



Increased Maritime Traffic in the Arctic: Implications for International Cooperation and Security

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Abstract

As warming increases in the Arctic region, sea ice coverage is decreasing. As such, waters are becoming more navigable, and maritime traffic is increasing in the summer months. What was once a formidable and isolated region is now becoming full of commercial and military possibility. Traffic is steadily increasing in the Arctic for a number of reasons: energy companies can more easily explore and develop natural resources; governments can further address their defense and security needs; tourism companies can send cruises through the Arctic; and companies reliant on maritime shipping can cut travel time by using trans-Arctic shipping routes. With increased traffic and corresponding economic, political, and security concerns, Arctic states will need to better define their policies related to sea routes. Will states continue to follow the well-established ethos grounded in peace and cooperation as they address issues related to maritime traffic? Or will they break from this norm and secure their interests through unilateral action and nationally strategic and economically prosperous methods? Relying on insights from realism and liberalism in international relations, this paper argues that the management of maritime traffic in the Arctic will develop in a bifurcated manner: the Northwest Passage and Northern Sea Route will develop as two distinct options for trans-Arctic shipping. Although Russia might participate in sharing best practices related to maritime traffic governance, it will be the primary manager of the Northern Sea Route, using the route to advance its own interests. Meanwhile, the management of the Northwest Passage will depend on cooperation among the United States, Canada, and possibly Denmark, which itself will be a function of addressing Canada's territorial claim over the route.

Introduction

Climate change is experienced intensely in the Arctic, with temperatures rising at twice the global average.ⁱ As a result, the Arctic Ocean is opening up, allowing for increased maritime traffic. Presently, trans-Arctic voyages require icebreaker escorts, but projections show that as early as the 2030s, unescorted navigation in the Arctic might be possible; by the 2050s, it is probable.ⁱⁱ Effectively, the world is gaining a new navigable ocean, bringing significant opportunities and risks for commercial

enterprises and local communities. Arctic navigation depends on several factors: the trajectory of climate change, the level of cooperation among Arctic states, the prices of natural resources like oil, infrastructure investments, emergency management, and advancements in technology, among others. But by many accounts, maritime traffic in the Arctic is expected to increase.ⁱⁱⁱ

To address navigation issues in the Arctic, the United Nations and the Arctic Council serve as foundations. The United Nations Convention on the Law of the Sea (UNCLOS) manages the array of jurisdictional claims in the Arctic. The International Maritime Organization (IMO), the regulatory arm of UNCLOS, works also to adapt international governance beyond the original treaty, and has recently made significant strides in the Arctic with the implementation of the Polar Code, a set of regulations specifically for vessels operating in polar regions. Russia and the United States have also requested that the IMO govern the Bering Sea and Strait transit routes. As such, international law, rather than a bilateral agreement, governs the Bering Sea and Strait transit routes, and ships of any nation must follow the designated routes. The Arctic Council has also played an important role in the region as a forum in which the eight Arctic nations discuss issues related to the Arctic, like human security and environmental concerns. The Arctic Council has served as a venue for the eight Member States to negotiate legally binding agreements related to search and rescue (SAR), scientific research, and pollution response.¹

Meanwhile, Arctic states will need to better define their policies for the region. States may continue to follow the well-established ethos grounded in the constructed “zone of peace and fruitful cooperation,” as Gorbachev envisioned in his 1987 Murmansk speech, when addressing issues related to maritime traffic. But they may also digress from this norm and secure their interests through unilateral action and nationally strategic methods, particularly as the region becomes more accessible.

This paper reviews the current standing and future viability of the two main trans-Arctic shipping routes: the Northern Sea Route (NSR) and the Northwest Passage (NWP).² It begins with the assumption that each route, despite lying within the Arctic region, has its own geographic and political features that will shape the character of its governing regime. Borrowing from international relations (IR) theory, it explores the opportunities and challenges for cooperation on governance for maritime traffic. This paper argues that a viable Northwest Passage will depend on resolving the debate over Canada’s longstanding claim that the route primarily lies within internal waters, while the Northern Sea Route is clearly dominated by Russia now and into the future. States and companies are far from consistently using either route, but all actors governing the routes should share best management practices as traffic increases given the similarity in shipping challenges across the region, even while an oppositional dynamic could develop between Russia and the NSR on one side and the US/Canada

¹ It is important to note that the Arctic Council does not pass international law. Nevertheless, it has been a forum in which its eight Member States have negotiated and signed multilateral treaties.

² The Transpolar Route will not be reliably navigable until late in the century.

and the NWP on the other. Cooperation must happen for the NWP to be a viable route, given that the route passes through multiple states' EEZs, while Russia will likely manage the NSR unilaterally.

This has direct relevance to Alaska's stakeholders. Alaska can benefit from opening waters in the Bering Sea and Strait and Chukchi and Beaufort Seas. Large ships passing through the Bering Strait and onto either the Northern Sea Route or Northwest Passage could stop at a deep water port on Alaska's west coast. Although Alaska does not yet have a deep water port in the Arctic,³ some advocate for one in Nome. Shipping and tourism can bring economic development to the region, particularly if a road or rail connects a coastal community like Nome to interior Alaska. Meanwhile, the United States will need to secure Alaska's borders and waters as the region becomes more open to traffic. A port in Nome and perhaps another on the North Slope could be places from which to stage Coast Guard operations. Currently, the Coast Guard service responsible for western and northern Alaska is based in Kodiak. As traffic increases around Alaska, it is also not unthinkable that the federal government will consider placing a naval base in Alaska.

