

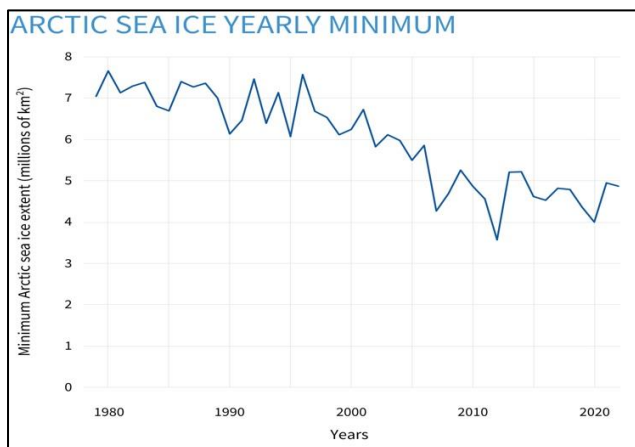
A Study on International Politics Surrounding the Arctic Sea Routes

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1. Introduction

The Arctic Circle is defined as the region above 66 degrees 33 minutes 39 seconds north latitude on Earth. The Arctic Ocean, situated within this Arctic Circle, has historically been ice-bound outside of the summer season, limiting navigation primarily to research purposes. However, recent climate change-induced reductions in sea ice are expanding the use of the Arctic Sea Route as a new channel of transportation, an alternative to existing shipping lanes.

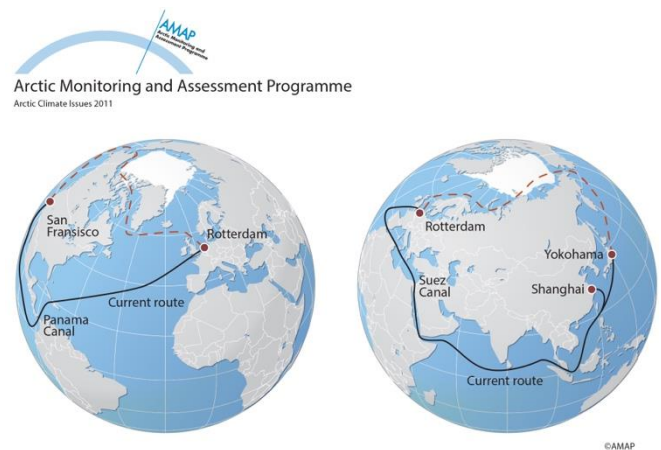
Figure 1: Changes in Sea Ice Area within the Arctic Circle¹



The Arctic Sea Route represents the shortest maritime path between Asia and Europe, offering significant potential for the efficiency of sea trade in terms of reduced transportation costs and time. The anticipated increase in commercial navigation and new resource development activities are expected to economically

invigorate the region. Notably, ports located north of Hong Kong, including those in East Asia, stand to benefit greatly, with Japan being a prime example.²

Figure 2: Overview of the Arctic Sea Route³



Furthermore, the continental shelf of the Arctic is believed to be rich in energy resources. According to studies by the United States Geological Survey, it is estimated that the region holds 13 percent of the world's oil and 30 percent of its natural gas reserves.⁴ Additionally, it is considered abundant in natural resources such as gold, platinum ore, and rare earth elements.

While the Arctic Ocean is poised for an increase in commercial navigation and new resource development, there are constraints due to the influence of sea ice, and the expansion of Arctic Sea Route usage also raises the potential for maritime accidents and concerns over

environmental destruction, including impacts on ecosystems⁵

The governance of the Arctic Circle has been primarily under the auspices of the Arctic Council (AC), established based on the Ottawa Declaration of 1996, following an international cooperation initiative centered on environmental protection in the Arctic, called by Soviet Secretary-General Gorbachev in 1987.⁶

The AC consists of eight countries: Norway, Sweden, Finland, Russia, the United States, Canada, Greenland, and Iceland, and includes thirteen non-Arctic observer states and international organizations such as the International Maritime Organization (IMO). Noteworthy is the inclusion of six indigenous groups of the Arctic Circle, not merely as observers but as permanent participants in discussions. This underscores the critical role of indigenous peoples, who, through their traditional knowledge and experience, not only play a pivotal role in environmental protection but also in shaping sustainable development policies in the AC, reflecting their direct stake in regional development and the impacts of climate change.⁷

Post-Cold War, Russia's political turmoil and transition led to a diminished focus on remote areas,⁸ including the Arctic Sea. The Ottawa Declaration stipulated that military and security issues would not be addressed,⁹ allowing the AC to serve as a successful example of post-Cold War international cooperation, fostering sustainable development, environmental protection, and support for indigenous education and other initiatives in the Arctic.

