

***The Arctic in world politics.
The United States, Russia, and China in the Arctic – implications for Finland***

Vesa Virtanen

Fellow, Weatherhead Center for International Affairs, Harvard University
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ABSTRACT

The diminishing Arctic sea ice will lead to increased activities in the Arctic in the 2020s. Within the Arctic region, there are valuable unexploited oil, gas, and mineral fields. As the ice melts, access to these resources will become easier. At the same time, new shipping routes from Europe to Asia will create opportunities to save as much as 20 days in sailing and as much as \$1 million per ship in fuel costs. Arctic fishing will become more attractive as the ice melts and fisheries move towards the north. A more accessible Arctic will also be a tempting locale for tourists looking for new adventures.

These developments will create new prospects and challenges for the nation states in the region and for those who wish to take advantage of these opportunities. The primary actors in the Arctic are the eight Arctic states—namely Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States. But the new possibilities and resources also interest non-Arctic countries, like China, Japan, and South Korea.

This study utilizes realist theory both as a lens to analyze current state actions in the Arctic as well as a guide to predict future interactions among states. According to realist theory, states are rational actors and they have strategies that maximize their prospects for survival and the attainment of power. When applying realist theory to the changes in the Arctic, it can be predicted that nation states will try, insofar as possible, to gain benefits from the forthcoming developments in the Arctic. This may lead to rivalry and even disputes between them. The best-case scenario would result in interstate cooperation in the region, but competition or conflicts cannot to be excluded.

This study focuses primarily on the great powers, (the United States, Russia, and China) and their potential reactions to the changing conditions in the Arctic region. It finds that the changing Arctic is not as interesting to the United States as it is for Russia and non-Arctic China. The main “Arctic” interests of the United States are environmental issues, freedom of the seas, and ensuring that shipping routes in the area remain open. The U.S. Arctic (Alaska) is far away from the key focus areas important to the United States. Additionally, when North America achieves greater energy independence in less than 10 years, thanks to shale oil and shale gas reservoirs, its economic interests in the Arctic regarding oil and other fossil fuels are going to be less valued than today. Only if a disaster occurs will we see more rapid development in U.S. Arctic capabilities.

For Russia, the melting sea ice in the Arctic creates huge opportunities with regard to accessing the oil and gas fields located within its exclusive economic zone (EEZ) in the far North. Of the great powers, Russia will benefit most from the Arctic change. Its power in the international arena and its economic well-being depend on how much money it can make from energy products. To further enable the state’s access to such resources, Russia is strengthening its military presence in the Arctic in order to protect its interests in the area. As well as access to oil, the Northern Sea Route (NSR) along the Russian coast is seen in Russia as a means of making money in terms of passage fees. With less ice blocking the NSR, Russia can more easily sell and transport its valuable energy products to Asia, where energy demand is growing more quickly than anywhere else in the world, and is set to increase substantially, at least in the next 10 years.

For China, not being an Arctic state and therefore having no direct claims over territory or resources, the potential new shipping routes are of great interest. Utilizing Arctic passages significantly shortens the distance between Europe and China, reducing shipping transport

costs. China's economy is highly dependent on international trade and relies heavily on its shipping fleets to connect with markets around the world. China is also interested in exploiting new oil and gas fields in order to boost its economic growth, but as it is not an Arctic country and therefore has no legal claim to Arctic resources, it buys energy fields and builds infrastructure to be able to benefit from the Arctic climate change.

This study also finds that military activity in the Arctic is rising. The "worst case scenario" would be caused by disputes between the great powers. Even though some Arctic states are strengthening their military presence in the Arctic, the greatest implications from the melting sea ice are not related to military issues. The security policy situation in the Arctic is likely to be more demanding in the 2020s than it is today, but the likelihood of direct military confrontation in the area is remote. Existing disagreements are likely to be resolved diplomatically because of huge interlinked economic interests and the deterrence of the nuclear arsenal of the great powers. International cooperation in the Arctic is essential, both now and in the future, in order to avoid misunderstandings. The major "everyday" threats are disasters linked with increased drilling for energy, environmental challenges, and an uptick shipping, fishing, and tourism. The Arctic states are not yet sufficiently prepared for search and rescue (SAR) tasks and possible environmental problems in the harsh and vast area with poor communications. Unfortunately, it seems now that radical improvements in SAR capabilities are not likely before something happens.

The melting Arctic ice will have security implications for all of the Arctic states. This study, however, specifically focuses on the possible security implications for Finland. Increased activities in the Kola Peninsula are forcing Finland to follow Russian activity closely, as

most state action happens near Finnish borders. The defense of Lapland remains important for Finland. Increased activities in the Arctic will create new economic opportunities for Finland, especially regarding Finnish expertise in operating in the Arctic. To enable Finland to fully exploit the new circumstances in the Arctic, infrastructure—particularly roads, railroads and transit areas—should be developed. This will be important for Finland, located in the future traffic hub of the Arctic, to be better able to benefit from the opening of the NSR between Europe and Asia.

Keywords: Arctic, Security, Great powers

Author bio

Colonel Vesa Virtanen, Finnish Defense Forces, is a graduate of the military academy and he has held a variety of positions in his career, among them, staff officer in the Defense Command working with operational and long-term planning of the Finnish Defense Forces, aide to the Chief of Defense Finland, commander of the Uusimaa Jaeger Battalion, and a chief of the training sector in the personnel division of the Defense Command. In 2009, he was asked to be the secretary of a working group on general conscription; the group's report on the future of general conscription was widely accepted in Finland and noted in the new government's program. He has worked as a United Nations (UN) military observer in the former Yugoslavia and as an aide to the chairman of the EU military committee in Brussels. He received degrees from Helsinki University (Master in Social Sciences, International Politics) and from the National Defense University (General Staff Officer), Finland.

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List of Abbreviations

AEW	Aircraft early warning
EEZ	Exclusive economic zone
EU	European Union
EUCOM	U.S. European Command
GDP	Gross domestic product
ICBM	Intercontinental ballistic missile
IISS	International Institute for Strategic Studies
IMO	International Maritime Organization
NATO	North Atlantic Treaty Organization
NORDEFECO	Nordic Defense Cooperation
NSR	Northern Sea Route
PPP	Purchasing power parity
QDR	Quadrennial Defense Review
SSBN	Strategic Submarine Ballistic Nuclear (Submarine with ballistic nuclear missiles)
SAR	Search and rescue
UAV	Unmanned aerial vehicles
UNCLOS	United Nations Convention on the Law of the Sea
USARAK	U.S. Army Alaska

1. INTRODUCTION

“Only when the ice breaks will you truly know who is your friend and who is your enemy.”

—Inuit proverb

During the Cold War, the Arctic was divided into two armed camps: the United States and NATO on the one hand, and the Soviet Union on the other. The Arctic region provided an attractive area of operations for strategic weapons systems. Along that tense front, nuclear submarines and bombers operated. Runways and radar stations were built, along with underwater acoustic sensors. Following the dissolution of the Soviet Union, the strategic importance of the Arctic was diminished, especially in the eyes of U.S. policymakers.

A more cooperative approach concerning the Arctic region has emerged since 1990. The United States and Soviet Union agreed on the location of their maritime boundary in the Bering Strait and Chukchi Sea. The Arctic Council, an international organization, which institutionalized cooperation on nonmilitary matters among the eight Arctic countries, was established in 1996.¹ In the 1990s, Arctic cooperation was not very active, but during the last few years, it has intensified. All eight Arctic countries are members of the Arctic Council. No new non-Arctic states have been accepted as formal members.

During the last few years, more attention has again been given to the Arctic region, but in a far different way than during the Cold War. Global warming is affecting the Arctic much more than any other region, and the melting of the Arctic sea ice makes the Arctic more accessible, which is creating greater opportunities for the extraction of oil, gas, and many valuable minerals. At the same time, the area has become more attractive for commercial shipping, industrial fishing, and even tourism. These factors will most likely make a significant impact on the security and environment of the Arctic in the 2020s. The Arctic is interesting in terms of security especially for the eight Arctic countries, but recently China,

¹ The U.S. (Alaska), Canada, Russia, Finland, Norway, Sweden, Denmark (Greenland), and Iceland.

Japan, and South Korea have become more and more engaged in the area. This increase in interest and activity in the Arctic region can affect Nordic security and the power balance in the Arctic as well.²

It is not only polar bears, which are altering their behavior because of the big changes occurring in the area, but also major actors in international politics. For polar bears, the change is already clear; they can no longer easily kill seals because of diminishing ice. They try to survive and they have to adapt and eat berries instead. On the other hand, it is not yet clear how the behavior of nations will change because of the diminishing ice. The rapid pace of the melting of sea ice in the Arctic has caused nations to consider the implications of the consequences of an Arctic without or with much less sea ice. International relations are still dominated by realist considerations in that each nation state is primarily concerned with its own interests. States will try to take as many resources and as many benefits as possible. In the Arctic, rising temperatures and the unexploited fuel resources can mean suddenly rising tensions, a situation that is comparable to what we have already seen in 2012 in the South China Sea and East China Sea.³

In this study, I will concentrate on evaluating why the Arctic is growing more interesting for the great powers of the United States, Russia, and China. Although there are three implications brought on by climate change, being ecological, socioeconomic, and political, this paper will focus on the political changes, specifically the political implications relevant to security policy. I will also seek to calculate how these great power implications will affect Finland.

In this study, I will try to answer the following questions: What are the great powers' interests in the Arctic region? What are the possible dispute areas in the Arctic? What kind of implications may change in the Arctic have for the security environment in the Arctic as a whole and for Finland in particular?

² By Nordic (area), I mean the region in Northern Europe and the North Atlantic that consists of Denmark, Finland, Iceland, Norway and Sweden, and their associated territories, namely the Faroe Islands, Greenland and Åland.

³ Territorial disputes in the South China Sea involve both land (island) and maritime disputes among seven sovereign states within the region. These countries are China, Taiwan, the Philippines, Vietnam, Malaysia, Brunei, and Indonesia. Disputes in the East China Sea are between the China, Japan, and South Korea over the extent of their respective exclusive economic zones. These disputes caused high tensions especially between China and Japan in 2012 when there were demonstrations in the two countries. At the same time, both countries sent their ships to the area of dispute. The main reasons behind the disputes are acquiring fishing areas around the archipelagos, the potential exploitation of suspected crude oil and natural gas under the waters, and the strategic control of important shipping lanes.

There are, of course, more actors in the Arctic than the world's three largest military spenders, i.e., the United States, Russia, and China, although these nations are by all means those that are going to influence the security situation the most. If something happens in the Arctic, the main implications for international security will come from the relations among these great powers.

There are several other actors in the Arctic that will have some impact on the region's development. The most relevant are the other Arctic states: Finland, Sweden, Norway, Iceland, Denmark, and Canada. The small Scandinavian countries, along with Denmark and Iceland, will have influence to some extent, as they have control over desirable strategic resources. For Canada, the Northwest Passage is important, but it does not affect the strategic environment for other countries, like Finland. For Finland's security, the major implications are to be seen in the actions and relations among the United States, Russia, and China in the European High North.⁴ Moreover, there are other international organizations that will also influence events in the region. For example, all Arctic countries except Russia, Finland, and Sweden are members of NATO. Finland and Sweden, however, which have no Arctic coast, have good relations with NATO. Thus, NATO will have some bearing on the future of the Arctic region. Another organization active in the region is the EU. The EU is increasingly interested the Arctic, but it is unlikely to have a significant impact as not all EU countries are interested in the Arctic

Recently, the Arctic has been the topic of several different studies and focus groups. Maybe the most significant project to research the Arctic is the *GeoPolitics in the High North* research program, the aim of which is to develop new knowledge about actors and their interests in the High North. The program is led by the Norwegian Institute for Defense Studies and has published several studies. Many countries, like the United States, Russia, and Finland, have also published their own Arctic white papers as well. But, despite this increased attention, comparisons of security policy interests among the great powers concerning the Arctic have not been made in great depth.

⁴ By European High North, I mean the area north of the Polar Circle in Norway, Sweden, Finland, and in Russia in Argangel and Murmansk.

This study was inspired by the material I have researched and the several interesting discussions I have had during my academic year as a Fellow at the Weatherhead Center for International Affairs at Harvard University. The lack of studies focusing on comparative security policy drove my choice of topic. During the past few years, I have seen heightening interest in the Arctic region during my visits to different countries, not least in Russia and China, compelling my study to focus on the great powers in particular in relation to Finland.

This study consists of four main parts. First, it is important to define the Arctic region prior to engaging in analysis of the security policies of the great powers. Then I will explore the role the Arctic region plays in security policy. Finally, the key elements of realist thinking will be explained, because the theory still appears to be an important and relevant tool in explaining nation-states' actions. In the second part of this study, I will evaluate the great powers' interests in the Arctic. I will also quickly evaluate other actors in the Arctic to provide a holistic picture of the strategic environment in the region. In the third part of the study, I will evaluate the great powers' developing influence in the future of the Arctic and assess possible dispute areas in the region. In the fourth part, I will address the security/political implications of Arctic change for Finland.