Stakeholders focus on the benefits and opportunities of a changing environment to Alaska and the rest of the Arctic. Former Lieutenant Governor of Alaska Mead Treadwell and his colleagues envision a "league of Arctic ports" to foster collaboration among Arctic states and promote trans-Arctic shipping that will benefit both private business and state government.^{iv} Alaska Senator Lisa Murkowski has proposed the Shipping and Environmental Arctic Leadership (SEAL) Act to establish a seaway development corporation for fostering cooperation among Arctic states and to collect maritime shipping fees for funding infrastructure and responding to environmental needs associated with regional shipping.^v Alaskan and other coastal communities want to benefit from increased activity where they can, while anticipating detrimental effects of traffic, like pollution and the introduction of invasive species. Given the general lack of infrastructure in Alaska's Arctic, the Army Corp of Engineers is investigating if Nome should host America's first Arctic deep water port capable of docking large container ships and Coast Guard cutters.^{vi}

Background: Maritime Traffic in the Arctic

Arctic Warming

The Arctic is warming precipitously, with sea ice coverage declining over time (see Figure 1). The Arctic's surface air temperature is at a record high, with high temperatures from 2014 through 2018 all exceeding previous records.^{vii} The average annual global surface temperature is expected to increase by 4 to 13°C by the year 2100,^{viii} and the Arctic has proven to warm at twice the rate of the rest of the earth. Currently, the Arctic Ocean has a polar ice cap consisting of multi-year ice that remains frozen year-round, but in parts of the ocean and surrounding seas, the ice thaws during the summer, making navigation possible during the late summer and fall. Based on the Arctic sea ice trend

³ Deep water ports are located in Dutch Harbor, Kodiak, and Anchorage.

from 1979 to 2012, the entirety of the Arctic Ocean is expected to have an ice-free September before 2050, eliminating all of the multi-year ice.^x By 2100, the Arctic Ocean is projected to be ice-free for half of the year.^x As seen in Fig. 1, the ice along both the NSR and NWP is being reduced at the highest rate across the Arctic, making the routes visibly easier to navigate. This figure is also telling as to which route will open more quickly, that being the NSR with the ice reduction being most heavily concentrated along the entirety of Russia's Northern EEZ. Although not the only influencing factor, a more geophysically open Arctic will increase the likelihood of further shipping and other traffic as ice-related barriers and dangers decrease.