However, recent climate change effects, significantly reducing Arctic Sea ice, have altered the geopolitical landscape regarding the utilization of the Arctic Circle. Economic incursions by non-Arctic states, notably China, have set the stage for a shifting international political climate in the region.

Particularly, the Russian invasion of Ukraine that began in February 2022 has dramatically transformed the geopolitics of the Arctic Circle. The following month, seven member countries, excluding Russia, announced a temporary suspension of their activities in the AC.¹⁰

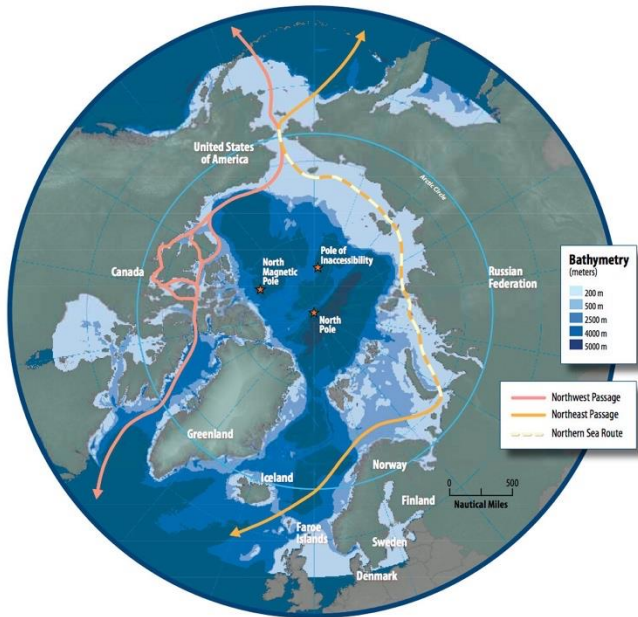
Additionally, Sweden and Finland's applications for NATO membership have created a trend where all member countries, except Russia, are NATO members.¹¹

This report aims to provide an overview of the current state and evolution of the Arctic Circle, focusing on the significance of the Arctic Sea Route and its associated economic and environmental impacts, as well as the geopolitical shifts. Specifically, it will concentrate on the international political dynamics post-Ukraine invasion and the emerging geopolitical framework surrounding the Arctic Sea Route, offering insights into the implications for Arctic governance and sustainability.

2. The Arctic Sea Routes

The term “Arctic Sea Routes” collectively refers to the navigational paths that connect the Atlantic and Pacific Oceans via the Arctic Sea. Specifically, within the Arctic Circle, there are two main routes: the Northern Sea Route (NSR) along the Russian coast and the Northwest Passage (NWP) along the Canadian coast. Traditionally, the term “Arctic Sea Route” has been synonymous with the NSR, which starts from the Barents Sea, stretches eastward along the Siberian coast, and reaches the Pacific Ocean through the Bering Strait. Conversely, the Northwest Passage traverses the northern coast of Canada, linking the Pacific and Atlantic Oceans.¹²

Figure 3: Overview of the Northern Sea Route and the Northwest Passage¹³



The principal allure of these routes lies in the distance they truncate. Compared to the mainstream Suez Canal route that connects Asia and Europe, the Arctic Sea Routes can reduce the distance by approximately 40%,¹⁴ enabling significant savings in transportation time and costs. Similarly, when juxtaposing the major Panama Canal route between Tokyo and New York, the use of the Northwest Passage results in a distance reduction of about 20%.¹⁵

Such reductions not only allow for decreased fuel expenses and shorter transportation times but also offer security advantages by avoiding piracy-prone areas off the coast of Somalia, leading to reduced insurance premiums. Additionally, these routes present environmental benefits, such as lower CO₂ emissions.

However, these routes are fraught with challenges due to the Arctic's unique and harsh natural environment. The thickness and extent of ice have fluctuated throughout history, particularly during the winter months when many areas are covered with thick sea ice, making navigation extremely difficult. Yet, recent climate change has led to a trend of diminishing sea ice in the summer, thereby extending the potential period for route utilization.