2 THE ARCTIC REGION

2.1 What is the Arctic?

Geographically, the Arctic region can be defined as the area located north of the Arctic Circle, which runs approximately 66°34'03" north of the Equator (see figure 1).⁵

⁵ See Åtland, Kristian, "Climate Change and Security in the Arctic," Paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, Feb 17-20, 2010, pp. 6 – 7. The figure is based on maps from the Perry-Castañeda Map Collection, University of Texas, http://www.lib.utexas.edu/maps/islands_oceans_poles/arctic_region_pol_2007.jpg.



Figure 1: The Arctic region⁶

With its radius of 2606 kilometers, the Arctic Circle encapsulates as much as 8 percent of the planet's surface. The area north of the Arctic Circle is about 40,000,000 square

⁶ <http://www.history-map.com/picture/000/Arctic-region.htm>

kilometers (15,500,000 square miles). The Arctic region can also be defined by the 10°C isotherm, which goes somewhat further south in the maritime areas (the North Atlantic, the Bering Sea, and Hudson Bay) and also includes all of Greenland and most of Iceland. In addition to the Arctic Ocean, the region includes at least nine Arctic or near-Arctic seas and the northernmost parts of the land territories of eight sovereign states.⁷

In this study, the “Arctic” or Arctic region refers to the geographic area north of the Arctic Circle (66 degrees north). According to this definition, the following eight states are Arctic nations: The United States (Alaska), Canada, Russia, Finland, Norway, Sweden, Denmark (Greenland), and Iceland. Iceland’s land area is just south of the Arctic Circle. Sweden and Finland have no Arctic shore.

The ownership of the Arctic is governed by the 1982 United Nations Convention on the Law of the Sea (UNCLOS), which is the primary international legal framework for the Arctic. UNCLOS provides a common framework for managing international waters, including maritime boundary disputes and territorial claims. It is unable, however, to serve as a forum for solving military disputes or to address security concerns related to increased commercial activity and military presence as its founding document, the Ottawa Declaration on the Establishment of the Arctic Council, states that it is not permitted to discuss security-related issues. The United States has insisted on this measure as well.⁸ UNCLOS gives to the Arctic nations an EEZ that extends at least 200 nautical miles from land and to undersea resources beyond this limit, so long as they are on a continental shelf.

UNCLOS also deals with conservation and the management of living resources, pollution prevention, reduction and control, vessel pollution, and environmental management. In fact, UNCLOS is the strongest and most comprehensive environmental treaty now in existence and is considered to be a “Constitutions for the Oceans.”⁹ It can be asserted that

⁷ See more details from Åtland, Kristian: “Climate Change and Security in the Arctic,” Paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, Feb 17-20, 2010, pp. 6 – 7.

⁸ *A New Security Architecture for the Arctic*. CSIS, Jan 2012, p. 14.

⁹ Holmes, Stephanie, “Breaking the Ice: Emerging Legal Issues in Arctic Sovereignty.” *Chicago Journal of International Law*, Vol. 9, June 2008, p. 330.

UNCLOS is not only a treaty, but a codification and articulation of the present state of the rules applicable to oceans, binding both signatories and nonsignatories.¹⁰

All Arctic countries, except the United States, have ratified UNCLOS. While the other Arctic states are racing to carve up the region, the United States has remained largely on the sidelines. The U.S. Senate has not ratified UNCLOS, even though it had powerful supporters such as President Barack Obama, environmental nongovernmental organizations, the U.S. Navy and U.S. Coast Guard service chiefs, and leading voices in the private sector.¹¹ The few in the United States who oppose U.S. accession to UNCLOS claim that, by ratifying the treaty, Washington would cede too much U.S. sovereignty and that customary international law and the powerful U.S. Navy already allow the United States to protect its Arctic interests.¹²

As a result, the United States cannot formally assert any rights to the untold resources off Alaska's northern coast beyond its EEZ—such zones extend only 200 nautical miles from each Arctic state's shore—nor can it join the UN Commission that adjudicates such claims. Worse, the United States has forfeited its ability to assert sovereignty in the Arctic by allowing its icebreaker fleet to atrophy.¹³

Many argue that UNCLOS is the right tool to manage the new possibilities of the Arctic because:

1. The convention provides mechanisms for states to settle boundary disputes;
2. States can submit claims for additional resources beyond their EEZ;
3. UNCLOS sets aside the resources in the high seas as the common heritage of humankind;
4. UNCLOS allows states bordering ice-covered waters to enforce more stringent environmental regulations; and

¹⁰ Guruswamy, Lakhsmann, "The Promise of the United Nations Convention on the Law of the Sea (UNCLOS): Justice in Trade and Environment Disputes," p. 209.

http://heinonline.org/HOL/Page?handle=hein.journals/eclawq25&div=13&g_sent=1&collection=journals.

¹¹ Borgerson, Scott G., "Arctic Meltdown: The Economic and Security Implications of Global Warming," *Foreign Affairs*, Vol. 87, No. 2 (Mar. - Apr., 2008), p. 64. Published by: Council on Foreign Relations Article Stable URL: <http://www.jstor.org/stable/20032581>. Kiruna Declaration. On the occasion of the Eighth Ministerial Meeting of the Arctic Council. Kiruna, May 15, 2013.

¹² Borgerson, p. 75.

¹³ Ibid, p. 64.

5. UNCLOS defines which seaways are the sovereign possessions of states and which are international passages open to unfettered navigation.¹⁴

On the other hand, UNCLOS cannot be seamlessly applied to the Arctic due to “the region’s unique geographic circumstances,” which “do not allow for a neat application of this legal framework.”¹⁵ This is because the continental shelf under the Arctic is extremely geologically complex and there are five states competing over claims. Moreover, there is the issue of defining maritime borders between the United States and Canada over the Beaufort Sea and between Norway and Russia in the Barents Sea, defining the Northwest Passage.¹⁶

It is worth noting that the Arctic is not currently governed by any comprehensive multilateral norms and regulations because it was never expected to become a navigable waterway or a site for large-scale commercial development.¹⁷ It is very likely that these kinds of norms and regulations will be needed in the future as the Arctic becomes more accessible.

After 1991, the Arctic nations were looking for an institution in which to establish these norms and regulations. In 1996, the Arctic Council was founded to address these very concerns. It is considered the primary institutional framework for the Arctic. Its fundamental function is to promote international cooperation in environmental protection and sustainable development. A legally binding agreement between the eight members¹⁸ was signed in May 2011. In this agreement (see map in figure 2), the Arctic states agreed on common efforts to strengthen aeronautical and maritime SAR in the Arctic.¹⁹ The second binding agreement, an Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, was signed in Kiruna in May 2013.²⁰ The Arctic Council, like UNCLOS, is unable to address any security-related issue because of its charter

¹⁴ Borgerson, p. 72.

¹⁵ Kuttner, Robert, “The Copenhagen Consensus: Reading Adam Smith in Denmark,” *Foreign Affairs*, Volume 87, No. 2, p. 72.

¹⁶ Borgerson, p. 64

¹⁷ Ibid, p. 65.

¹⁸ Canada, Denmark (Greenland and Faroe Islands), Finland, Iceland, Norway, Sweden, The Russian Federation and the United States of America.

¹⁹ http://arctic-council.org/filearchive/Arctic_SAR_Agreement_EN_FINAL_for_signature_21-Apr-2011.pdf

²⁰ See <http://www.arctic-council.org/index.php/en/resources/news-and-press/news-archive/739-kiruna-ministerial-meeting-documents>

provisions.²¹ Despite this, it is an important body in the Arctic for cooperation and makes it possible to influence Arctic matters. That is why several non-Arctic countries applied for observer status.

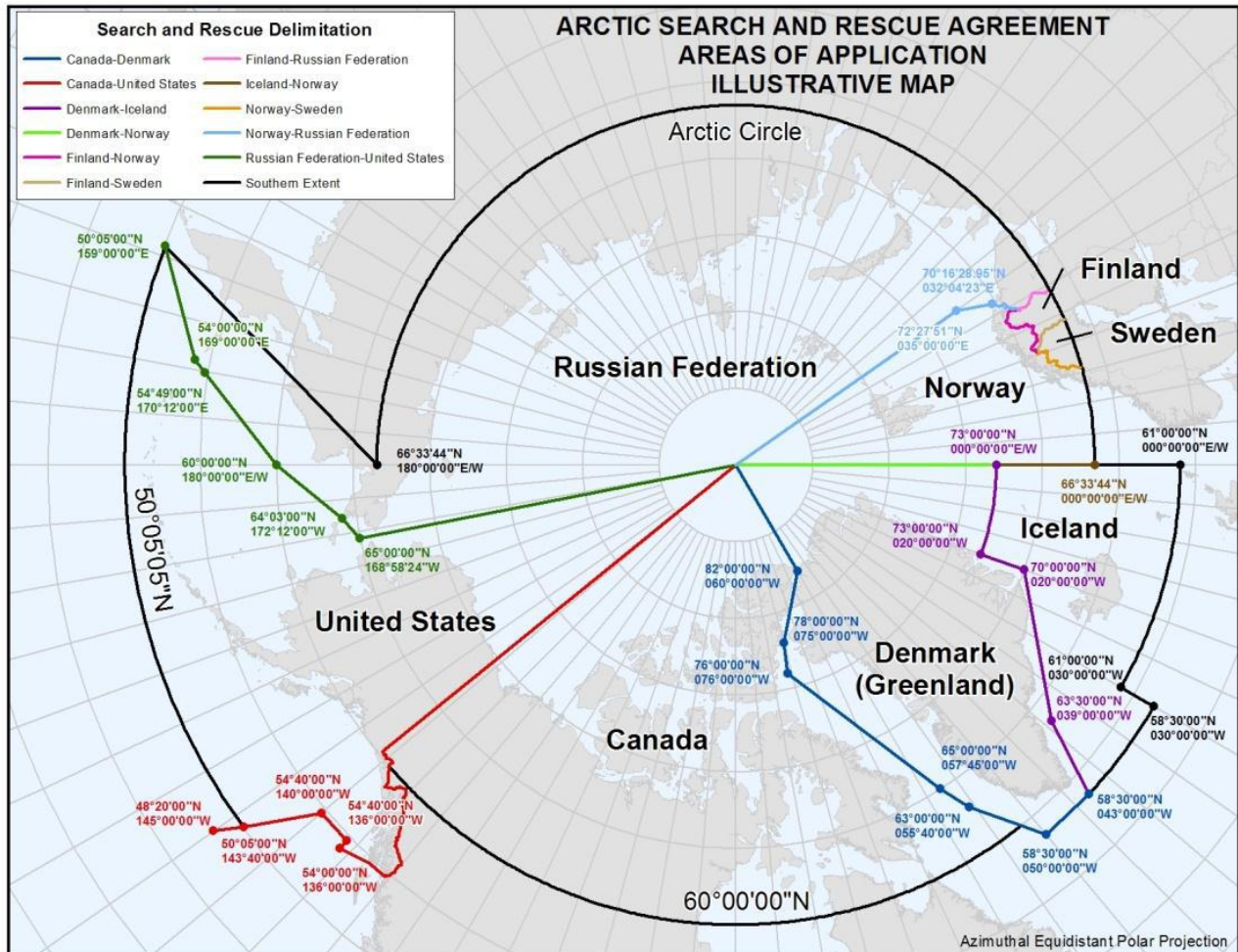


Figure 2: Arctic Search and Rescue Agreement²²

For the time being, only the eight Arctic states are full members of the Arctic Council. Several indigenous peoples' organizations, however, have been granted Permanent Participant Status in the organization, as follows: The Arctic Athabaskan Council, Aleut International Association, Gwich'in Council International, Inuit Circumpolar Council,

²¹ See Arctic Council website: Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, April 2011.

http://library.arcticportal.org/1474/1/Arctic_SAR_Agreement_EN_FINAL_for_signature_21_Apr_2011.pdf.

²² http://www.arctic-council.org/images/attachments/Pamphlets/FINAL_ArcticSAR_Pamphlet_4.pdf

Russian Arctic Indigenous Peoples of the North, and Saami Council. They have full consultation rights in connection with the Council's negotiations and decisions.²³

The Arctic Council also has observers. Observer status is open to non-Arctic states, inter-governmental and inter-parliamentary organizations, and nongovernmental organizations. Observers must accept and support the objectives of the Arctic Council, must recognize Arctic states' sovereignty, sovereign rights, and jurisdiction in the Arctic. Among other things, observer states must "have demonstrated a political willingness as well as financial ability to contribute to the work of the Permanent Participants and other Arctic indigenous peoples."²⁴

The relegation of non-Arctic states to observer status, effectively sidelined from decision-making power, is made clear in that the Arctic Council explicitly delineates in its founding documents that: "Decisions at all levels in the Arctic Council are the exclusive right and responsibility of the eight Arctic States with the involvement of the Permanent Participants."²⁵ Observers are allowed to contribute to the Council via the "Working Groups," which propose projects through an Arctic State or a Permanent Participant, and fund regulations for these projects.²⁶

There are also nine intergovernmental-parliamentary organizations and eleven nongovernmental organizations that have observer status in the Arctic Council.²⁷

²³ <http://www.arctic-council.org/index.php/en/about-us/permanentparticipants>

²⁴ Ibid.