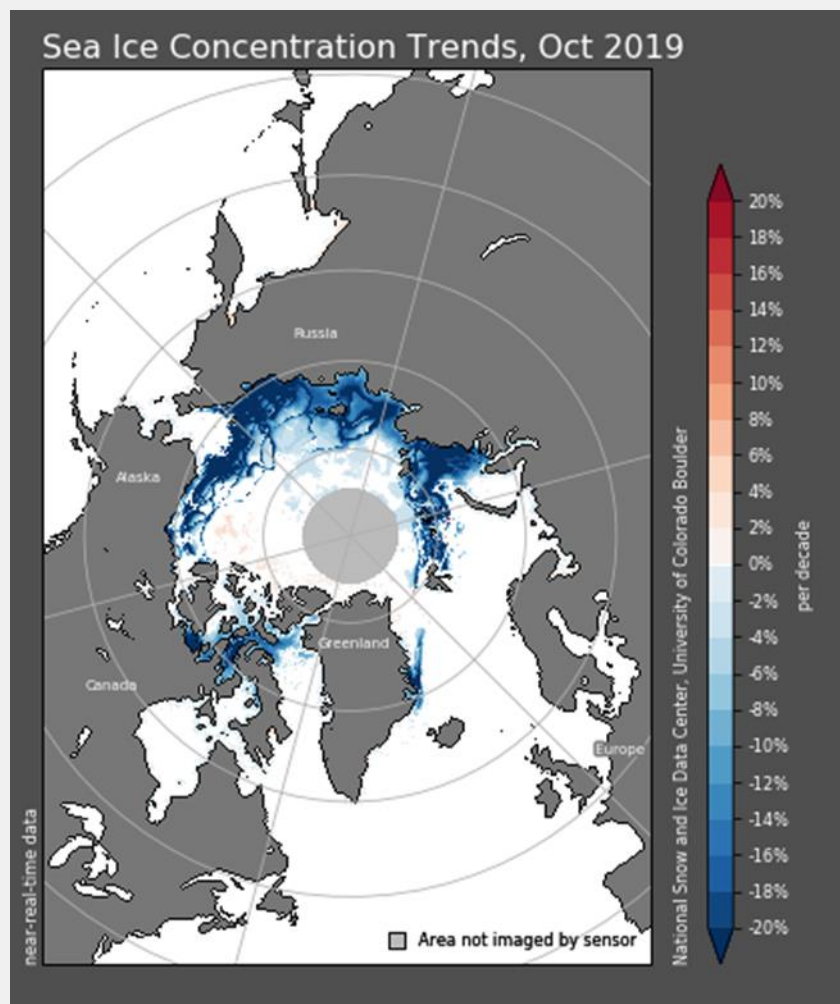


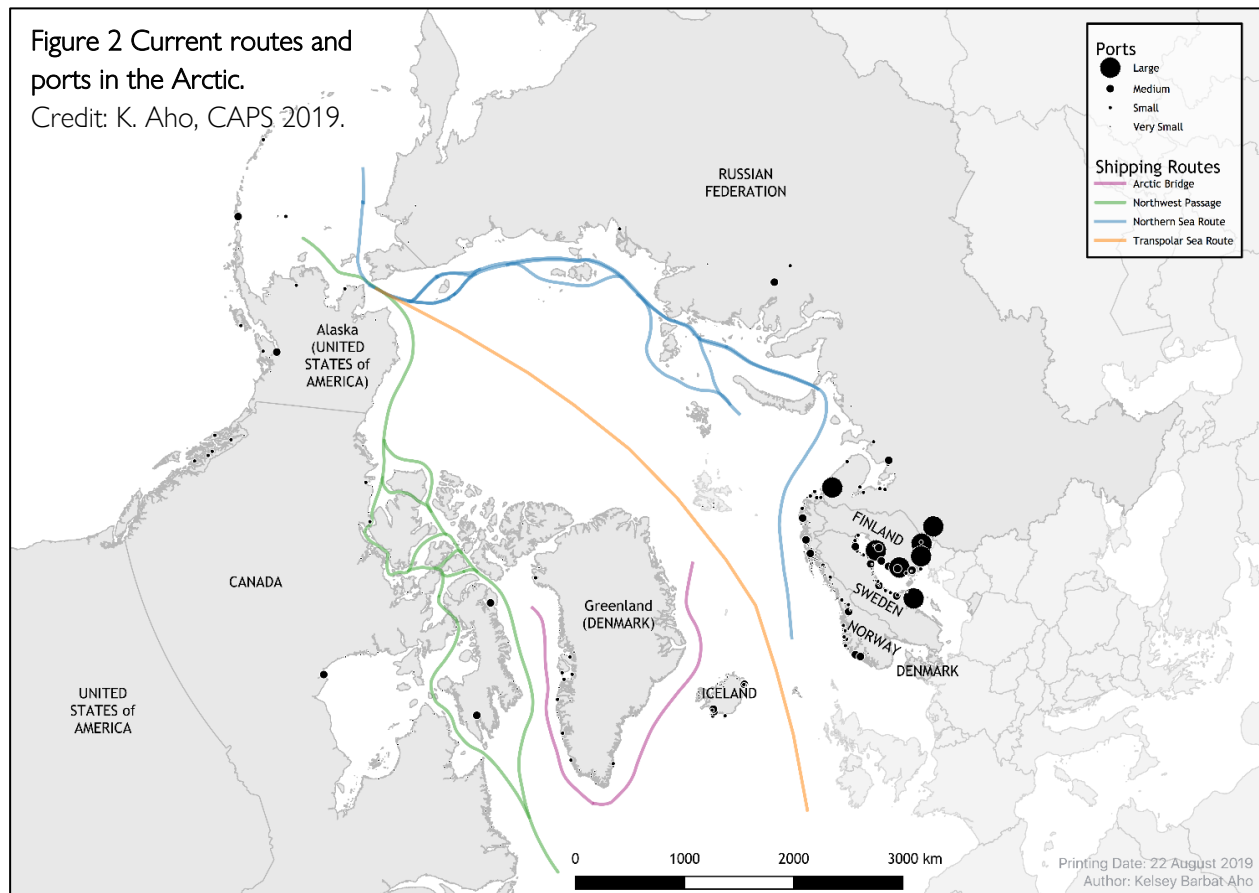
Figure 1 Sea Ice Concentration Trends, Oct 2019

Source: Uma Bhatt et al., "Sea Ice Outlook August Report." *Arctic Research Consortium of the United States*, August 22, 2018, <https://www.arcus.org/sipn/sea-ice-outlook/2018/august>

Recent Maritime Traffic in the Arctic

Climate change has created navigational opportunities in the Arctic.^{xi} The 2009 Arctic Marine Shipping Assessment (AMSA) evaluates Arctic maritime traffic based on 2004 data (the baseline year). The report considers a multitude of maritime vessels: tankers, bulk carriers, offshore supply vessels, passenger ships, tug and barge combinations, fishing vessels, ferries, research vessels, and government and commercial icebreakers.^{xii} AMSA’s objective is to create the first baseline database of all ships (except for naval vessels) operating in the Arctic during a single year, to better understand maritime traffic and pollution.

The report reveals that the majority of the traffic is in fact “destinational” – vessels shipping to the Arctic as a destination, or vessels operating locally, rather than transiting the region to deliver goods from one side of the world to the other. Destinal traffic includes community resupply, tourism, and resource extraction.^{xiii} In 2004, the AMSA survey year, there were approximately 6,000 vessels active in the Arctic region, with many making multiple voyages; of these, 1,600 were fishing vessels operating in the southern reaches of the Arctic like the Bering Sea.^{xiv} See Figure 2 for a view of current routes and ports in the Arctic.



The NWP is witnessing an increase in vessel traffic.⁴ The NWP is a sea route that extends from the Pacific Ocean, over Alaska, through the Canadian archipelago, and then between Canada and Greenland into the Atlantic Ocean. Currently, it is navigable only in summers with icebreaker escorts. Annual shipping distances have nearly tripled between 1990 and 2015, with two-thirds of the growth occurring since 2006.^{xv} In the period 2008-2018, vessels transiting the NWP were mainly adventure craft or cruise ships.^{xvi} The *Crystal Serenity*, with a capacity of 980 passengers and over 600 crew members, became the largest passenger ship to navigate the Northwest Passage in 2016, when it completed a voyage from Vancouver to New York. Of the 222 complete transits in this period, only eight were hauling commercial cargo.^{xvii} The vast majority of traffic on the route is destinational, primarily resupplying rural communities, with growing fishing and tourism industries, rather than related to natural resource extraction,^{xviii} which is prevalent in Russia.

However, maritime infrastructure in the NWP is currently limited, with no deep water ports⁵ in Alaska's Arctic and the fate of the only Canadian Arctic deep water port in jeopardy.^{xix} As an ongoing concern, coastal communities near the Northwest Passage are worried about an "overriding sense of uncertainty about the future of cruise (and other small vessel) activity".^{xx} Most coastal communities are rural villages that lack any capacity to dock such ships or accommodate the hundreds of passengers that flood in with them.