Furthermore, safe navigation of the Arctic Sea Routes necessitates specialized ship technology, crew training, and detailed navigational information. Ice flows and variability are unpredictable, with the sudden appearance of large icebergs or drift ice posing potential obstructions to maritime transit. Therefore, specialized icebreaker ships and vessels equipped with advanced navigational capabilities are required.

In fact, in November 2021, an unexpected cold snap led to rapid sea freezing, resulting in over 20 ships being trapped in ice—a situation that necessitated the dispatch of nuclear-powered icebreakers by Russia to rescue the encased vessels. This incident underscored the risks associated with sudden sea freezing due to cold waves and highlighted the critical role of coastal states.

While the advantages of the Arctic Sea Routes are evident, they are underpinned by the inherent risks and challenges posed by the frigid Arctic marine environment.

3. Key National Positions and Policies Regarding the Arctic Sea Routes

3.1 Russia

Among the nations bordering the Arctic Sea Route, Russia occupies a pivotal position. With the Siberian coast forming the majority of the Northern Sea Route, Russia is a key player in this maritime corridor. Consequently, Russia prioritizes the economic benefits derived from the shortened route and the potential for new resource development, actively enhancing its icebreaker fleet and developing port facilities.

Russia has established operational regulations for vessels navigating along its Arctic coast, including requirements for ice navigation, mandatory icebreaker escort, and the presence of Ice Pilots.¹⁶

These regulations necessitate that vessels submit applications for Ice Certificates, pre-navigation filings, and arrangements for icebreaker escorts and pilots, similar to the fees imposed for navigating the Suez or Panama Canals.

Furthermore, Russia possesses approximately 60% of the Arctic Sea continental shelf, spanning 2.7 million

square kilometers, suggesting a high probability that a significant portion of the Arctic's natural resources lies within Russian territory.¹⁷ The Yamal Peninsula, in particular, holds one of the world's largest natural gas reserves, and Russia is advancing the Yamal Project, a large-scale natural gas development project in the Arctic, in collaboration with domestic and international partners.

On the military front, in January 2021, Russia elevated its Northern Fleet to a military district level to enhance joint operations in the Arctic. Additionally, plans for constructing 13 airfields and the deployment of radar systems, as well as anti-aircraft and anti-ship missiles in the Arctic, have been confirmed.¹⁸

In March of the same year, Russia demonstrated its presence in the Arctic by publicizing three nuclear submarines breaking through the ice. Furthermore, in July 2022, President Putin announced a new maritime strategy, dedicating approximately 40% of its content to the Arctic, emphasizing the region's dominance as Russia's top priority and its intent to enhance naval capabilities in the Arctic and global seas,¹⁹ signaling an arms race ahead of Western nations.

3.2 Canada

As the nation that possesses the Northwest Passage, Canada emphasizes its sovereignty while also prioritizing the protection of the Arctic environment and the rights of indigenous peoples. However, the Northwest Passage presents more significant challenges for navigation due to thicker and more volatile sea ice compared to the Northeast Passage. The lack of powerful icebreakers to support foreign merchant ships makes commercial navigation difficult, with the route primarily serving cruise ships for tourism. Currently, it is challenging to identify significant commercial or strategic advantages for the Northwest Passage.

3.3 United States

The United States is attentive to the strategic importance of the Arctic Sea Routes, and is particularly concerned about the Arctic incursions by China and Russia,

emphasizing the need to ensure Freedom of Navigation and regional stability. The U.S. continues to explore new economic opportunities in the Arctic region while keeping a vigilant eye on geopolitical shifts.

The U.S. Coast Guard, under the initiative of Commandant Fagan, is executing plans to replace its aging icebreakers, thereby strengthening the security apparatus within the U.S. Arctic territory.²⁰

Militarily, the U.S. published its Arctic Defense Strategy in 2013 and unveiled a strategy titled "a Blue Arctic" in 2021. It stated the necessity of a sustained U.S. Navy presence and regional partnerships for peace and prosperity in the Arctic, and explicitly mentioned the intensification of military activities to respond to the growing challenges posed by China and Russia.²¹

3.4 China

In 2013, China was granted observer status in the Arctic Council (AC), laying the foundation to enhance its influence in the Arctic alongside nations like Japan and South Korea. Initially, Russia was wary of China's observer status in the AC, but following the annexation of Crimea in 2014 and the subsequent Western economic sanctions, Russia deepened its cooperation with China. Particularly in the development of Arctic seabed oil and gas fields, Russia, which had been seeking cooperation with the West, turned to China for support after the Crimea issue.