²⁵ <http://www.arctic-council.org/index.php/en/about-us/partners-links>

²⁶ <http://www.arctic-council.org/index.php/en/about-us/partners-links>. Kiruna Declaration

On the occasion of the Eighth Ministerial Meeting of the Arctic Council, Kiruna, May 2013. Permanent Observer Status has been given to the following non-Arctic states: France, Germany, the Netherlands, Poland, Spain, and the United Kingdom. During the same month, the Arctic Council welcomed China, India, Italy, Japan, the Republic of Korea, and Singapore as new Observer States.

²⁷ <http://www.arctic-council.org/index.php/en/about-us/partners-links>.

The nine intergovernmental-parliamentary organizations are: International Federation of the Red Cross & Red Crescent Societies, International Union for the Conservation of Nature, Nordic Council of Ministers, Nordic Environment Finance Corporation, North Atlantic Maritime Mammal Commission, Standing Committee of the Parliamentarians of the Arctic Region, United Nations Economic Commission for Europe, United Nations Development Program, and United Nations Environment Program.

The eleven nongovernmental organizations are: Advisory Committee on Protection of the Seas, Arctic Circumpolar Gateway, Association of World Reindeer Herders, Circumpolar Conservation Union, International Arctic Science Committee, International Arctic Social Sciences Association, International Union for Circumpolar Health, International Work Group for Indigenous Affairs, Northern Forum, University of the Arctic, and World Wide Fund for Nature-Global Arctic Program.

It is worth noting that before May 2013, observer status had been given only to non-Arctic European countries. In May 2013, the Arctic Council also welcomed non-European non-Arctic countries like China, India, Japan, South Korea, and Singapore, to join as observers. In Kiruna, the Arctic Council also welcomed the establishment of the Arctic Council Secretariat in Tromsø, Norway.²⁸

China pressed on many diplomatic fronts in order to be able to gain observer status. China has offered investment deals and promises of collaboration in sustainable development and renewable energy to several Arctic countries. In 2012, President Hu Jintao visited Denmark, the first time a Chinese head of state has done so. In the same year, Prime Minister Wen Jiabao went to Iceland and Sweden in the first visits by a Chinese premier in decades. China's bilateral diplomacy helped to gain support from Scandinavian Arctic states. The United States and Russia are wary of China's advances.²⁹

One other entity has significance to the Arctic. The International Maritime Organization (IMO) is a specialized agency of the UN with responsibility for the safety and security of overseas shipping and the prevention of marine pollution by ships. The IMO Assembly meets once every two years and adopts a six-year Strategic Plan for the Organization. The IMO does not directly address the Arctic, but discusses issues that would be relevant to the Arctic with the increase in shipping in the region regarding safety and anti-pollutant measures.³⁰

Due to the harsh climate, the Arctic is one of the most desolate and sparsely populated areas of the world. Together the Arctic population is less than four million. Over half of the Arctic population lives in Russia.³¹ The three largest communities above the Arctic Circle are situated in Russia: Murmansk (population approximately 300,000), Norilsk (175,000), and Vorkuta (70,000). Tromsø (in Norway) has about 69,000 inhabitants and Bodø 47,000.

²⁸ Kiruna Declaration . On the occasion of the Eighth Ministerial Meeting of the Arctic Council, Kiruna, May 2013.

²⁹ <http://www.globalpost.com/dispatch/news/regions/asia-pacific/china/120629/arctic-council-oil-natural-resources>. July 31, 2012.

³⁰ See more <http://www.imo.org>.

³¹ See for example http://www.grida.no/graphicslib/detail/population-distribution-in-the-circumpolar-arctic-by-country-including-indigenous-population_1282. In most countries, it is difficult to estimate the real figures as population is given by towns and communities. Some towns and communities have areas both north and south of the Arctic circle. Finnish Lapland, for example, has a population of 183,000 people. Lapland's border is not the same as the Arctic Circle so, for example, Rovaniemi, Kemi, Tornio, and Ranua are located south of the Arctic Circle with total population of approximately 100,000 people.

The largest North American community north of the Arctic Circle, Sisimiut (Greenland), has approximately 5,000 inhabitants, while between Canada and the United States, Barrow, Alaska is the largest settlement with some 4,000 inhabitants. The Finnish town of Rovaniemi, which lies slightly south of the line, has a population of approximately 60,000, and is the largest settlement in the immediate vicinity of the Arctic Circle. Among the people of the Arctic, the Norwegians have the easiest climate, with most ports in North Norway remaining ice-free year-round as a result of the Gulf Stream.

State	Number of icebreakers (Government owned)	Under construction	Planned
Russia	36 (18)	5	8
Sweden	7 (4)	-	-
Finland	7 (4)	-	-
Canada	6 (6)	-	1
USA	5 (3)	-	-
Denmark	4 (0)	-	-
China	1 (1)	-	1
Argentina	1 (1)	-	-
Australia	1 (1)	-	-
Chile	1 (1)	-	-
Estonia	1 (1)	-	-
Germany	1 (1)	-	1
Japan	1 (1)	-	-
South Korea	1 (1)	-	-
South Africa	1 (1)	-	-
Latvia	1 (1)	-	-
Norway	1 (1)	-	1

Table 1: Major icebreakers of the world.³²

States have different capabilities to operate in the Arctic. Table 1 shows the major icebreakers in the world. It shows that Russia has the greatest fleet of icebreakers and that

³² <http://www.uscg.mil/hq/cg5/cg552/images/130220%20Icebreaker%20Chart.pdf>

the Nordic countries of Finland, Norway, and Sweden have relatively strong icebreaker fleets compared to their size.

2.2 Why is the Arctic interesting in terms of security policy?

The melting of the sea ice will make the Arctic more accessible in the coming years, and this can have significant security implications. Summer sea ice has declined more than 40 percent since satellite tracking began in the late 1970s. It appears that the sea ice is melting at a rate faster than scientists predicted. A few years ago, it was estimated that it could take until mid-century before the Arctic would be free of summer ice. A record low summer sea ice was recorded in 2012, suggesting that an ice-free Arctic summer could happen much faster than previously thought.³³

In 2012, sea ice accounted for as much as 700,000 square kilometers (270,270 square miles) below the previous minimum of 4.17 million square kilometers (1,61 million square miles) set in 2007. Researchers now believe that we could see an ice-free Arctic summer as soon as in 2015 or 2016.³⁴ Some positive implications of the melting of the sea ice include the increased possibility of Arctic transport and increased access to Arctic offshore oil and gas resources. The main negative implication is that, with the acceleration of global warming, there is a risk that states will contest these newly accessible resources. With the Arctic ice melting at a record pace, the world's great powers, especially Russia and China, are increasingly looking for political influence and economic position in the Arctic, a region that previously was seen as a wasteland.

³³ See Roarch, John, "As Arctic Ice Melts, Rush Is On For Shipping Lanes," *National Geographic*, February 25, 2005. http://www.news.nationalgeographic.com/news/2005/02/0225_050225_arctic_landrush.html and International Herald Tribune August 28, 2012, p. 1.

³⁴ See The Guardian. <http://www.guardian.co.uk/environment/2012/sep/17/arctic-collapse-sea-ice>.

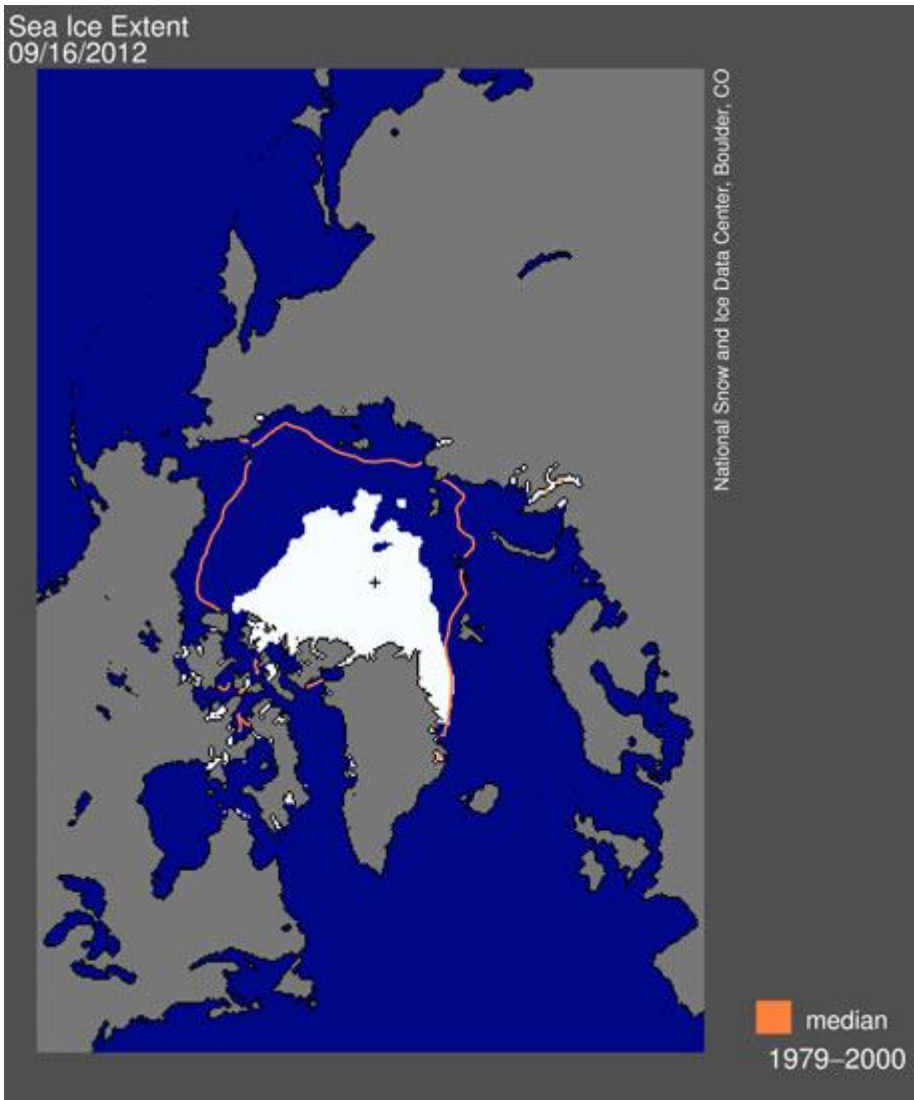


Figure 3: The extent of the sea ice³⁵

One of the great assets of the Arctic lies hidden under the continental shelf: the unexploited oil and gas fields.³⁶ According to the U.S. Geological survey, as much as 13 percent of the world's unexploited oil reserves and 30 percent of its gas are located in the Arctic region.³⁷ According to different estimates, 70 percent of the unexploited gas fields

³⁵ <http://nsidc.org/arcticseaicenews/2012/09/arctic-sea-ice-extent-settles-at-record-seasonal-minimum/>

³⁶ See about the meaning of oil and gas for the world politics in Yergin, Daniel, "The Price, The Epic Quest for Oil, Money & Power," New York, 2009.

³⁷ U.S. Geological Survey: *Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle*. Washington, D.C. U.S. Government Printing Office, 2008. <http://www.usgs.gov>. See also *USGS Arctic Oil and Gas Report: Estimates of Undiscovered Oil and Gas North of the Arctic Circle*. <http://www.geology.com/usgs/arctic-oil-and-gasreport.shtml>.

are in the Russian area. As much as 84 percent of oil and gas reserves are thought to be offshore.³⁸

Although oil and gas are the primary focus of most states, this is not all the Arctic has to offer. Besides huge oil and gas reservoirs, the Arctic hides other significant mineral deposits. Canada, for example, is already the world's third-largest producer of diamonds and has one of the world's largest and purest deposits of iron ore, located in Nunavut.³⁹ Minerals available in the Arctic include manganese, chromium, cobalt, copper, gold, lead, magnesium, nickel, platinum, silver, tin, titanium, tungsten and zinc. These minerals are growing in importance as many are used in electronics and "green technology."

The Arctic is also rich in timber and fish. The Arctic Ocean is connected to several significant breeding areas of fish stocks, which are expected to move north with rising Arctic water temperatures. In fact, this change has been underway for the last 40 years⁴⁰.

Arctic tourism is another factor when considering what may change in the Arctic in the coming decades. People are interested in seeing new areas and the Arctic is one of them.

