission. High Representative of the Union for Foreign Affairs and Security Policy. *Joint Communication to the European Parliament and the Council: An integrated European Union policy for the Arctic*. Brussels, Belgium. 27 April 2016. Accessed 22 November 2018.
- Fisheries (United Kingdom v. Norway): Overview of the Case*. <https://www.icj-cij.org/en/case/5>. Accessed 4 February 2019.
- Fisheries Case (United Kingdom v. Norway) Judgement of December 18th, 1951*. International Court of Justice, 18 December 1951. <https://www.icj-cij.org/files/case-related/5/005-19511218-JUD-01-00-EN.pdf>. Accessed 3 February 2019.
- Fraser, Whit. “The Polar Sea Controversy.” *The National*. The Canadian Broadcasting Corporation. 29 July 1985. <https://www.cbc.ca/archives/entry/the-polar-sea-controversy>. Accessed 9 February 2019.
- Freeman, Minnie Aodla. “Inuit.” *The Canadian Encyclopedia*, 4 March 2015, Historica Canada. <https://www.thecanadianencyclopedia.ca/en/article/inuit>. Accessed 5 February 2019.
- Government of Canada. *The Pan-Canadian Framework on Growth and Climate Change*. 2016. <https://www.canada.ca/content/dam/the-mes/environment/documents/weather1/20170125-en.pdf>. Accessed 7 December 2018.
- Griffiths, Sian. “US-Canada Arctic border dispute key to maritime riches.” BBC. <https://www.bbc.com/news/world-us-canada-10834006>. 2 August 2010. Accessed 4 February 2019.

- Headland, R.K. and Colleagues. *Transits of the Northwest Passage to End of the 2018 Navigation Season*. 1 December 2018. Scott Polar Research Institute, University of Cambridge. Accessed 3 February 2019.
- Huebert, Rob. Climate Change and Canadian Sovereignty in the Northwest Passage. *Calgary Papers in Military and Strategic Studies*, Occasional Paper No. 4, 2011, p.383-399. Centre for Military and Strategic Studies. Accessed 15 September 2018.
- ICJ-CIJ. *International Court of Justice: The Court*. International Court of Justice, 2018. <https://www.icj-cij.org/en/court>. Accessed 24 November 2018.
- IHS: *Inuit Health Survey 2007-2008*. Center for Indigenous Peoples' Nutrition and Environment, McGill University, 2010. Accessed 27 November 2018.
- IMO: International Maritime Organization. *International Organizations which have concluded agreements of cooperation with IMO*. 2018. <http://www.imo.org/en/About/Membership/Pages/IGOsWithObserverStatus.aspx>. Accessed 14 December 2018.
- INAC: Indigenous and Northern Affairs Canada. *Nunavut – September 2003*. <https://www.aadncaandc.gc.ca/eng/1100100016496/1100100016497>. 15 September 2010. Accessed 4 February 2019.
- Kikkert, Peter. “Nunavut.” *The Canadian Encyclopedia*, 22 January 2019, Historica Canada. <https://www.thecanadianencyclopedia.ca/en/article/nunavut>. Accessed 4 February 2019.
- Knight, Christopher P. “NORDREG now Mandatory Within the Northwest Passage.” <http://www.mondaq.com/canada/x/114788/Marine+Shipping/NORDREG+now+Mandatory+Within+the+Northwest+Passage>. 8 November 2010. Accessed 20 December 2018.
- Lalonde, Suzanne and Lasserre, Frédéric. *The Position of the United States on the Northwest Passage: Is the Fear of Creating a Precedent Warranted?* *Ocean Development and International Law*. January 2013. Accessed 9 February 2019.
- Langlois, Annie. *Hinterland Who's Who: Canada's Arctic Tundra*. Environment and Climate Change Canada: Canadian Wildlife Federation. 2012. Accessed 4 February 2019.