During President Xi Jinping's visit to Russia in 2017, he confirmed cooperation with President Putin on the development of the Arctic Sea Route and unveiled the "Polar Silk Road" initiative. Furthermore, in its Arctic policy white paper published in January 2018, China explicitly promoted the "Polar Silk Road" as part of its grand economic zone concept, "One Belt, One Road." Subsequently, natural gas from the Yamal Project was imported into China for the first time in July 2018, indicating a closer Sino-Russian relationship and steps toward realizing the "Polar Silk Road" initiative.²²

3.5 Japan

Japan, geographically susceptible to the impacts of climate change and as the Asian nation closest to the Arctic Sea, stands to benefit significantly from economic and commercial opportunities. Arctic policy has become an essential aspect of Japan's national strategy.

In 2013, Japan was accredited as an observer nation to the AC and has since planned to participate in various meetings from a stable position, cooperating with domestic ministries and research institutions to deepen its contributions to the AC.

Arctic issues are directly linked to Japan's national interests as a maritime nation. Utilizing its track record in academic research, such as the long-term establishment of observation stations in the Svalbard Islands and continuous observational activities, Japan intends to actively cooperate with the AC's endeavors.²³

With the increase in commercial use of the Arctic Sea Route, there will be a rise in vessel traffic to and from Japan, as well as increased transit of Chinese and Korean vessels through the Soya and Tsugaru Straits, necessitating enhanced maritime security in the region.

Mitsui O.S.K. Lines has participated in the Yamal Project, and in 2018, it completed the world's first icebreaking LNG carrier, which navigated the Arctic Sea Route during the summer, initiating LNG transport from Russia to China. Additionally, several icebreaking LNG carriers have been chartered for the project, capable of navigating the Arctic Sea Route eastward and heading to East Asia via the Bering Strait without the lead of Russian nuclear icebreakers.²⁴

4. International Law and the Framework for Cooperation in the Arctic Sea Routes

The legal framework surrounding the Arctic Sea Routes is multi-layered and complex. Unlike the Antarctic Treaty System, there is no single legal framework specifically designed for the Arctic. Instead, the 1982 United Nations Convention on the Law of the Sea (UNCLOS) applies. This convention establishes the rights and obligations of coastal states in various

maritime zones, including territorial seas, Exclusive Economic Zones (EEZs), and continental shelves, providing a fundamental legal framework for many issues related to the law of the sea in the Arctic. Coastal states have privileges under UNCLOS for the exploration and development of resources within their EEZs. Furthermore, claims for the extension of the continental shelf, when submitted based on specific scientific criteria, are assessed by the Commission on the Limits of the Continental Shelf established under UNCLOS.

Specific rights of navigation in the Arctic Sea Routes are related to Article 234 of UNCLOS. This provision grants coastal states in ice-covered areas under extreme climatic conditions special authority to prevent marine pollution. As a result, Arctic coastal states like Canada and Russia assert the right to set specific rules and standards for navigation in these waters.

In addition to these basic treaties, the Arctic states have established additional agreements to address the unique challenges of the harsh natural environment of the Arctic Sea. In 2011, the eight Arctic countries signed the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic to facilitate effective search and rescue operations in the region.

The Arctic Sea has unique characteristics due to its low temperatures, which slow down the activity of oil-degrading bacteria, and its limited water circulation with the outside world due to land barriers.²⁵ This means that once pollution from oil field development accidents or ship groundings occurs, natural recovery can be slow. Furthermore, the Arctic has its own unique ecosystem, and the risks associated with logistics and resource extraction could significantly impact the local environment. Considering these challenges, the Arctic states signed the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic in 2013.

These treaties construct a framework for addressing concerns associated with the increased use of the Arctic Sea Routes. In October 2015, the Arctic Coast Guard Forum (ACGF) was established, led by the U.S. Coast

Guard, to enhance the coordination and effectiveness of member countries' maritime security agencies in emergency responses.

Figure 4: Joint training by maritime security agencies of ACGF member countries²⁶



Under the guidance provided by these legal frameworks and institutions, countries are developing and adjusting their policies and positions regarding the Arctic Sea Routes. International cooperation and dialogue within these frameworks continue to be essential for the future of the Arctic.