One of the most controversial potentials of the Arctic is the prospect of new shipping routes. It is very difficult to estimate when and if the northern sea areas will become international transit routes.⁴¹ According to Stephen M. Carmel, the Senior Vice President of Maersk Line, there are still many uncertainties of how usable Arctic shipping routes will be. Especially for container shipping, the economics of the Arctic as a transit route can be unappealing. For example, construction standards, outfitting, and crew training make Arctic-capable ships more expensive to build and operate. For on-time delivery, it is important to know the real shipping time, which, using harsh Arctic routes, can still be difficult. The challenges for Arctic shipping are as well that the variability in transit time is

³⁸ U.S. Geological Survey Fact Sheet 2008-3049: *Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle*. <http://pubs.usgs.gov/fs/2008/3049/>.

³⁹ Huebert, Robert, "Canada and the Newly Emerging International Arctic Security Regime," *Arctic Security in an age of climate change*, p. 202 and Statistics Canada, Study Diamonds Are Adding Lustre to Canadian Economy, The Daily, January 13, 2004. <http://www.statcan.gc.ca/daily-quotidien/040113/dq040113a-eng.htm>.

⁴⁰ United Press International: "Ocean Warming Affecting Fish Populations." November 3, 2009. http://www.upi.com/Science_news/2009/11/03/Ocean-warming-affecting-fish-populations/UPI-17961257275663/.

⁴¹ See Protection of the Arctic Marine Environment (PAME), Arctic Council, Arctic Marine Shipping Assessment 2009 Report. http://pame.is/images/stories/PDF_files/AMSA_2009_Report_2nd_print.pdf.

unacceptable, network efficiencies are lost, and Arctic routes are useful only part of the year.⁴²

There are two potential routes that may be used: The NSR and the Northwest Passage. In the future, it might also be possible to use the central Arctic shipping route. For Europe and the Nordic countries, the NSR is the most important, offering a significant shortcut between East Asia and Europe, which could save as much as 35–60 percent in distance and 10–20 days in shipping between Northern Europe and the Far East in comparison to the Suez or Panama Canals.⁴³ Surface-vessel access to open seas in the Arctic will gradually increase from the current few weeks a year to a few months a year, centered in mid-September, when the Arctic sea ice is at its minimum.⁴⁴

⁴² Carmel, M. Stephen, "Taking a Round-Turn on Reality: Commercial Shipping through the Arctic." See also <http://www.usni.org/magazines/proceedings/2013-07/cold-hard-realities-arctic-shipping>

⁴³ Arctic Council: Arctic Marine Shipping Assessment 2009 Report, p. 43. See also Barents Observer, November 23, 2012.

⁴⁴ Arctic Council: Arctic Marine Shipping Assessment 2009 Report, pp. 68 – 69

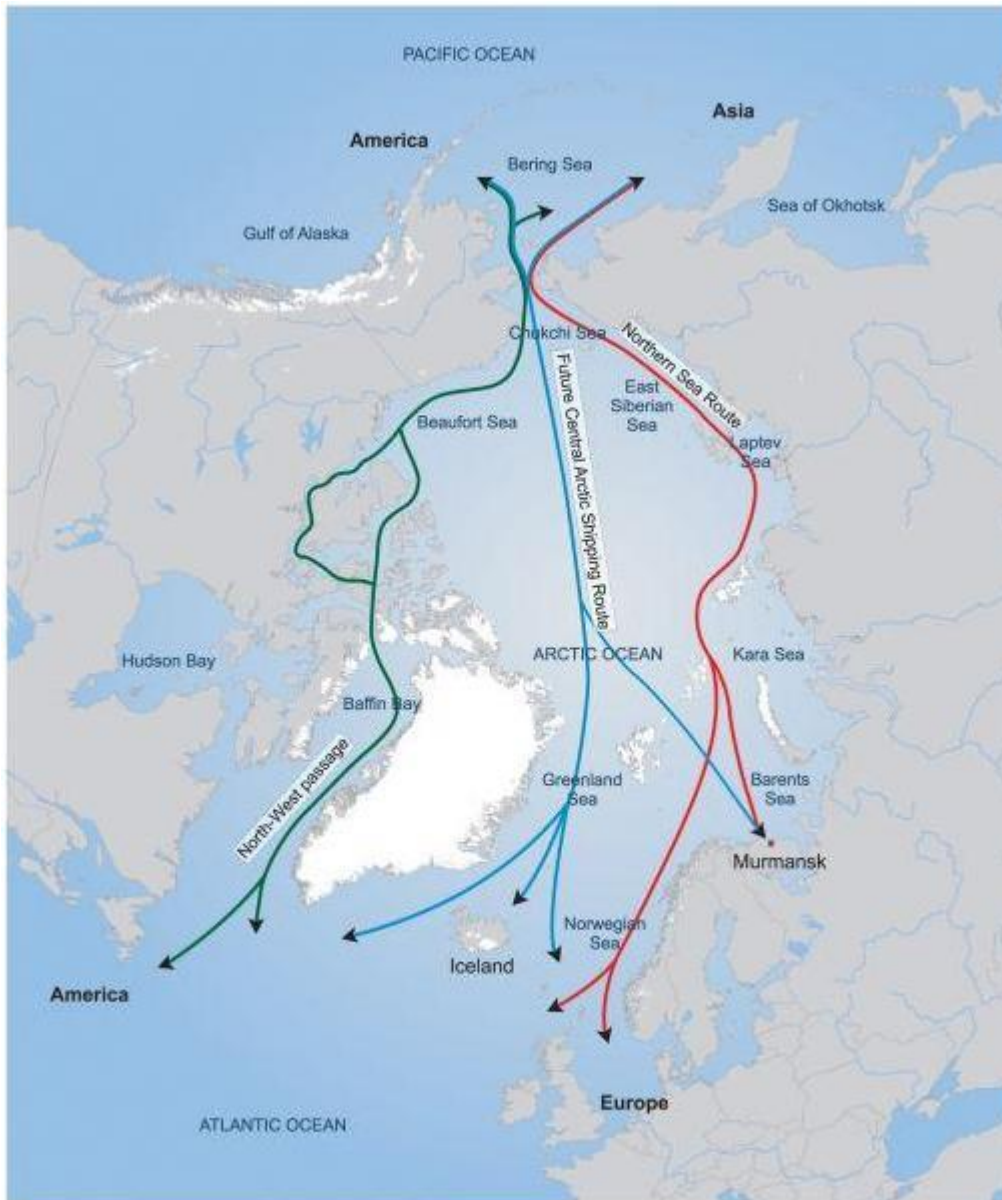


Figure 4: Future possible shipping routes⁴⁵

It seems now that, well before 2040, the NSR is likely to be a regularly accessible shipping route without icebreaking hulls for at least five to six months a year. By the end of this decade, in fact, more northern sea areas will be open during the summer months.⁴⁶ The NSR will become increasingly important with the continuing development of energy products from Norway and Russia, though, interestingly, the energy “revolution” appears to hold less relevance and interest as far as the United States is concerned. At the same

⁴⁵ Arctic Shipping Routes Map, 2011, <http://library.arcticportal.org/1498/>

⁴⁶ See for example Smith, Laurence C., and Stephenson, Scott R., “New Trans-Arctic shipping routes navigable by midcentury,” <http://www.pnas.org/content/early/2013/02/27/1214212110.full.pdf>.

time, while the United States considerably reduces its dependence on energy products from abroad due to the U.S. domestic development of shale oil and shale gas reservoirs, other countries, particularly China, India, Japan, and South Korea in the Far East, would benefit from the use of the NSR for their energy needs.

The NSR, first established in the 1930s, was formally opened to international shipping as late as July 1991, almost three years after Mikhail Gorbachev's 1987 "Murmansk Initiative," in which the Soviet leader took issue with security-related and other arguments against such a development.⁴⁷ In terms of distance, the NSR offers significant savings compared to alternative routes between ports in Northwest Europe (such as Hamburg) and ports in Northeast Asia/Northwest America (such as Yokohama, Hong Kong, Singapore, and Vancouver). For some destinations, distance savings can be as high as 50 percent. Distance savings would be even greater for traffic between high-latitude ports in Northern Europe, such as northern Norway and the Kola Peninsula, and the northern Pacific area. For international shipping companies, savings in distance may lead to weeks of savings in time and also money. Some analysts have estimated the savings could be as much as \$800,000 in fuel and in labor costs per trip for a large freighter.⁴⁸

Shipping via:	Vancouver	Yokohama	Hong Kong	Singapore
Northern Sea Route	6635 (=12288 km)	6920 (=12815 km)	8370 (=15501 km)	9730 (=18022 km)
Suez Canal	15377 (=28478 km)	11073 (=20507 km)	9360 (=17334 km)	8377 (=15514 km)
Cape of Good Hope	18846 (=34903 km)	14542 (=26932 km)	13109 (=24278 km)	11846 (=21939 km)
Panama Canal	8741 (=16188 km)	12420 (=23002 km)	12920 (=23928 km)	15208 (=28165 km)

Table 2: Shipping routes from Hamburg to different ports in nautical miles⁴⁹

⁴⁷ Åtland, Kristian, "Mikhail Gorbachev, the Murmansk Initiative, and the Desecuritization of Interstate Relations in the Arctic." *Cooperation and Conflict*, Vol. 43, No. 3 (2008), pp. 304–305.

⁴⁸ See Climate Change and Security in the Arctic, p. 30.

⁴⁹ Lyke, Claes Ragner, "Northern Sea Route Cargo Flows and Infrastructure: Present State and Future Potential." FNI Report 13/2000, p. 1.

Despite significant reductions in the sea ice in recent years, the volume of traffic along the Arctic routes is still fairly modest, and the traffic is mostly for the resupply of local communities, transport of natural resources out of the region, and cruise traffic, rather than trans-Arctic shipping.⁵⁰ According to the Arctic Marine Shipping Assessment, this is likely to remain the situation in the foreseeable future.⁵¹ But with the accelerating reductions in sea ice, Arctic shipping will become increasingly attractive in the coming years, especially if the cost of oil remains high. Furthermore, the need to save more money will remain paramount if the global economic slowdown continues. Due to these factors, the NSR could become one of the most important marine transport routes between Europe and Asia after 2030.

The 2012 navigation season on the NSR beat all the previous records. Never before have so many vessels and so much cargo taken the Arctic shortcut between Europe and Asia. The number of vessels using the NSR rose from four in 2010 to 34 in 2011 and as many as 46 in 2012. This trend is continuing in 2013. The total cargo transported on the NSR in 2012 was 1,261,545 tons, an increase of 53 percent from 2011. Petroleum products constituted the largest cargo group. The second largest cargo group was iron ore and coal.⁵²

Year	Number of vessels
2010	4
2011	34
2012	46

Table 3: Number of vessels using the Northern Sea Route

In the future, the sailing routes in question are likely to become ice-free for considerable parts of the year, particularly north of Siberia and the Russian Far East. This may lead to

⁵⁰ Arctic Council: Arctic Marine Shipping Assessment Report 2009, http://web.arcticportal.org/uploads/4v/cb/4vcbFSnnKFT8AB5IXZ9_TQ/AMSA2009Report.pdf, pp. 4–5.

⁵¹ Arctic Marine Shipping Assessment 2009 Report. Arctic Council, April 2009. <<http://ine.uaf.edu/accap/documents/AMSA2009Report.pdf>>

⁵² See Barents Observer, November 23, 2012 and <http://www.marinelink.com/news/northern-longest-route355368.aspx>. A total of 894,079 tons of diesel fuel, gas condensate, jet fuel, LNG, and other petrol products were transported in 26 vessels in 2012. Eighteen of the tankers sailed from west to east. There were no super tankers on the NSR in 2012. The largest tanker was the Norwegian "Marika," which transported 66,552 tons of jet fuel from Korea to Finland in August 2012. Also, the NSR was used for the first time for transportation of LNG in 2012. The NSR is now estimated to save 20 sailing days for the distance from Hammerfest to Japan. By June 6, 2013, the NSR administration had received 89 applications to use the NSR in 2013. By then, it had given permission to 54 ships.

an increase in traffic volume, particularly in the event of a destabilizing situation in the regions surrounding other strategic transit points such as the Suez Canal, Panama Canal, and Malacca Straits. Increases in ship traffic in the Arctic can potentially heighten the risk of interstate conflicts related to the use of the aforementioned major Arctic marine transport routes.

In the long run, intercontinental transit along routes farther from the coastline—north of the Russian islands and north of the Canadian archipelago—could become a reality. Such a turn of events could create new legal and safety concerns, very different from those that are associated with the current sailing routes. It could deprive Arctic coastal states such as Russia and Canada of much of their prestige and regulatory power, not to mention potential sources of income.

The Arctic states, especially Russia, but also non-Arctic states, in particular China, are preparing to benefit from the new circumstances in the Arctic. This could potentially lead to efforts to improve military capabilities necessary to operate in an Arctic environment, to develop better SAR capabilities, and to create means for Arctic states to defend their national interests in the region.