Shipping is also increasing in the NSR, a shipping route along the north coast of Russia extending from the Kara Sea in the west through the Bering Strait in the east. It is a large component of the Northeast Passage, which runs from the Atlantic to the Pacific Ocean. The route lies within Russia's exclusive economic zone (EEZ).^{xxi} Sections of the route are free of ice for approximately two months in the summer per year. Since 2011, over 220 vessels have traversed the NSR, including cargo, passenger, and fishing ships from Europe, Central America, and Asia.^{xxii} Most transits are destinational shipping, originating or ending their journeys in Russia.^{xxiii} The route has been used for the resupply of remote communities located along the Irtysh, Yenisei, and Lena Rivers. According to Malte Humpert, "The growth in traffic primarily comes from the export of liquefied natural gas, crude oil, and coal. The exploration of natural resources in Russia's Arctic has resulted in a five-fold increase in cargo volume since 2014."^{xxiv}

⁴ Notably, vessel activity decreased dramatically in 2018, owing to extensive icing; see U.S. Committee on the Marine Transportation System, *A Ten-Year Projection of Maritime Activity in the U.S. Arctic Region, 2020–2030*, (Washington, D.C.: 2019).

⁵ A deep water port is a port which can accommodate large ships (with greater drafts), such as supertankers, post-Panamax vessels, and container ships. For a review of the recent history of the Port of Churchill, see "Port of Churchill Receives Grain Shipment by Rail for the First Time in Four Years," *Thompson Citizen*, July 24, 2019, <https://www.thompsoncitizen.net/news/nickel-belt/port-of-churchill-receives-grain-shipment-by-rail-for-the-first-time-in-four-years-1.23895424>.

Meanwhile, the Bering Sea and Strait, through which the NWP and NSR run, is home to extensive maritime traffic. In 2014-2015, the Bering Sea and Strait saw a total of 60,925 transit segments by fishing vessels (many of which support the seafood industry) and 51,142 segments by non-fishing vessels. The most common type of non-fishing vessels were bulk carriers (20,120) and container ships (15,228),⁶ numbers unparalleled in the Arctic Ocean itself.^{xxv} Transit through this channel has seen an increase of 250 percent between 2008 and 2015 - from 220 to 540 transits annually. This increase is largely due to destination shipping for the Yamal liquefied natural gas (LNG) project, in which Russia and China have partnered to extract natural gas from the Russian Arctic.^{xxvi} See Figure 3 for a map of the Bering Sea and Strait. According to an array of accounts, maritime traffic is increasing in the Northwest Passage, the Northern Sea Route, and the Bering Sea and Strait.

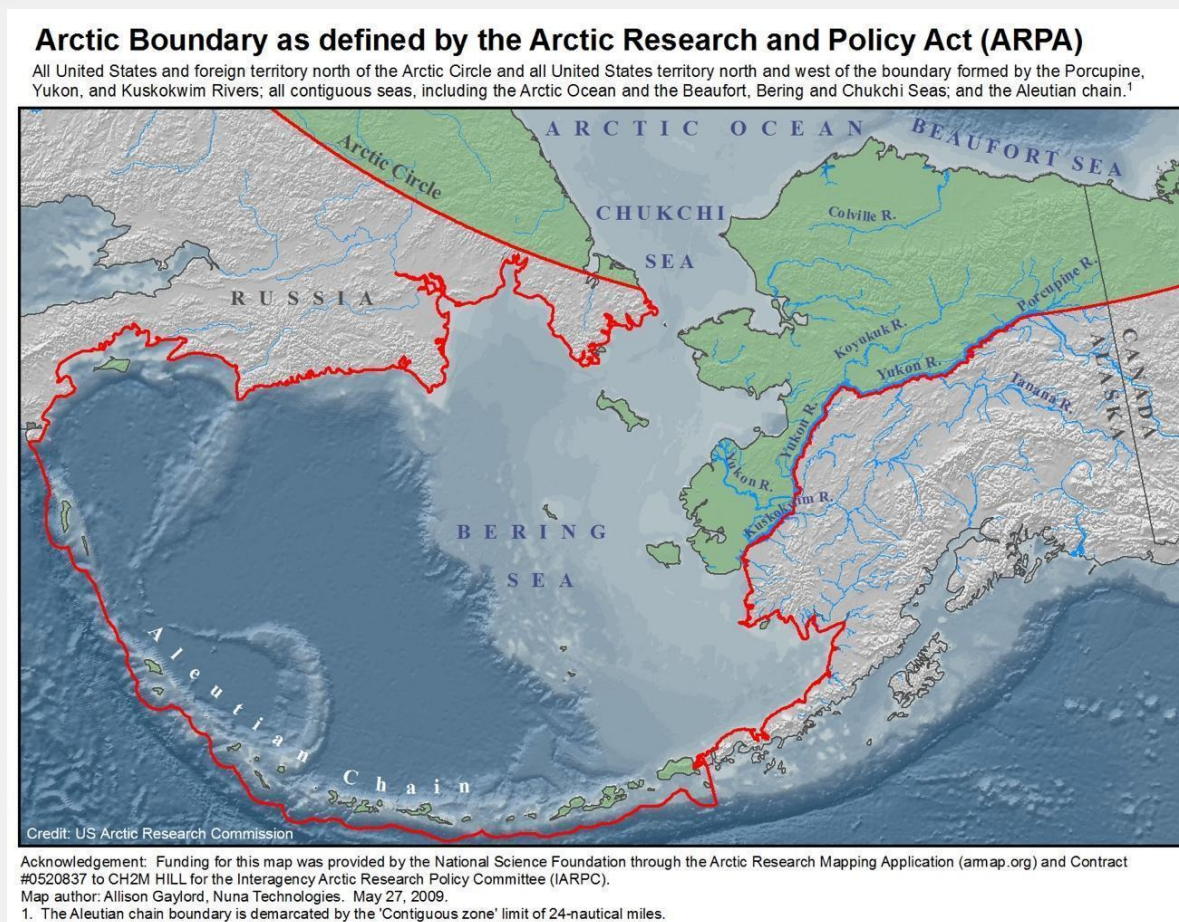


Figure 3 Map of Bering Sea and Strait.