5. Russia's Invasion of Ukraine and Its Impact

In 2014, Russia annexed the Crimean Peninsula from Ukraine, an action that sent shockwaves through the international political arena, drew widespread condemnation, and resulted in economic sanctions from Western countries. At that time, however, Russia's actions were considered separately from the Arctic Sea, and international cooperation through the Arctic Council (AC) continued.

However, the Russian invasion of Ukraine that began in February 2022 had a severe impact on the geopolitics of the Arctic region, leading to a suspension of AC activities by the seven member countries excluding Russia. The subsequent applications of Sweden and Finland to join NATO raised the possibility that all member countries except Russia could become NATO members, signaling a new geopolitical phase in the Arctic.

The majority of the Northeast Passage runs along the Russian coast, and currently, Russia sets fees for icebreaker escorts and pilotage services, as well as requires pre-application for navigation,²⁷ which diverges from the "freedom of navigation" advocated by the United States.

Moreover, Russia has a history of closing the Black Sea to cut off Ukraine's grain exports during the invasion, and should the conflict with NATO intensify, Russia might consider raising transit fees for the Northeast Passage or restricting the passage of NATO-related vessels.

Ideally, increased use of the Arctic Sea Routes could lead to a reduction in Suez Canal transit fees, creating a competitive pricing situation that benefits the shipping industry. However, the Ukrainian invasion could close off this potential situation.

Under economic sanctions, Russia's activities have also spurred movements to explore possibilities for cooperation with other Arctic countries. Russia, facing sanctions and tensions with the West, has moved closer to China. China has proposed the "Ice Silk Road" and is pursuing economic and strategic interests in the Arctic region, making collaboration with Russia important for both parties.²⁸ Thus, cooperation between Russia and China could lead to new developments in resource development and the use of shipping routes in the Arctic. In the midst of these political and economic movements, the impact on indigenous peoples and local communities cannot be ignored. The indigenous peoples of the Arctic live traditional lifestyles and cultures closely tied to the environment, and geopolitical and economic shifts could have serious implications for their lives. Particularly concerning is the suspension of AC activities, which could also disrupt support for indigenous education and other initiatives. The AC, which is supposed to prioritize indigenous peoples and not deal with military and security issues, is now hindered by a military event unrelated to indigenous peoples, reflecting the reality that the Arctic has become an arena for great power competition.

In summary, Russia's invasion of Ukraine is expected to have significant effects not only on the international

political landscape but also on the geopolitical dynamics surrounding the Arctic Sea Routes and the international politics of the Arctic, which are centered on indigenous peoples.

6. Conclusion

The future of the Arctic Sea Routes is shaped by a diverse array of factors including climate change, geopolitics, international law, environmental conservation, and the rights of indigenous peoples. The use and development of these routes are progressing through a complex interplay of these elements, each influencing the others. In this context, Russia's invasion of Ukraine has had a profound impact on the international relations and geopolitics of the Arctic Sea Routes and the Arctic region as a whole. The activities of the Arctic Council (AC) have been suspended in direct response to these developments, starkly demonstrating how vulnerable regional cooperation and dialogue mechanisms can be to external political tensions. If such political tensions hinder multilateral cooperation aimed at the safe and sustainable use of the Arctic Sea Routes, as well as the protection of the environment and the rights of indigenous peoples, the outlook becomes increasingly uncertain.

This uncertainty requires heightened attention, considering that the development and use of the Arctic

Sea Routes have significant implications for the future of the entire planet. Their potential and risks extend beyond the Arctic region, affecting the whole world. To address this appropriately, it is necessary for the involved nations to unite in their efforts, focusing on scientific research, strengthening international law, and protecting the environment and the rights of indigenous peoples.

Amidst these intertwined factors, the commercial and strategic value of the Arctic Sea Routes cannot be ignored. However, to maximize this value while simultaneously protecting the environment and the rights of indigenous peoples, dialogue and cooperation from the entire international community are essential. This transcends economic and political issues and is a mission that must be responsibly carried forward for future generations.

Considering these circumstances, it can be said that the future of the Arctic Sea Routes will be shaped by the collective efforts of the international community. It will be based on international cooperation and dialogue that manage new opportunities and risks in a balanced manner, respecting and conserving the Earth's environment and the lives of indigenous peoples. This will likely become the most important principle in the unfolding future of the Arctic Sea Routes.

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