There are also many new variables that have to be taken into consideration when forecasting the possible changes in the Arctic area. One of the most controversial is how usable the NSR will be for shipping and when. The growing importance of the Arctic can be seen even now, because we have indications that the increasing number of international players in the Arctic has led to a boom in spying against Norway and Denmark.⁵³ Concerning the security policy and behavior of great powers, the most important elements within the Arctic region are oil, gas, minerals, and the new shipping routes. These are all factors that can make states act aggressively in order to exploit the new possibilities brought about by the ice melting expected in the coming decades.

⁵³ See Barents Observer, "More spies in the Arctic." 5 October, 2012. <http://barentsobserver.com/en/security/more-spies-arctic-05-10>.

2.3 Realist theory explaining the actions of a nation state

In order to understand current state policy and action and potentially predict future state action and policy in the Arctic region, theories concerning international relations can give some insight. Regarding current events in the Arctic, it appears that realist theory is the most applicable and most useful for explanatory purposes.

According to realism, power is the currency in international politics. The perception of power in this study focuses on the perception of economic and military strength. The great powers, the main actors in realist's a game, pay careful attention to how much economic and military power they have relative to each other.

The realist framework helps to understand why states pursue certain interests and why they act the way they act. Before delving into analysis, it is important to define the concept of realism that will be utilized throughout this study. First, the great powers are considered to be the main actors in the world. Second, it is assumed that all states possess some offensive military capability to inflict some harm on their neighbors. Third, states can never be sure about the intentions of other states.⁵⁴ Therein lies a very important lesson in estimating the level of threat that a state imposes on others. Mathematically, the level of threat can be assessed with the equation: $\text{threat} = \text{capability} \times \text{intention}$. Unlike capabilities, intentions cannot be empirically verified. Intentions are in the minds of decision-makers, and they are especially difficult to foresee. With a change of regime, intentions can change rapidly. In any case, it is impossible to know for sure who will be forming the foreign policy in any state ten or fifteen years from now, let alone if they will have aggressive intentions or not. This has to be taken into consideration when making long-term defense policy decisions. The uncertainty surrounding the perception of threat is even more important when developing armed forces because procurement programs take a long time, as does the training of personnel.

The fourth important assumption in realist theories is that the main goal of states is survival. To survive, states seek to maintain their territorial integrity and the autonomy of

⁵⁴ See Mearsheimer, John J., "Structural Realism" in Tim Dunne et al, *International Relations Theories: Discipline and Diversity*, Oxford 2007, p. 79.

their domestic political order. Finally, it is assumed that states are rational actors. They are capable of coming up with sound strategies that maximize their prospects for survival.⁵⁵

According to the realist theory, great powers fear each other. They have little trust among them; thus, they worry about one another's intentions. Great powers also know that they operate in a "self-help" world. Effectively, alliances can be made, but states still have to rely mainly on themselves to survive. The best way to survive is to be especially powerful. The more power a state has relative to its competitors, the less likely it is to be attacked.⁵⁶ That is why the great powers try to exploit the international situation when possible in order to pursue economic opportunities and strengthen their military capabilities. With the ice melting at an increasingly rapid rate, realist theory would suggest that states will attempt to exploit the new economic opportunities in the Arctic region and build up their militaries to defend their interests there.

When I use the term security, I refer mainly to the survival of a state in the international arena. I see that international security consists of the measures taken by nations or states and international organizations, such as the UN, to ensure mutual survival. These measures include military action and diplomatic agreements such as treaties and conventions. International and national security are invariably linked. When I refer to safety, I mainly mean the safety of a human being. In this sense, safety means that a human being is safe, and free from danger, risk, or injury.

3. INTERESTS IN THE ARCTIC

3.1 The United States in the Arctic

The United States is an Arctic state by virtue of its 49th state—Alaska. U.S. Arctic territory in Alaska occupies only a small portion of the Arctic region as a whole. During the Cold War, the United States feared a trans-Arctic attack by intercontinental ballistic missiles launched from the Soviet mainland and missiles from the Soviet submarines in the Barents Sea or the Arctic Ocean. This led to the development of extensive defense systems in the

⁵⁵ Mearsheimer, p. 80.

⁵⁶ Ibid.

Arctic region. In 1961, Ballistic Missile Early Warning System radar was built at Thule Air Base in Greenland.⁵⁷

The U.S. Arctic is today far from the nation's political and economic centers, despite the fact that Alaska has huge natural resources and is important for U.S. missile defense. This can be understood as an effect of the War on Terror. The September 11, 2001 attacks may be seen as having marked the beginning of the new U.S. strategic thinking. The U.S. administration concentrated on terrorism, but also on rogue states and the potential proliferation of weapons of mass destruction to these actors, as direct threats to the United States. At the same time, the gradual rise of great powers other than the United States, particularly China, contributed to direct U.S. attention south and east. A geographical focus on the broader Middle East and Asia lay implicit. With this perspective, the Arctic did not appear at first on the foreign policy agenda.

This modest Arctic policy is seen in U.S. development plans as well. The United States is the only Arctic coastal state that does not have any large-scale economic development plan for the region and has a lack of Arctic military capabilities.⁵⁸ The U.S. southern border with Mexico has obtained much more attention than the Arctic borders. In the coming years, this northern area will be even more difficult to handle as the U.S. defense and homeland security budget falls under heightened domestic budgetary scrutiny. Increased spending in areas that do not pose immediate threats seems unlikely.⁵⁹ From this, it can be inferred that the Arctic will probably fall by the wayside with regard to development.

During the Cold War, the United States had a military base network in the Arctic, connected with other Arctic nations through NATO commitments (for example, the United States as a party to the NATO treaty may assist Denmark in the defense of Greenland). The military base network is today much smaller than it used to be during the Cold War. Since 1991, Thule Air Base in Greenland is the only remaining defense area in Greenland. Today, the strength of the Thule base, which mainly acts as a radar station and satellite-tracking installation, is around 100 U.S. personnel compared to several thousand during

⁵⁷ Åtland, Kristian, "Climate Change and Security in the Arctic," A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 10.

⁵⁸ "A New Security Strategy Architecture for the Arctic," *CSIS*, January 2012, p. 20.

⁵⁹ Cordesman, Anthony H., "Salvaging American Defense: The Challenge of Strategic Overstretch," *Prager Security International* 2007.

the Cold War.⁶⁰ During the 1950s and 1960s, there were three defense areas and four installations in Greenland.⁶¹

In Iceland, the last U.S. base was closed in 2006. Right after that, in 2007, Russia resumed Cold War-style bomber flights. NATO provided Iceland with a temporary air-policing agreement. The closure of U.S. airbases shows how little the United States officially paid attention to the Arctic. Taking into consideration the growing importance of the Arctic, the U.S. presence should be strengthened rather than reduced.

After a Russian expedition group planted the Russian flag at the bottom of the Arctic Ocean in 2007, the United States started to become more involved in the Arctic issues.⁶² In an interview in 2009, Secretary of State Hillary Clinton said that the Arctic is “an area that we are beginning to pay attention to” and “we have to pay real attention to.”⁶³ Still, the United States has remained rather isolationist in Arctic issues.

Despite the lack of U.S. activity, the Arctic region is by no means unproblematic for the United States today. There are disputes between allies, the United States and Canada, about the Northwest Passage, which Canada declared in 1985 to be its “internal waters.”⁶⁴ This view is not shared by the United States, which considers the Northwest Passage to be an “international strait” and subject to the freedom of navigation, for commercial as well as state vessels. The EU seems to take a similar view. In 1988, the Arctic Cooperation Agreement between Canada and the United States stated that navigation by U.S. icebreakers in the waters claimed internal by Canada would take place with Canadian consent. This agreement stabilized the situation, but applied only to icebreakers, assuming that any commercial vessel operating in these waters would require icebreaker assistance. This assumption may not necessarily be true in the future. Climate change may turn the Northwest Passage into a commercially viable route for nonsupported transits, seasonal or

⁶⁰ <http://www.thule.af.mil> and Åtland, Kristian, “Climate Change and Security in the Arctic,” A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 10.

⁶¹ See Dansk Uderingspolitisk Institut, “Grønland under den kolde krig – danske og amerikansk sikkerhetspolitik 1945 – 1968,” Copenhagen 1997.

⁶² See James Kraska, James, “The New Arctic Geography and U.S. Strategy,” *Arctic Security in an Age of Climate Change*, p. 252.

⁶³ Newsweek, December 2009: Interview with Secretary of State Hillary Clinton.

⁶⁴ Rothwell, Donald R., “The Canadian-U.S. Northwest Passage Dispute: A Reassessment,” *Cornell International Law Journal*, Vol. 26, No. 2 (1993), pp. 331–332; and Huebert, Robert, “Polar vision or tunnel vision: The making of Canadian Arctic policy,” *Marine Policy*, Vol. 19, No. 4 (1995), pp. 343–344.

year-round. This may potentially lead to heightened tensions between Canada and the United States.⁶⁵ It could also cause conflict between Canada and the EU.⁶⁶

In 2005, there were allegations in Canada that U.S. nuclear submarines may have transited unannounced through Canadian Arctic waters. The allegations provoked strong reactions in Canada. In December 2009, the Canadian parliament voted almost unanimously in favor of a bid to rename the country's Arctic seaway "the Canadian Northwest Passage."⁶⁷ In recent years, Canada has taken steps to strengthen its military presence in the Arctic. Ultimately, the Northwest Passage dispute will most likely be solved peacefully because the United States and Canada are close allies.

The United States sees itself as an Arctic actor that has to be more active than before and protect its national interests. Today, the promoting of U.S. security interests is the top national priority.⁶⁸

Broadly, in 2009, the U.S. Arctic policy was to:

- meet national and homeland security needs in the Arctic region
- protect the Arctic environment and conserve its biological resources
- ensure that natural resource management and economic development are environmentally sustainable
- strengthen institutions for cooperation among the eight Arctic nations
- involve the Arctic's indigenous communities in decisions affecting them
- enhance scientific monitoring and research of environmental issues.⁶⁹

In January 2009, as one of his final acts as U.S. President, George W. Bush presented an Arctic Policy, which prioritized the U.S. interests in protecting the Arctic's environment, developing the natural resources, and maintaining national security.⁷⁰ This Presidential Directive was for four years the most recent definitive declaration towards the Arctic (The

⁶⁵ Wattie, Chris, "U.S. Sub May Have Toured Canadian Arctic Zone," *National Post*, December 19, 2005, p. A1.

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⁶⁶ Climate Change and the Security in the Arctic, p. 29.

⁶⁷ Boswell, Randy, "Arctic sea route to be renamed 'Canadian Northwest Passage.'" *The Vancouver Sun*, December 3, 2009.

⁶⁸ National Strategy for the Arctic Region, Washington D.C. May 10, 2013, p. 2.

⁶⁹ Kraska, James, "The New Arctic Geography and U.S. Strategy," *Arctic Security in an Age of Climate Change*, p. 253.

⁷⁰ U.S. Department of State, *National Security Presidential Directive and and Homeland Security Presidential Directive*, January 2009. <http://www.fas.org/irp/offdocs/nsdp/nsdp-66.htm>.

National Security Presidential Directive, NSDP-66). It articulated the U.S. security interests in the area:

- Missile defense and early warning systems
- Deployment of sea and air systems for strategic sealift, strategic deterrence, maritime presence, and maritime security operations
- Ensuring freedom of navigation and overflight
- Preventing terrorist attacks and mitigating criminal or hostile acts that could increase U.S. vulnerability to terrorism in the Arctic region.⁷¹

Arctic security concerns, however, play only a minor role in U.S. defense policy as a whole. The U.S. National Security Strategy, issued in 2010 by the administration of President Barack Obama, and the U.S. National Military Strategy, issued in 2011, define the goals of U.S. security and military policies, but mention the Arctic only in passing.⁷² In a January 2012 document outlining security priorities for the 21st century, the Arctic is not mentioned at all.⁷³ This all shows that the Arctic has yet to be considered a priority for the United States.

The 2010 National Security Strategy explicitly identifies the U.S. national security interests in the Arctic: "The United States is an Arctic nation with broad and fundamental interests in the Arctic region, where we seek to meet our national security needs, protect the environment, responsibly manage resources, account for indigenous communities, support scientific research, and strengthen international cooperation on a wide range of issues." But the United States also sees the Arctic as a potential conflict area. According to U.S. maritime strategy, the region poses "potential sources of competition and conflict for access and natural resources."⁷⁴

The U.S. national security interests in the Arctic are based on strategic deterrence, including ballistic-missile early warning and ballistic-missile defense. Maintaining air and

⁷¹ White House website: National Security Presidential Directive 66/Homeland Security Presidential Directive 25 (NSPD-66/HSPD-25). *Arctic Region Policy*, January 9, 2009. <http://www.fas.org/irp/offdocs/nsdp/nsdp-66.htm>.