⁶ Bulk carriers are ships that transport cargo in large quantities. Container ships are ships that carry their load in intermodal containers, a technique called containerization.

Current Management of Maritime Traffic in the Arctic

The management system of maritime traffic in the Arctic rests on global, regional, multilateral, and bilateral arrangements. The UN Convention on the Law of the Sea (UNCLOS) defines the rights and responsibilities of nations with respect to their use of oceans and also establishes rules for businesses and management structures for marine resources.^{xxvii} UNCLOS clarifies that a state's internal waters include a) waters on the side of the baseline of a nation's territorial waters that are facing towards the land (except in archipelagic states) and b) waterways such as rivers and canals (and sometimes the waters in small bays). The convention states that a nation's territorial waters are the first twelve nautical miles from its coastline, over which the nation extends its full sovereignty. According to the convention, a state's contiguous zone includes waters from twelve to twenty-four nautical miles from its coastline, over which the nation may exert control to "prevent infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea".^{xxviii} Finally, each nation has an exclusive economic zone (EEZ) extending from its baseline to two hundred nautical miles⁷, where coastal states may exercise sovereign rights "to explore, exploit, conserve and manage the living resources in the exclusive economic zone".^{xxix} Figure 4 depicts Arctic states' EEZs.

A nation may exercise full sovereignty over its territorial waters, but according to Section 3, Article 17 of UNCLOS, ships of all states enjoy the right of innocent passage through territorial seas,^{xxx} although they must abide by the coastal state's regulations and must not threaten the coastal state. Waters beyond a state's territorial zone are international waters (often called the "high seas"). According to the agreement, states have the right to activities like navigation, fishing, and scientific research in international waters.^{xxxi}

Section 8, Article 234 of UNCLOS discusses ice-covered areas and thus has direct application to the Arctic. It states:

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

⁷ Up to 350 nautical miles from the baseline, exclusive rights to the seabed and subsurface resources are granted to the given nation if the continental shelf of that nation extends beyond the 200 nm EEZ. This does not apply to shipping because it has no impact on the legal status of the water column or ocean surface.

to navigation and the protection and preservation of the marine environment based on the best available scientific.^{xxxii}



Some argue that this article should remain the legal foundation for regulating activities in the Arctic.^{xxxiii} Such an approach could lead to more strict environmental regulations in the Arctic, thereby preserving the newly opened ocean and its ecosystem. Regardless of the potential benefit to the Arctic environment, this article opens the prospect that states may exert more authority over shipping and other traffic within their EEZs in the name of environmental protection. Nonetheless, when states follow UNCLOS regarding a route and permit innocent passage in their EEZs, they ensure the route is politically predictable and stable, attracting ships and encouraging economic development. With this comes the need for more investments in infrastructure like ports.

The IMO is responsible for regulating shipping, safety and security, environmental issues, and legal concerns on and within international waters. It is the regulatory agency of UNCLOS. Additionally,

after a joint request from the United States and Russia, the IMO approved six two-way routes and six precautionary areas in the Bering Sea and Strait in 2017. The routes lie in U.S. and Russian territorial waters and help ships avoid shoals, reefs, and islands and to reduce the potential for maritime casualties and environmental disasters.^{xxxiv} The Bering Strait is an international waterway that does not allow for Russian or US discrimination on traffic, but with the IMO institution of the six routes it has become international law that vessels follow those routes.^{xxxv}

The IMO has also instituted a comprehensive set of regulations for all vessels operating in polar (Arctic and Antarctic) waters: the Polar Code. Entering into force on January 1, 2017, the Polar Code mandates strict safety and environmental regulations, spanning from vessel structure to emergency procedures.^{xxxvi} The code also adds the additional task of enforcement to the Coast Guards operating in the Arctic region.

Unlike UNCLOS, the Arctic Council lacks authoritative legal competence to contribute much to maritime traffic governance. Although the Arctic Council has become the primary intergovernmental forum for handling Arctic-specific issues, it is merely a forum and does not produce international law. To meet the challenges of the Arctic in a more effective manner, Olav Schram Stokke contends that the Arctic Council can facilitate regulatory advances in the IMO by building knowledge and fostering cooperation.^{xxxvii} Meanwhile, he argues that the Council is well equipped to build maritime competencies, such as oil spill response and search and rescue operations.

The Beaufort Sea has also attracted attention from scholars. Betsy Baker contends that successful Canadian and U.S. scientific cooperation on seabed mapping can serve as a basis for collecting and sharing data on the Beaufort Sea, in which the two countries share interests, but over which they disagree on the maritime boundaries.^{xxxviii} Cooperation there can serve as a foundation for a “joint ecosystem-based, integrated management of the triangle⁸ – a principle that is already central to each country’s approach to oceans management.”^{xxxix} Michael Byers concurs, writing, “[t]he scientific evidence collected so far, which suggests that sovereign rights will extend well beyond 200 nautical miles from shore, has enhanced the opportunity for a negotiated solution of the maritime boundary by creating a new balance between the two countries’ longstanding legal arguments.”^{xl} For both authors, data collection and analysis have the strong potential to resolve the territorial dispute in the Beaufort Sea.

⁸ [Authors’ Note] Canada and the United States have an ongoing dispute over an area in the Beaufort Sea between Yukon and Alaska. Canada claims that the maritime boundary runs along the 141st meridian west to a distance of 200 nautical miles, following the Yukon-Alaska boundary, while the United States argues that the boundary line is perpendicular to the coast to a distance of 200 nautical miles, following a line of equidistance from the coast. Thus, the difference creates a wedge with an area of about 21,000 km² that both countries claim.