- Leahy, Stephen. "Canada cuts environment spending." *The Guardian*. 9 November 2011. <https://www.theguardian.com/environment/2011/nov/09/canada-cuts-environment-spending>. Accessed 4 December 2018.
- Lindsey, Rebecca. "Climate Change: Minimum Arctic Sea Ice Extent." *NOAA: National Oceanic and Atmospheric Administration*. <https://www.climate.gov/news-features/understanding-climate/climate-change-minimum-arctic-sea-ice-extent>. 15 August 2018. Accessed 3 February 2019.
- "Lowther Island, Canada." Map. *Google Maps*. Google, 15 August 2010. Web. Accessed 10 September 2018.
- Malone, James L. *The United States and the Law of the Seas After UNCLOS III*. Duke Law: Law and Contemporary Problems, Spring 1983, Volume 12, p.29-36.
- Navigating the North: An Assessment of the Environmental Risks of Arctic Vessel Traffic. The Ocean Conservancy. 2017. Accessed 5 February 2019.
- NBS: Nunavut Bureau of Statistics. *2014 Food Price Survey: Comparison Chart*. Food Secure Canada. 2014. <https://foodsecurecanada.org/resources-news/resources-research/2014-nunavut-food-price-survey-comparison-chart>. Accessed 27 November 2018.
- Neatby, Leslie H. and Mercer, Keith. "Sir John Franklin." *The Canadian Encyclopedia*, 8 March 2018, Historica Canada. <https://www.thecanadianencyclopedia.ca/article/sir-john-franklin>. Accessed 3 February 2019.
- PAME. Protection of the Arctic Marine Environment. *Arctic Marine Shipping Assessment (AMSA)*. <https://pame.is/index.php/projects/arctic-marine-shipping/amsa/57-projects/amsa/amsa-2009-report>. Accessed 4 February 2019.
- Palahitskyy, Mykhaylo. *Legal and Political Aspects of the Beaufort Sea Maritime Boundary Dispute between The United States of America and Canada*. University of Vienna, 2016. Accessed 4 February 2019.
- Parker, Richard D and Madjd-Sadjadi, Zagros. Emerging Legal Concerns in the Arctic: Sovereignty, Navigation, and Land Claim Disputes. *Polar Record*, Volume 46, Issue 4, October 2010, p.336-348. Accessed 22 October 2018.
- Peace Palace. "International Court of Justice" Peace Palace, Jurisdiction. <https://www.vredespaleis.nl/jurisdiction/international-court-of-justice/?lang=en>. Accessed 20 September 2018.

- Pharand, Donat. "The Arctic Waters and the Northwest Passage: A Final Revisit." *Ocean Development & International Law*, Volume 38, 2007, p.3-69. Accessed 21 September 2018.
- Pomerants, Daniel. *The Beaufort Sea Maritime Boundary Dispute: High Stakes for Canadian Arctic Sovereignty and Resource Extraction in Changing Climate*. Diss. York University, 2012. Web. Accessed 3 February 2019.
- Pugliese, David. "Canadian Forces to expand Nunavut training centre as Russia plans more bases in the Arctic." *National Post*. 23 February 2016. <http://nationalpost.com/news/canada/canadian-forces-to-expand-nunavut-training-centre-as-russias-plans-more-bases-in-the-arctic>. Accessed 13 November 2018.
- Rea, Kenneth John. "Nunavut." *Encyclopedia Britannica*. 28 February 2018. Web. <https://www.britannica.com/place/Nunavut#ref655020>. Accessed 27 November 2018.
- Robinson, J. Lewis. "Northwest Passage." *The Canadian Encyclopedia*, 4 March 2015, Historica Canada. <https://www.thecanadianencyclopedia.ca/en/article/northwest-passage>. Accessed 3 February 2019.
- Sevunts, Levon. "Canada to file Arctic continental shelf submission in 2019: Global Affairs Canada." RCI: Radio Canada International. 17 September 2018. <http://www.rcinet.ca/en/2018/09/17/canada-to-file-arctic-continental-shelf-submission-in-2019-global-affairs-canada/>. Accessed 30 December 2018.
- Sevunts, Levon. "Canada to submit its Arctic continental shelf claim in 2018." RCI: Radio Canada International. 3 May 2016. <http://www.rcinet.ca/en/2016/05/03/canada-to-submit-its-arctic-continental-shelf-claim-in-2018/>. Accessed 29 December 2018.
- Scoones, Ian. *Sustainable Rural Livelihoods: A framework for Analysis*. IDS Working Paper 72, 1998. Sussex: Institute for Development Studies. Accessed 7 March 2018.
- Scott, Michon. "Arctic sea ice ties for second lowest in 2016." *NOAA: National Oceanic and Atmospheric Administration*. <https://www.climate.gov/news-features/event-tracker/arctic-sea-ice-ties-second-lowest-2016>. 15 September 2016. Accessed 5 December 2018.
- Scott, Michon. "2015 Arctic sea ice fourth lowest on record." *NOAA: National Oceanic and Atmospheric Administration*. <https://www.climate.gov/news-features/featured-images/2015-arctic-sea-ice-fourth-lowest-record>. 15 September 2015. Accessed 1 December 2018.