⁷² See "National Security Strategy," *White House*, Washington, DC, May 2010 and US Department of Defense (DOD): "The National Military Strategy of the United States of America 2011: Redefining America's Military Leadership," *DOD*, Washington, DC, 8 Feb. 2011.

⁷³ See "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense," *DOD*, Washington, DC, January 2012.

⁷⁴ U.S. Navy and U.S. Coast Guard, "A Cooperative Strategy for 21st Century Seapower," Washington D.C., U.S. Department of Defense, October 2007, p. 3. <http://www.navy.mil/maritime/maritimestrategy.pdf>.

sea access and the ability to operate in the Arctic Ocean is a cornerstone of U.S. nuclear deterrence.⁷⁵

The Arctic is an ideal location for ballistic missile defense, and the area is still a potential vector for a missile attack on the United States. The Arctic region is a principle trajectory for medium-range and intercontinental ballistic-missile attack from Russia, China, North Korea, and Iran.⁷⁶ That is why the Thule base and Alaska are important in future U.S. defense. For U.S. security Alaska is of great importance as it lies in an area from where one can easily project power anywhere in the North in no more than 12 hours. Alaska has also meaning as a base for missile defense and because of the neighborhood of the Bering Straits. The Bering Straits will be of strategic importance as they are located between the United States and Russia and they will be one of the bottlenecks in shipping between Asia and Europe in the future.

Despite the Arctic's strategic significance, the United States still views the region with relatively minimal interest compared to every other Arctic nation.⁷⁷ The Arctic economic potential, however, will be important for the United States, which has, to date, not been able to utilize the resources of the Arctic partly because of opposition from environmental organizations. Along the coast of Alaska, in particular, there are huge oil fields. On the other hand, the United States does not need to use these reservoirs yet, because of easier and cheaper usable shale oil and gas fields in the lower 48 states.

The U.S. Department of Defense report on the 2010 Quadrennial Defense Review (QDR) states:

*"The effect of changing climate on the Department's operating environment is evident in the maritime commons of the Arctic. The opening of the Arctic waters..." "...will permit seasonal commerce and transit..." "... presents a unique opportunity to work collaboratively in multilateral forums to promote a balanced approach to improving human and environmental security in the region. In that effort, DoD must ..." "... address gaps in Arctic communications, domain awareness, search and rescue, and environmental observation and forecasting capabilities to support both current and future planning and operations."*⁷⁸

The Department of Defense and its interagency partners must be able to more comprehensively monitor the air, land, maritime, space, and cyber domains for potential direct threats to the United States. Such monitoring provides the U.S. homeland with an extended, layered in-depth defense. This effort includes enhanced coordination with Canada for the defense of North America as well as assisting Mexico and Caribbean partners in developing

⁷⁵ Kraska, James, "The New Arctic Geography and U.S. Strategy" Arctic Security in an Age of Climate Change, p. 254.

⁷⁶ Ibid, p. 253,

⁷⁷ Ibid, p. 256.

⁷⁸ Department of Defense, "Quadrennial Defense Review Report," February 2010, p. 86.

*air and maritime domain awareness capacities. Special attention is required to develop domain awareness tools for the Arctic approaches as well. In coordination with domestic and international partners, DoD will explore technologies that have the potential to detect, track, and identify threats in these spheres to ensure that capabilities can be deployed to counter them in a timely fashion.*⁷⁹

U.S. military leaders have planned to increase the surveillance of the Arctic with unmanned aerial vehicles (UAV) and manned aircraft. In 2009, the U.S. Navy released its *Navy Arctic Roadmap*, which proposes that the navy must build its capacity to act better in the Arctic, because of future international interests and challenges in the region.⁸⁰

Other U.S. military leaders have also expressed concerns about the growing potential threats in the Arctic. Admiral James Stavridis cautioned as a commander of the U.S. European Command (EUCOM) that the race for oil and minerals in the Arctic region could lead to war.⁸¹ Still the 2010 Quadrennial Defense Review identified the opening of Arctic waters to vessel traffic as a unique opportunity to work collaboratively in multilateral forums to promote a balanced approach to improving human and environmental security in the region.

Missile defense and early warning systems are the first critical security interests for the United States in the Arctic. Two U.S. air force bases are located in Alaska and one in Greenland. Eielson Air Force Base is near Fairbanks and Elmendorf-Richardson Air Force Base is near Anchorage.⁸² Both bases house combat and support aircraft, including F-22 interceptors and airborne early-warning (AEW) aircraft and they are able to accommodate substantially larger forces. The U.S. forces are also using Thule Air Base in Greenland,⁸³ which has a long runway. Even though it has only one large intercontinental ballistic missile (ICBM) detection radar and no aircraft,⁸⁴ it plays an important role as a strategic outpost in the northeastern corner of the North American continent.

Though defense from the air is important, there is also the land component: the U.S. Army Alaska (USARAK). USARAK is mainly made up of ordinary mechanized infantry and airborne troops and is not specifically earmarked for Arctic operations. It has bases near

⁷⁹ Ibid, p. 19.

⁸⁰ See "U.S. Navy Arctic Roadmap," Task Force Climate Change/Oceanographer of the U.S. Navy, October 2009.

⁸¹ Barents Observer, October 2010. Senior NATO Commander: Climate Change Could lead to Arctic conflict.

⁸² See Joint Base Elmendorf-Richardson, <http://www.jber.af.mil> and Eielson Air Force Base, <http://www.eielson.af.mil>.

⁸³ "A New Security Architecture for the Arctic," CSIS, January 2012, p. 22.

⁸⁴ See Peterson Air Force Base, 821st Air Base Group. <http://www.peterson.af.mil/units/821stairbase/index.asp>.

Anchorage and Fairbanks.⁸⁵ The Northern Warfare Training Center in Black Rapids is more specifically geared toward an Arctic role: it is where all U.S. Army cold weather training, including for non-Arctic cold regions, is concentrated.⁸⁶ The 1,850-strong Alaska National Guard is the most likely army component to have Arctic tasks. Some other U.S. land forces (including the U.S. Marine Corps) have at least partly specific training or equipment for potential Arctic roles or have experience in extreme cold weather operations in Afghanistan.⁸⁷

Many U.S. aircraft carriers, other major combat ships and amphibious warfare ships are generally capable of operating in northern weather conditions. Most of the U.S. nuclear ballistic missile submarines (SSBN) are known to be able to operate under the Arctic ice. They are also able to break through the ice and they regularly transit under the Arctic ice or break through the ice and surface near the North Pole.⁸⁸

The United States finds it important to maintain the freedom of movement of its civilian and military vessels, and it has an interest in regulating the access of non-Arctic powers, such as China.⁸⁹ This is interesting from the point of view of security policy and might, in a worst-case scenario, have security implications.

The United States is the only Arctic nation that has not ratified UNCLOS. The United States will be in an interesting situation as it chairs the Arctic Council in 2015, if it has not ratified UNCLOS by then. So far, 156 countries and the EU have ratified the treaty. If the United States will not follow suit, it cannot claim anything in the Arctic. Only by joining UNCLOS can the United States can maximize legal certainty and best secure international recognition of its sovereign rights with respect to the extended continental shelf in the Arctic and elsewhere, which may hold vast oil, gas, and other resources.

⁸⁵ See <http://www.usarah.army.mil>.

⁸⁶ See US Army, Northern Warfare Training Center. <http://www.wainwright.army.mil/nwtc>. The army also operates the Cold Regions Research and Engineering Laboratory and the Cold Regions Test Center in Alaska.

⁸⁷ Wezeman, Siemon T., "Military Capabilities in the Arctic." *SIPRI Background Paper*, March 2012, p. 12.

⁸⁸ Ibid, p. 13. In April 2011, two US nuclear attack submarines participated in Ice Exercise (ICEX) 2011, operating under the Arctic ice. In the same exercise, a camp was established 150 nautical miles north of Prudhoe Bay, Alaska

⁸⁹ Kraska, James, "The New Arctic Geography and U.S. Strategy," *Arctic Security in an Age of Climate Change*, p. 253.

The United States is prepared to operate either independently or in conjunction with other states to safeguard its interests.⁹⁰ It remains to be seen how these principles will be fulfilled in practice in case of possible disputes.

According to Rob Huebert, the associate Director of the centre for Military and Strategic Studies at the University of Calgary, the U.S. Arctic policy is largely governed by its desire to see an orderly and environmentally nonintrusive development of the region's hydrocarbon reserves, the establishment of transit rights through the Arctic straits, and a guarantee of national security from terrorist, criminal, or state-based threats in the region. The United States is explicit about wishes to see the region developed in a cooperative fashion, but its core interests will be defended by unilateral action if necessary.⁹¹

The Arctic, for a long time, was seen to be a neglected area. With the developing situation in the Arctic, the United States made amendments to the U.S. Military's Unified Command Plan to address the new importance of the region. The biggest change to the plan assigns the U.S. Northern Command responsibility for the Arctic. The U.S. European Command and the U.S. Pacific Command shared responsibility with U.S. Northern Command for the region, according to the last change in policy published in December 2008. It now also places responsibility for Alaska under the Northern Command. The previous plan had the Northern Command and the U.S. Pacific Command sharing responsibility for the state and adjacent waters. The Northern Command was given responsibility for Arctic capabilities primarily due to its having the only U.S. Arctic territory within its area of operations.⁹²

The United States is not as capable as Russia of operating in the Arctic. The biggest gap is related to Arctic materiel resources. The United States can operate in the Arctic only with airplanes, nuclear submarines, and with one icebreaker during the most of the year. An increased presence in the Arctic would require much more than just more icebreakers.

⁹⁰ "National Security Presidential Directive-66/Homeland Security Presidential Directive-25", White House, section III b, paras 1 – 5, January 2009.

⁹¹ Hubert, Robert, "Canada and the Newly Emerging International Arctic Security Regime" *Arctic Security in an age of Climate Change*, p. 214.

⁹² Garamore, Jim, "Unified Command Plan Reflects Arctic's Importance," *American Forces Press Service*, April 7, 2011.

The United States lacks deep water port facilities, airfields, aids to navigation, and maritime domain awareness.⁹³

The U.S. Coast Guard regularly operates in or near the Arctic.⁹⁴ The Coast Guard operates three icebreakers. Two of them are heavy-duty —both commissioned in the mid-1970s—and a more modern medium-duty icebreaker. Were all three operational, the United States would still lag behind several other Arctic nations in capabilities. These ships have a mainly scientific role in both the Arctic and Antarctic regions. One of the ships is being modernized in the period 2009–2013; another one has been out of service since 2010 and is scheduled for decommissioning due to budget constraints. Ideas for new vessels are under consideration. The Coast Guard's budget plan for 2013–17 is to include \$860 million to purchase one large icebreaker.⁹⁵ This would be of little help to alleviate the U.S.' restricted capability to operate in the Arctic. Economic constraints still make it uncertain whether the money will be allocated for the new submarine or not.

According to a Coast Guard study, it will need at least six heavy-duty and four medium-duty icebreakers just to meet mission requirements. According to the Coast Guard study provided to Congress in 2010, the Coast Guard requires three heavy-duty and three medium-duty icebreakers to fulfil its statutory missions. The need is six and four, respectively, if it is to maintain a continuous presence.⁹⁶ This and other gaps in the Arctic are difficult to fill in the present situation, where the Pacific is getting the most attention.

The Arctic security gap is why the U.S Navy has several times asserted that this lack of sufficient Arctic materiel can jeopardize its goals in the region. It remains to be seen when and if the U.S will allocate money to Arctic capabilities in the future. Until now, the main bulk of the money has gone to more and more expensive international operations.

Caitlyn L. Antrim, expert on Law of the Sea matters, proposes that the U.S. objective should be to work collaboratively to resolve disputes over extended continental shelf and

⁹³ Kraska, James, "The New Arctic Geography and U.S. Strategy," *Arctic Security in an Age of Climate Change*, pp. 257 and 263.

⁹⁴ Brown, M. K. and Parker, R. C., "The case for the cutter." *Proceedings of the United States Naval Institute*, vol. 137, no. 8. August 2011, p. 18.

⁹⁵ Wezeman, Siemon T., "Military Capabilities in the Arctic," *SIPRI Background Paper*, March 2012, p. 13.

⁹⁶ United States Coast Guard High Latitude Region Mission Analysis Capstone Summary, July 2010, pp. 12-13 and 15. See more details of Coast Guard's needs O'Rourke, Ronald, "Changes in the Arctic: Background and Issues for Congress." August 1, 2012, pp. 34-36.

fisheries claims, to negotiate a regional high-seas fisheries plan, and to develop a regional Arctic maritime transportation plan.⁹⁷ According to her, the United States should develop an Arctic regional maritime partnership with Russia. Elements of such partnership should include⁹⁸:

1. Reinforce the rule of law.
2. Military cooperation and emergency response.
3. Maritime safety and security.
4. Arctic domain awareness.
5. Arctic science.
6. Arctic policies of regional and transiting states.