Although scholars and policy makers differ on the appropriate level and method of managing transit in the Arctic, these regimes, institutions, and agreements will serve as a foundation for the evolving governance regime.

Theoretical Insights on Governance of Maritime Traffic in the Arctic

Theories of international relations can provide lenses to view prospective route governance. The two dominant theories of international relations, liberalism and realism, are explained to assess the management of Arctic maritime traffic.

Liberalism, Cooperation, and Absolute Gains in International Relations

The liberal school of thought in international relations argues that states seek to maximize their economic and political power by striving to improve their status relative to where they were previously, not relative to other states' power. This school rejects the idea that power among states is zero-sum and that states' gains or losses are necessarily relative to those of other states. Liberals contend that states can achieve absolute gains through international cooperation and trade and that institutions and rules should manage states' relations. Moreover, increased diplomatic, economic, and political cooperation among states decreases the prospect for 'cheating' and resorting to violence to achieve national interests. Liberalism acknowledges that the world is anarchic – that there is no world government with power over states – and that states are the central actors in international relations. However, liberals also believe that international governmental and nongovernmental organizations, along with subnational actors, play important roles in the international system and can help facilitate amicable relations.

How will states respond to increased maritime traffic, according to liberalism? Liberals would anticipate that states will manage increased maritime traffic in the Arctic through cooperation, diplomacy, and international and regional rules and institutions. The liberal school would argue that the strong diplomatic ties that currently govern the region, and the existing cooperative spirit among Arctic states, should be expected to carry forward and apply to the management of shipping and other traffic as it increases. Indeed, there are already examples of this. Most notably, the Member States of the Arctic Council have agreed to a multilateral treaty coordinating search and rescue efforts across the Arctic, despite conflicting territorial claims.

With Arctic nations like traditional adversaries Russia and the US, and Observer states like China, working to advance their own interests in the region, an aggressive dynamic could develop. Nevertheless, Ian Brosnan, Thomas Leschine, and Edward Miles argue that despite the dominant rhetoric that the Arctic is marked by potential for conflict, avenues and incentives for cooperation on shipping and other areas exist.^{xii} They are confident that as issues become increasingly more pressing, cooperation is more likely than stalemate precisely because of the mutual gains that are possible.

A long-time observer of the Arctic, Oran R. Young stresses the unique features of the Arctic, where multilateral cooperation is strong, and discusses how the region is responding to global issues.^{xlii} Although he does not advocate for an Arctic Treaty, a proposal for a comprehensive international legal regime similar to that of the Antarctic Treaty,⁹ Young does argue for a “discourse of ecosystem-based management and spatial planning” and input from legitimate stakeholders, including non-state actors.^{xliii} In particular, he suggests enhancing the effectiveness of the Arctic Council, while understanding that it cannot take on all regulatory decision making and all regulation enforcement. And germane to shipping, Young advises using appropriate and effective forums for handling key issues as they arise -- for example, turning to the IMO to devise a mandatory polar code for Arctic shipping.^{xliv} Indeed, the IMO did establish such a code in 2014: the Polar Code. This code establishes regulations for shipping in the polar regions, with focus on navigating ice and designing ships.

In brief, liberal perspectives anticipate that states will build on the foundation of cooperation and be motivated to come together to form systems of governance to manage their relations in the Arctic, despite temptations for unilateral and self-interested action. By extension, states will work together to manage increasing maritime traffic.

Realism, Competition, and Relative Gains in International Relations

The other dominant theory of international relations, realism, establishes that states always and necessarily strive to achieve security and power, and thus relations among them are marked by distrust, fear, and conflict. Owing to the anarchic structure of the world order, in which states must fight to secure their own national interests, realists believe that states prioritize their security and defense over others in their relations. They believe states are more apt to use political, economic, and military coercion than cooperation to achieve their strategic goals. In their view, gains are relative and zero-sum: States gain power at the expense of others, and the amount of power is finite. According to realism, states will look to use military and nonmilitary power to defend and expand their territory, compete to obtain scarce resources, and exert as much control in the international sphere as possible. Institutions serve as a means to cooperate only on low priority issues and are subject to the exploitation by individual states.

Realists expect Arctic states to devolve into conflict over territorial claims, competition for natural resources, and even militarization to support national interests. They see a security dilemma rising in the Arctic: As Russia militarizes its portion of the Arctic region, states like the United States will likely respond accordingly, increasing tensions and the likelihood of conflict. Realists also expect powerful non-Arctic states, like China, to increase their involvement in the region to exploit the region’s resources and exert power over all issue-areas, in line with their national interests. Scott Borgersen predicts an “Arctic meltdown” due to the competing interests in the region.^{xlv} From the realist point

⁹ For a brief overview of an Arctic Treaty plan, see Brit Fløistad and Lars Lothe, *The Possibility of an Arctic Treaty*, (Kirkenes, Norway: Center for High North Logistics, 2010).

of view, most maritime traffic will be the outcome of states pursuing strategic interests like natural resource extraction and commercial shipping. Likewise, states will be skeptical of collaborating on managing traffic, particularly on that which relates to “high politics” issues.

The United States acts in part according to the realist perspective, considering the manner in which it has developed its icebreaker fleet. There has been a longstanding call in the United States for improved Arctic maritime capacity for both scientific and search and rescue purposes. The current U.S. icebreaker fleet consists of only two operational vessels: the Healy and the Polar Star. The latter is the only remaining heavy icebreaker since its twin ship, the Polar Sea, was decommissioned in 2010.^{xvi} For forty years, Congress failed to approve or fund the construction of new Arctic-capable vessels. The Russian fleet, comparatively, has more than forty such vessels. However, recently, in 2019, the U.S. government authorized funding for the commissioning of the vessels after they were reclassified as “polar security cutters”; thus the linking of the vessels directly to national security seemed to attract funding.^{xvii} Furthermore, these vessels will be designed with the reserved space and power to field offensive weapons, just as many of the Russian vessels are.^{xviii} Consistent with the realist school of thought, these preparations demonstrate that the United States foresees a militarized Arctic and is seeking to directly counterbalance the Russian capacity.