Scott, Michon and Lindsey, Rebecca. "Arctic Sea Ice Getting Thinner, Younger." *NOAA: National Oceanic and Atmospheric Administration*. <https://www.climate.gov/news-features/features/arctic-sea-ice-getting-thinner-younger>. 2 October 2012. Accessed 3 February 2019.

Taylor, Adam. "China sent a ship to the Arctic for science. Then state media announced a new trade route." *The Washington Post*. 13 September 2017. https://www.washingtonpost.com/news/worldviews/wp/2017/09/13/china-sent-a-ship-to-the-arctic-for-science-then-state-media-announced-a-new-trade-route/?utm_term=.c332fc7c6bae. Accessed 5 December 2018.

The Canadian Press. "Nunavut By The Numbers: Stats Show High Cost, Low Prospects of Northern Life." *Huffington Post Canada*. 14 December 2014. https://www.huffingtonpost.ca/2014/12/15/nunavut-by-the-numbers_n_6323568.html. Accessed 27 December 2018.

The Fletcher School, Tufts University. *Law of the Sea: A Policy Primer*. Chapter 2: Maritime Zones. <https://sites.tufts.edu/lawofthesea/chapter-two/>. Accessed 13 November 2018.

United Nations Convention on the Law of the Sea. http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf. Accessed 3 December 2017.

United Nations Treaty Collection. Chapter XXI: Law of the Sea. Updated 28 December 2018. https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en. Accessed 28 December 2018.

USGS Fact Sheet: Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle. U.S. Department of the Interior, U.S. Geological Survey, 2008. Accessed 13 November 2018.

Vanderklippe, Nathan. "China reveals plans to ship cargo across Canada's Northwest Passage." *The Globe and Mail*. 20 April 2016. <https://www.theglobeandmail.com/news/world/china-reveals-plans-to-ship-cargo-across-canadas-northwestpassage/article29691054/>. Accessed 16 December 2018.

West, Colin Thor. "The survey of living conditions in the Arctic (SLiCA): A comparative sustainable livelihoods assessment." *Environ Dev Sustain* (2011) 13:217-235. Department of Anthropology, University of North Carolina, Chapel Hill. Accessed 1 November 2018.

Wikimedia Commons. NorthwestPassage.jpeg. 10 May 2008.
https://commons.wikimedia.org/wiki/File:Northwest_passage.jpg.
Accessed 22 December 2018.

Zhou, Laura. "Slowly but surely, China is carving a foothold through the Arctic." South China Morning Post. 15 October 2017.
<https://www.scmp.com/news/china/diplomacydefence/article/2115409/chinese-ships-arctic-voyage-marks-progress-ice-silk>. Accessed 19 March 2018.

Acronyms and Abbreviations

AMSA	Arctic Marine Shipping Assessment
CAD	Canadian Dollars
CF/HTO	Community freezers/hunters and trappers organizations
CIER	Center for Indigenous Environmental Resources
CLCS	Commission on Limits of the Continental Shelf
EIA	United States Energy Information Administration
EU	European Union
EC	European Commission
EEZ	Exclusive Economic Zone
HFO	Heavy fuel oil
ICJ	International Court of Justice
INAC	Indigenous and Northern Affairs Canada
IMO	International Maritime Organization
NBS	Nunavut Bureau of Statistics
NLCA	Nunavut Land Claims Agreement Act
NOAA	National Oceanic and Atmospheric Administration
NORDREG	Northern Canada Vessel Traffic Services Zone
NTI	Nunavut Tunngavik Incorporated
UNCLOS	United Nations Convention on the Law of the Sea
US	United States of America
USGS	United States Geological Survey