Antrim suggests that the armed forces should work together to maintain a full spectrum of ships, aircraft, satellites and observation stations or emergency supplies. Shared awareness of assets and combined exercises would benefit all users of the Arctic.⁹⁹

This goal should be supported, but it seems difficult to achieve as states have their own national interests in play. Russia, in particular, seems to be working alone, and especially without NATO and non-Arctic countries. Many Arctic states do not want, for example, non-Arctic actors like China to come and sail with its own assets.

There is an initiative between the U.S. EUCOM and the Norwegian Ministry of Defense called the Arctic Security Forces Roundtable. According to the International Institute for Strategic Studies (IISS) Forum, this roundtable has presented three main findings¹⁰⁰:

1. maritime domain awareness is a key gap in the Arctic
2. a combination of technical solutions and agreements on collaboration for information-sharing could move towards improving this
3. further development is needed in communications technology in order to monitor current and future activity and ensure domain awareness and that documenting and codifying lessons are vital.

⁹⁷ Antrim, Caitlyn L., "The Russian Arctic in the Twenty-First Century," *Arctic Security in an age of climate change*, p. 127.

⁹⁸ Ibid. pp. 127 – 128.

⁹⁹ Ibid, p. 127

¹⁰⁰ IISS Forum for Arctic Climate Change and Security. Military Cooperation Workshop, 18 October 2012, pp. 4 – 5.

A Center for Strategic and International Studies' report proposes many changes to U.S. Arctic policy and its organization. This report from March 2013 shows how complex and challenging it is to change the U.S. Arctic policy as the policy is made in very different places and there is not enough high-level coordination. These proposed changes are¹⁰¹:

1. Update and prioritize National Security Presidential Directive 66/Homeland Security Presidential Directive 25
2. Reform White House Arctic interagency coordination
3. Increase State Department leadership in the circumpolar Arctic
4. Appoint a U.S. Arctic envoy with ambassadorial rank
5. Develop a robust public diplomacy campaign

The United States should act quickly if it does not want to fall behind and be unable to take advantage of the new opportunities appearing in the Arctic. Arctic governance is not sufficiently concentrated in the United States. There are also too few people dealing with Arctic issues; for example, in the Pentagon, there is only one full-time Arctic person, and the Military Commands have none.

The United States is trying to wake up to see the importance of the Arctic region. This is shown in the newest U.S. Arctic strategy, which President Barack Obama himself signed on May 10, 2013.¹⁰² In this strategy, the U.S. priorities in the Arctic are¹⁰³:

1. Advance the U.S. security interests
2. Pursue responsible Arctic region stewardship
3. Strengthen international cooperation.

The summary of this U.S. Arctic strategy starts with the quote of the National Security Strategy from 2010 stating that *"The United States is an Arctic Nation with broad and fundamental interests in the Arctic Region, where we seek to meet our national security needs, protect the environment, responsibly manage resources, account for indigenous*

¹⁰¹ Conley, Heather; Toland, Terry; David, Mihaela, and Jegorova, Natalja, "The New Foreign Policy Frontier. U.S. Interests and Actors in the Arctic" Center for Strategic & International Studies, CSIS Europe Program, March 2013, pp. VIII - IX.

¹⁰² See National Strategy for the Arctic Region, Washington D.C. May 10, 2013.

¹⁰³ Ibid , p. 2.

communities, support scientific research, and strengthen international cooperation on a wide range of issues."¹⁰⁴

Promoting the security interests of the United States, the strategy mentions that the United States "will enable our vessels and aircraft to operate, consistent with international law, through, under, and over the airspace and waters of the Arctic, support lawful commerce, achieve a greater awareness of activity in the region, and intelligently evolve our Arctic infrastructure and capabilities, including ice-capable platforms as needed. U.S. security in the Arctic encompasses a broad spectrum of activities, ranging from those supporting safe commercial and scientific operations to national defense."¹⁰⁵

In order to pursue responsible Arctic region stewardship, the United States "will continue to protect the Arctic environment and conserve its resources; establish and institutionalize an integrated Arctic management framework; chart the Arctic region; and employ scientific research and traditional knowledge to increase understanding of the Arctic."¹⁰⁶

In order to strengthen international cooperation, the United States will work through bilateral relationships and multilateral bodies, including the Arctic Council, and pursue arrangements that advance collective interests, promote shared Arctic state prosperity, protect the Arctic environment, and enhance regional security, and it will work toward U.S. accession to UNCLOS.¹⁰⁷

Only a week after this U.S. Arctic Strategy was issued, the U.S. Coast Guard published its Arctic Strategy, which outlines three strategic objectives in the Arctic for the U.S. Coast Guard over the next ten years¹⁰⁸:

- Improving Awareness
- Modernizing Governance
- Broadening Partnerships

¹⁰⁴ Ibid.

¹⁰⁵ National Strategy for the Arctic Region, May 2013, p. 2.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ The U.S. Coast Guard, Arctic Strategy, May 2013.

If the United States would like to lead the Arctic development and be successful in its Arctic council chairmanship starting in 2015, the Arctic needs much more attention than today. New capabilities are clearly required, and the Arctic demands more attention in U.S. foreign policy. In this sense, the newest Arctic strategy tries to emphasize the importance of the Arctic. The United States must develop its capabilities in order to be able to better operate in the Arctic to defend its interests. It will need nuclear icebreakers and better SAR capabilities. The United States should have support from private companies and allies in order to be able to operate on a large scale in the Arctic. It seems that only a few people in the United States understand that the United States is really an Arctic state and that the importance of the Arctic is increasing.

For this rather modest Arctic policy, there are several reasons and contrasting variables, which will have an effect on U.S. interests in the Arctic in the 2020s. Firstly, Alaska is quite distant from key areas in the United States. Secondly, U.S. concerns today lie in the Middle East, Indian Ocean and Asian subcontinent, including Afghanistan, Iran, Iraq and North Korea, with its long term focus on China and the Pacific. In the future, however, when the rivalry for energy heats up, the Arctic will probably get more attention. This is not likely to happen in the United States before the 2030s. The reason behind this estimate is that, thanks to new technology in utilizing shale oil and shale gas, North America will become self-sufficient in energy as early as the early 2020s. It has been estimated that the United States has enough shale gas to power itself for as much as 90 to 100 years. This will make the expensive Arctic drilling less interesting to the United States.

This energy revolution—North American independency in energy—will also affect U.S. interests in the Middle East, which will lose some attention in U.S. foreign policy, and the U.S. presence in the Middle East will be smaller in the future. The United States is, at present, acting in too many areas. The United States must cut its presence in the Middle East and in Europe, when the Pacific, and especially rising China, needs more attention. Though the United States needs to rebalance its foreign policy objectives, shifting focus to the Arctic seems unlikely during the next 20 years. It seems now also that only if a disaster occurs in the Arctic and the limited resources to react become widely known will the United States focus more extensively on the Arctic.

3.2 Russia in the Arctic

Russia's three main, strategically important areas are Moscow, the St. Petersburg region, and the Kola Peninsula. Two of these areas, St. Petersburg and the Kola Peninsula, lie just behind the Finnish border. In the Arctic, the Kola Peninsula has already long been a key area for Russia's nuclear deterrence. With the Arctic ice melting and the accessibility to new fields of energy becoming easier, the importance of the Kola Peninsula is growing. The Kola Peninsula already has the world's greatest concentration of nuclear reactors, and the world's only nuclear power plant operating north of the Arctic Circle is located here as well.

Russia remains a key player in the Arctic because of its geographical location and the length of its northern coastline, with about a third of the country being within or immediately adjacent to the Arctic Circle. More than half of the world's Arctic population lives in Russia. Only 500 kilometers from the Kola Peninsula's coastline lies the world's largest offshore gas field—the Shtokman field. Russia also has plans to develop new fields on the Yamal Peninsula in Western Siberia.¹⁰⁹ Furthermore, Russia's energy fields are becoming accessible quickly as they are near the mainland.

Natural resources are extremely important to Russia. Yegor Gaidar, acting prime minister of Russia in 1992, has summed up the meaning of the oil price increase for Soviet Union and later Russia: "The hard currency from oil exports stopped the growing food supply crisis, increased the import of equipment and consumer goods, ensured a financial basis for the arms race and the achievement of nuclear parity with the United States, and permitted the realization of such risky foreign policy actions like the war in Afghanistan."¹¹⁰ The Arctic region plays an important role for Russia since it generates around 20 percent of the country's gross domestic product (GDP) and 25 percent of the nation's exports.¹¹¹ Between 2000 and 2008 Russia experienced significant economic growth mainly because of high oil prices. It was mainly the income from oil and gas that made it possible for

¹⁰⁹ Åtland, Kristian, "Climate Change and Security in the Arctic," A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 9.

¹¹⁰ Gaidar, Yegor, "Collapse of an Empire: Lessons for Modern Russia," Washington 2007, p. 102.

¹¹¹ Zysk, Katarzyna, "Military Aspects of Russia's Arctic Policy: Hard Power and Natural Resources," in Kraska, James (ed.) *Arctic Security in an Age of Climate Change*, p. 95.

Russia to start modernizing its armed forces and nuclear arsenal and, in the end, guaranteed Russia's international status as a great power.

What is important to note is that, currently, there are signs of trouble in Russia's energy production. Russian industry's traditional core, the West Siberian fields, have been in decline since 2007. Russia is now producing flat-out, close to the limit of its current capacity.¹¹² That means that Russia has to take oil from the new fields, which are located in places that are colder, more remote, more complex, and far more demanding than the fields used today. Russia has until now virtually no experience in working the Arctic offshore. This makes the Arctic fields and the help of international oil companies important for Russia.

For Russia, the melting of the sea ice in the Arctic has much bigger positive meaning than for any other country. Most of the hidden Arctic oil and gas resources are located in the Russian EEZ and being able to exploit those resources is a significant economic opportunity for Russia. The melting makes it easier to sell and transport energy products to Asia, especially to China, where the energy consumption is predicted to grow the most in the next ten years.¹¹³

The importance of the Arctic to Russia is seen in the former Russian President Dimitry Medvedev's announcement, according to which Russia's "first and main task is to turn the Arctic into a resource base for Russia in the 21st century...Using these resources will guarantee energy security for Russia as a whole."¹¹⁴

After this interview, Russia published its security strategy to 2020. The importance of the Arctic is seen in "*The foundations of the Russian Federation's State Policy in the Arctic to 2020*" document,¹¹⁵ which Medvedev officially adopted on September 18, 2008. The document underlines the importance of the Arctic as a principal source of Russia's power in international politics. As early as only four years later, in February 2013, Russia

¹¹² See more International Herald Tribune December 5, 2012, p. 10. See also "Energy Security Challenges for the 21st Century," pp. 91 – 108, Santa Barbara, California, 2009.

¹¹³ "International Energy Outlook 2011." *U.S. Energy Information Administration*. Sept. 19, 2011. <<http://www.eia.gov/forecasts/ieo/world.cfm>>

¹¹⁴ Pronina, Lyubov, "Medvedev Says Arctic Is Russia's Future Resource Base," Bloomberg.com, September 17, 2008, <http://www.bloomberg.com/apps/news?pid=20601085&sid=aeWA6DvRZntg&refer=europe>.

¹¹⁵ The document was published in March 2009. An unofficial English translation is available at <http://www.arcticprogress.com/2010/11/russias-arctic-policy/>.

renewed its Arctic Strategy.¹¹⁶ This need to renew the strategy shows the importance and rapid development of the Arctic region. According to this strategy, the development of the Arctic region is based on Russian national interests. The area is seen as Russia's top strategic security base. The development of Russian Arctic combat capability is a vital part of the strategy. The strategy includes an important statement that the NSR is seen as a Russian national transit route. This route must be developed so that it has a better SAR network, command and control system, and an Arctic Coast Guard.¹¹⁷ One of the main goals that should be achieved with the strategy is to protect Russian northern regions. It is clear that, for Russia, the Arctic has much more meaning than for the United States and China. Much of Russia's future power and influence in international matters is linked to potential exploitation of valuable Arctic resources. Russia has to be successful in developing Arctic oil and gas fields in order to be able to finance its modernization of the economy.

Russia has taken steps to prepare itself to defend its rights to those assets, with force if needed. Russia has invested in icebreakers and submarines. Only the Northern Fleet has a thick icebreaking capacity.¹¹⁸ The rising role of the Arctic in Russian security policy is already seen in Russia's behavior. Russia is strengthening its military presence in the Arctic. The Kola Peninsula's role as one of the strategically important areas in Russia will rise.