Overall, the realist perspective contends that the Arctic will be defined by competition among states in and outside the region. States will pursue military and other coercive options for securing their borders and access to natural resources and for defending their homelands. Realists predict states will exert control in the region where they can.

Cases: The Northwest Passage and the Northern Sea Route

The Arctic Ocean is vast, but transiting from one end to the other is limited primarily to the use of the NWP or NSR. The Transpolar Sea Route (TSR), a third route, runs over the top of the globe through the North Pole, but it will be the last route to become routinely geophysically viable.¹⁰ The central Arctic Ocean is expected to have year-round ice coverage for at least the next several decades.^{xlix} Although the TSR is currently navigable for a short window of time in late summer each year, interest in using the route is currently low. The route is far from logistical support like ports and search and rescue services, and vessels, with icebreaker escorts, must navigate the route slowly, nullifying the benefits of the shorter route.¹¹ Thus, the focus remains on the NWP and NSR. An NWP transit is 17 percent shorter between Northeast Asia and Northeastern United States, and an NSR

¹⁰ The TSR will nonetheless likely have the fewest political barriers given that the entire route runs outside national EEZs.

¹¹ For more on the Transpolar Sea Route, see Malte Humpert and Andreas Raspotnik, “The Future of Arctic Shipping Along the Transpolar Sea Route,” in *Arctic Year Book 2012*, 2012, 281-307.

http://arcticyearbook.com/images/Articles_2012/Humpert_and_Raspotnik.pdf

transit is 40 percent shorter between Northern Europe and Northeast Asia, than traditional routes using either the Suez or Panama canals.ⁱ

Case 1: The Northwest Passage (NWP)

The political status of the Northwest Passage is contested. The Canadian government insists that the route lies mostly in its internal waters. As vessels do not have the right to innocent passage in a state's internal waters, they would need to seek Canada's permission to navigate the route. Donat Pharand defends Canada's claim:

first, the waters were enclosed by straight baselines under customary law, Canada not being a party to the 1958 Territorial Sea Convention; second, the innocent passage provision of that Convention had not become part of customary law by 1985; and third, Canada did not become a party to the 1982 Law of the Sea Convention until 2003, nearly 20 years after drawing the baselines, and the innocent passage provision of the Law of the Sea Convention cannot apply retroactively to change the established legal status.ⁱⁱ

He warns that Canada must take adequate preventive measures to preclude unauthorized foreign navigation in the Northwest Passage; otherwise, the route might be internationalized and subject to a right of transit passage.ⁱⁱⁱ

However, the United States and other members of the international community maintain that it is an international strait, which would allow for free and unencumbered passage in accordance with the innocent passage principle. Although the United States is not a signatory to the UNCLOS, it nonetheless grounds its argument in it. Without recognition of the right of innocent passage or a multilateral agreement to allow for transit through the Canadian portion of the route, the NWP will not be a viable means for trans-Arctic shipping. Canada may be likely to grant passage to close allies such as the United States, but if Canada's section of the NWP is deemed to be internal waters, then under international law there is no requirement to do so.

Elizabeth Elliot-Meisel argues that Canada and the United States should resolve this conflict through compromise. She believes

[i]f this means that the United States acknowledges Canadian sovereignty over the Passage (the Canadians could then regulate transits and control access) and Canada acknowledges the need for a regular U.S. presence in the Passage (thus freeing scarce resources for appropriation elsewhere), then both nations will have compromised in order to make the continent truly more secure for their citizens.ⁱⁱⁱⁱ

Although James Kraska also contends that cooperation over the Northwest Passage is the way forward, he comes to an opposing conclusion.^{liv} He writes that “Canada can best achieve widespread global support for managing its maritime Arctic by acknowledging that the Passage constitutes an international strait and working through the International Maritime Organization to develop a comprehensive package of internationally accepted regulations”.^{lv}

The United States and Canada have already reached agreement in some areas, while acknowledging their differences on sovereignty in the region. The United States “pledges that all navigation by U.S. icebreakers within waters claimed by Canada to be internal will be undertaken with the consent of the Government of Canada,” while Canada, in turn, agrees to preemptively approve all requested US transits.^{lvi} However, both countries acknowledge that the agreement does not influence their respective positions, merely allowing them to move forward with continued NWP transits without controversy.

In short, a significant political debate that must be resolved is the legal status of the Northwest Passage. Finding a solution to this issue will likely increase the prospect of further traffic because the ambiguity of jurisdictions would not ward off any prospective shipping.

Case 2: The Northern Sea Route (NSR)

The political status of the Northern Sea Route is also disputed. Russia claims that the NSR is a single transportation route, and thus, necessitates a single legal regime for its navigation, regardless of the legal distinctions among the waters that the NSR traverses.^{lvii} In practice, Russia’s Northern Sea Route Administration (NSRA) governs the route consistent with this stance. Although Russia has not explicitly claimed that the NSR falls under its sovereignty, in reality it controls the navigation of foreign ships and administers the route with expressed terms and conditions applicable to all ships using the route, despite contention in international law. It is important to note that no foreign vessel has crossed the NSR without seeking Moscow’s consent since 1965,^{lviii} thereby setting a strong precedent in favor of Russian control.

Viatcheslav Gavrilov provides three justifications for Russia’s control over the NSR:

[t]he first justifies the Russian authority over vessels using the NSR from a historical point of view. The second draws attention to the fact that, in international law, Arctic states enjoy specific and special legal rights and obligations with respect to shipping and other issues in the region. The third is based on the impossibility of dividing the NSR into separate sections that might have differing legal rights, and the need for the integrity of the NSR as a traffic artery.^{lix}

According to UNCLOS Section 8, Article 234, Russia can also claim authority over preventing, reducing, and controlling marine pollution in its EEZ. Thus, Russia can make the case that it can exert control over the route in the name of environmental protection.

Ultimately, “Russia does indeed consider the NSR as a ‘historically formed national transportation corridor,’ where navigation of foreign civil vessels and warships is possible only under Russia’s complete control”.^{lx} Meanwhile, Russia’s control is extensive. According to Pavel Devyatkin, “vessels navigating the NSR are responsible for environmental pollution, tariffs, and providing proof of liability and insurance.”^{lxi} Russia further demands that foreign ships pay for weather and ice reports, Russian pilots to guide the vessels, and the use of Russian icebreaker services.^{lxii}

Members of the international community acknowledge that Russia is not acting in accordance with international law. States have the right to navigate the route under the UNCLOS innocent passage clause. Pavel Gudev further recognizes the various legal regimes that should govern the route:

[t]he NSR goes through sea areas with entirely different legal regimes, which have been established, among other things, by the 1982 Convention: internal waters, 12-mile territorial sea, 24-mile contiguous zone and 200-mile exclusive economic zone of the Russian Federation. Beyond the 200-mile external border of the EEZ, the high seas enclave begins, and even though the NSR theoretically may cut through its waters, too, Russian regulations are inapplicable there.^{lxiii}

Moreover, several authors cite Russia’s policy towards the route as a challenge to the future viability of the route.^{lxiv}

Findings and Conclusion

Although geophysical barriers, navigation expenses, political agendas, and legal ambiguity challenge the current and future use of Arctic routes, as warming reduces sea ice coverage in the Arctic Ocean, states and companies will continue to be interested in both transit and destination usage. Of the Arctic routes, the Northwest Passage and the Northern Sea Route are likely to be most viable in the near future. Both routes connect the North Atlantic with the North Pacific, which is highly useful in connecting Asia and Europe, west North America to Europe, and east North America to Asia. As long as states continue to require maritime shipping for international trade, as they historically have, transit shipping across the NWP and NSR will remain attractive. The routes will also continue to support destination shipping and other uses as well.

Given that vessels will choose either the NWP or NSR to transit the Arctic in the near future or to deliver to destinations in the Arctic, we suspect that much of shipping governance will not be pan-Arctic, but rather specific to each route. As such, a partnership among all ports in the Arctic may be

unlikely given that the routes will compete to attract customers. In line with a realist notion, competition between the two routes will be at odds with the idea of a “league of Arctic ports.”

Based on a history of collaboration, the United States (including Alaska), Canada, and possibly Denmark (including Greenland) will likely coordinate to manage shipping and port governance in the Northwest Passage. As traffic increases in the route, Canada and the rest of the international community, and especially the United States, will need to resolve the route’s legal status. The United States will likely also need to revisit becoming a signatory to UNCLOS. Mounting pressure as a result of increased route usage might foster international cooperation. Indeed, based on the Canada-US Arctic Cooperation Agreement and other agreements, collaboration in the Arctic Council and NATO, and shared economic opportunities regarding use of the Northwest Passage, the states are likely to cooperate. Accordingly, a North American league of Arctic ports is a strong possibility. This perspective corresponds largely with the liberal tradition.

In contrast, although Russia might participate in the exchange of best practices related to shipping and port management, it is unlikely to share the management of the Northern Sea Route with others states in the near future. Russia does not follow UNCLOS’s innocent passage mandate, setting a precedent that it maintains authority over the route, with all nations recognizing this autonomy by requesting permission before transiting the route. This precedent carries great weight, and the objections of Arctic leaders and the United Nations are unlikely to change Russia’s position. These observations align with realist principles, in that Russia is prioritizing its national interests over the prospect for mutual gains. Clearly, given that many scholars have pointed out that states are dissuaded from using the route in part owing to Russia’s policies, this is not an example of striving for absolute gains.

The development of these routes, and the traffic from global shippers that it brings, will impact Alaska’s economy and security, particularly if a deep water port is established on its west coast. With Nome as the most probable location of such a port, its location adjacent to the Bering Strait, the channel shared between the two routes, maximizes its potential use. Furthermore, if a rural community such as Nome becomes a hub for international shipping and other traffic, as would be expected with significant sea ice loss in the Arctic Ocean, its economic base would shift dramatically. A port in this strategic location could also be of great benefit to the rest of Alaska if a rail or road system from the coast to the interior is established. Meanwhile, if such infrastructure does come to fruition, economic and social practices, particularly subsistence activities, would be affected.

Although a pan-Arctic league of ports - if “league” is meant as shared port management - is unlikely, based on current governance structures, states, communities, and companies across the Arctic are already in a good place to share best practices in the management of maritime traffic and related negative externalities. More immediately, actors should strengthen existing structures particularly to manage offshore oil and gas activities, especially in the area of oil spill prevention, containment, and

response.^{lxv} In this manner, states should cooperate, especially if best practices can be codified through an Arctic Council-facilitated treaty or even as an amendment to the Polar Code.

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^{ix} Collins et al., “Long-term Climate Change.”

^x Nathanael Melia, Keith Haines, and Ed Hawkins, “Sea Ice Decline and 21st Century Trans-Arctic Shipping Routes,” *Geophysical Research Letters* 43 (2016): 9720-9728.

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^{xiii} Ibid.

^{xiv} Ibid.

^{xv} Jackie Dawson et al., “Temporal and Spatial Patterns of Ship Traffic in the Canadian Arctic from 1990 to 2015,” *Arctic* 71, no 1 (March 2018): 1-113.

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