The Northern Fleet is the largest of the five Russian fleets. It is based on several large naval and air bases on the Kola Peninsula and along the coast of the Barents Sea. The fleet includes ballistic nuclear missile submarines (SSBNs), which operate in the Arctic area, including under the ice. SSBNs are protected by surface ships, including Russia's sole aircraft carrier, nuclear-powered submarines, and aircraft.¹¹⁹ The Northern Fleet faced a reorganization in 2012.¹²⁰ Russia is building new stealth frigates for its navy as well.¹²¹ It has also started to construct its two first Mistral Class helicopter carriers. A Mistral class

¹¹⁶ See <http://www.government.ru/docs/22846/>

¹¹⁷ <http://www.government.ru/docs/22846/>

¹¹⁸ Wezeman, Siemon T., "Military Capabilities in the Arctic," *SIPRI Background Paper*, March 2012, p. 10.

¹¹⁹ See more of the Russian Arctic capabilities Wezeman, Siemon T., "Military Capabilities in the Arctic," *SIPRI Background Paper*, March 2012, p. 9.

¹²⁰ See Barents Observer, "Two thirds of officers must go," Barents Observer, October 4, 2012. <http://barentsobserver.com/en/security/two-thirds-officers-must-go-04-10>.

¹²¹ See Barents Observer, "New stealth frigate ready for the Arctic," Barents Observer, October 9, 2012. <http://barentsobserver.com/en/security/new-stealth-frigate-ready-artic-09-10>.

ship is capable of carrying 16 helicopters, 4 landing vessels, 70 armored vehicles, and 450 personnel.¹²² Further, Russia is also building a top-secret nuclear submarine, which has a deep diving capability down to 3,000 meters (9,800 feet).¹²³ It can be used to enforce the North Pole claim for Russia.

Russia had plans to base a group of supersonic interceptors MIG-31s (NATO reports Foxhound) on the Arctic archipelago of Novaya Zemlya by the end of 2013. According to Russia, the planes' mission is to defend Russia from air attacks from the north. This base has been empty of airplanes since 1993.¹²⁴ This decision was later cancelled, but all these development plans were reported inside of one week, which demonstrates the growing importance and the significance of developments in the Arctic. The long quiet period that settled in the Arctic post-Cold War seems to be over and considerable development is going on. Despite of several plans there is still only little new capabilities which have been created partly because of the economic problems in Russia.

Russia has increased its military exercises in the Arctic. Its augmented flight activities since 2007 along Norway's coastline and around Iceland have been noted by NATO. Russia is concerned that the United States is using the Arctic for its strategic weapons systems. Russia also restarted its operations near or under the Arctic ice. In 2009, a Russian SSBN launched a ballistic missile after breaking through the Arctic ice. Several SSBNs are being modernized and new ones are being built.¹²⁵ If Russia is successful in modernizing its SSBN fleet, it could also lead to an increase in surface ships and aircraft, including many that can operate effectively in the demanding Arctic environment. At the same time, the reduction in Arctic sea ice under which the SSBNs can hide is also likely to

¹²² See Barents Observer, "First helicopter-carrier in the pipeline," Barents Observer, October 2, 2012. <http://barentsobserver.com/en/security/first-helicopter-carrier-pipeline-02-10>.

¹²³ See more Barents Observer, "Top Secret nuclear sub used to prove North Pole claim," Barents Observer, October 29, 2012.

¹²⁴ See Barents Observer, "Russia sends Mig-31 interceptors to the Arctic," Barents Observer, September 25, 2012. <http://barentsobserver.com/en/security/russia-sends-mig-31-interceptors-26-09>. See also

<http://barentsobserver.com/en/security/2013/02/russia-drops-arctic-air-force-plans-04-02> according to which Russia is most likely not deploying planes to this remote island one reason being that the personnel does not want to move there.

¹²⁵ See Wezeman, Siemon T., "Military Capabilities in the Arctic." SIPRI Background Paper, March 2012, p. 10, and <http://blogs.fas.org/security/2013/05/russianssbns/>. There are huge challenges in Russia to improve the submarine fleet. Even, when the Russian ballistic missile submarine fleet is being modernized, it is conducting so few deterrent patrols that each submarine crew cannot be certain to get out of port even once a year.

increase the need for escorts and patrol aircraft.¹²⁶ Despite these plans, Russia has huge problems in keeping its submarine fleet up to date.

Russia is also building up abandoned Cold War bases along its coastline. It plans to build and open ten SAR-centers along its coast and attach one military installation to every one by 2015.¹²⁷ There is also a need to build better communications in the Arctic so that the ships can operate safely in the harsh area. The lack of infrastructure along the NSR will hold back the development of commercial shipping. An increase of shipping activity depends on Russian investments in crucial infrastructural development.

Russia supports rather “soft-security” cooperation than military cooperation in the Arctic. This includes SAR operations, joint monitoring of climate change and promoting the security of transport routes. At the same time, Russia is sceptical about the increasing military exercises in the Arctic area.¹²⁸

The increasing strategic importance of the Arctic is also seen in the changes in Russia’s land capabilities. Russia’s ground forces in the Arctic have included until recently naval infantry and army brigade on the Kola Peninsula. They are winter-trained and suitable for operations in the north of Russia, not in the more harsh regions of the Arctic. In March 2009, Russia announced a plan for a special military force to protect Arctic interests. According to Russia, these planned forces are to balance the situation with NATO forces in the Arctic.

According to the Russian Minister of Defense Anatoly Serdyukov, plans for two Arctic brigades, including their size, armament, and location, were still being worked out in July 2011.¹²⁹ Russia has announced that these two Arctic brigades are being created in order to defend its interests in the area. Russia plans to establish a brigade especially equipped and prepared for military warfare in Arctic conditions.

The 200th Motorized Infantry Brigade in Pechenga in the first such unit and, in addition, the Russian military is considering the deployment of paratroopers from the Arctic Spetsnaz

¹²⁶ Wezeman, Siemon T., “Military Capabilities in the Arctic.” *SIPRI Background Paper*, March 2012, p. 10.

¹²⁷ <http://www.bsr.russia.com/en/shipping-a-ports/item/2930-when-east-meets-west-through-northern-sea-route>.

¹²⁸ IISS Forum for Arctic Climate Change and Security, Military Cooperation Workshop, October 18, 2012, p. 4.

¹²⁹ Wezeman, Siemon T., “Military Capabilities in the Arctic.” *SIPRI Background Paper*, March 2012, p. 9.

brigade.¹³⁰ In November 2012, Russia announced that the 200th motorized Infantry Brigade will become part of the northern fleet.¹³¹ For the time being, these changes in land forces have not brought any new capabilities and most likely it will take several years until these “new Arctic units” are in place, trained, and operational.

Russia sees that the NSR is its own property and territory. Since January 2013, a law came into effect in Russia regulating trade navigation via the NSR. According to Russia, this route is legally recognized to be under Russia’s control.¹³² Russia sees that it has the right to monitor the route and ask for payments for ice breaking. Russia requires by regulation that all vessels intending to enter the NSR give advance notice to Russian authorities and submit an application for guiding, which implies paying a fee for using the route. Russia sees any efforts to change that status as a threat to its national security. Russia wants to develop the NSR one of the basic routes between Europe and Asia.

Russia has been very active in demarcating its oceanic claims and has drawn straight baselines around Novaya Zemlya, Severnaya Zemlya, and the East Siberian Islands, rendering the waters between the Russian mainland and said islands to be internal waters.¹³³ Soviet, and later Russian, legal experts have claimed that the straits along the NSR “cannot be regarded as being used for international navigation, since the entire history of Arctic exploitation knows only extremely rare individual instances of passage through them by non-Russian ships.”¹³⁴ The straits that connect the Barents, Kara, Laptev, and East Siberian Seas are seen as part of a special Soviet (now Russian) legal regime.¹³⁵ Other countries, most notably the United States, have questioned the Russian position and claim that the straits are international, and that the right of innocent passage for foreign vessels exists.

¹³⁰ Pettersen, Trude, “Russia’s Arctic Force May Include Paratroopers.” *Barents Observer*, August 11, 2011. <http://www.barentsobserver.com/russias-arctic-force-may-include-paratroopers.4947261-1116320-html>.

¹³¹ Barents Observer, November 26, 2012.

¹³² See more <http://www.bsr.russia.com/en/shipping-a-ports/item/2930-when-east-meets-west-through-northern-sea-route>

¹³³ Brubaker, Douglas, R., “The Legal Status of the Russian Baselines in the Arctic.” *Ocean Development & International Law*, vol. 30, no 3, 1999, p. 207.

¹³⁴ Kolodkin, A. L. and Volosov, M. E., “The legal regime in the Soviet Arctic.” *Marine Policy*, vol 14. no 2, 1990, p. 163.

¹³⁵ Ibid.

Russia is, of all the Arctic countries, best prepared to operate in the Arctic. Its seven newest icebreakers have multi-mission capabilities and are fueled by nuclear reactors. They are capable of breaking through ice twice as thick as its diesel competitors. Russia has as many as 18 icebreakers in its military fleet. Still the quality of these icebreakers is rather modest according to Western standards. Russia intends to utilize its icebreaking fleet to offer icebreaker escorts to ships traveling through its waters, along with providing refueling posts and other supplies to the commercial ships using its waterways.

The Arctic is already important for Russia. Oil and gas production from the region account for as much as 20 percent of Russia's GDP and 22 percent of its exports¹³⁶ Eighty percent of the gas in the Arctic lies within the Russian EEZ.¹³⁷ In the future, Arctic resources will become even more important as the energy resources of western Siberia diminish. Presently, the Yamal field produces 90 percent of Russian state gas. The Barents Sea has one of the world's largest gas fields, the Shtokman field. The Kola Peninsula is also extremely rich in various ores and minerals, including apatite, alumina, iron ore, and titanium.¹³⁸ Defense of this area is in Russia's core interest. The high energy prices and melting ice only add to the value and importance of the Arctic region.

Russia has technical problems, however, standing in its way of utilizing the new oil and gas fields. Russia has not previously extracted its huge oil and natural gas reservoirs from tight rocks because it has other fields that are easier to tap.¹³⁹ Only two Russian companies, Gazprom and Rosneft, are allowed to utilize the off-shore resources, and these two companies alone cannot take enough energy from the Arctic to fully realize the potential of the region. This is why Russia needs help from foreign companies; otherwise it cannot meet the demand it has in energy. This dilemma could make Russia's authorities warm up to foreign investors, which could be a gateway for cooperation internationally.

¹³⁶ Dimitry Medvedjev, September 17, 2008, http://eng.kremlin.ru/speeches/2008/09/17/1945_type82912type82913_206564.shtml.

According to the IISS sources 15 percent of the Russian GDP and 25 percent of exports come from the northern regions of Russia. See The International Institute for Strategic Studies (IISS): IISS Forum for Arctic Climate Change and Security: Military Cooperation Workshop, London, October 18, 2012.

¹³⁷ The International Institute for Strategic Studies (IISS): IISS Forum for Arctic Climate Change and Security: Military Cooperation Workshop, London, October 18, 2012, p. 3.

¹³⁸ Glasby, Geoff and Voytekhevsky, Yuri, "Arctic Russia: Minerals and Mineral Resources," Geochemical Society, Russian Academy of Sciences website, <http://www.geochemsoc.org/publications/geochemicalnews/gn140jul09/articrussiamineralsandmin.htm>.

¹³⁹ See more International Herald Tribune, November 14, 2012, pp. 11- 13.

How successful Russia will be in exploiting the resources available in the Arctic has a lot to do with Russian capabilities and status in international politics in the 2020s. Those Arctic assets can be seen as a second way to maintain great power status, aside from its nuclear arsenal. Another factor that will be crucial in the future concerns oil and gas prices: the higher they are, the more capable Russia will be. A drop in energy prices would be a disaster for Russia's plans to modernize its economy and armed forces. There are some estimates that energy prices may drop slightly (10 to 30 percent) in the future as more and more oil and gas can be extracted by using new methods, for example shale oil and gas in the United States and Canada. According to different estimates the price of the traditional energy sources will most likely remain relatively high in the 2020s because of the increasing demand in Asia. Russia sees the Arctic as a critical area for its success in the international arena by the 2020s. Therefore, Russia does not want any other actor, like NATO, the United States, China, or the EU, to be present in or develop the Arctic.

3.3 China and the Arctic

Although China is not an Arctic country, the Arctic has become one of the prime concerns for China in the past few years.¹⁴⁰ The nation has the largest population in the world, the second largest economy, and, since 2009, when it overtook the United States, it is also the world's largest energy user. In 2009, China was the largest exporter and second-largest importer of globally shipped goods.¹⁴¹ In 2012, China accounted for a third of global growth in oil demand. Russia's oil shipments to China surpassed Iran's for the first time in 2012.

China will need a lot more energy in the future in order to be able to bolster its position internationally and continue its economic growth. Given these circumstances, China has become increasingly interested in the Arctic in recent years due to the melting of the polar ice cap. It is convinced that the Arctic is becoming one of the world's major crossroads and a geopolitical pivot of the globe. China has a desperate need for energy resources and raw materials for its growing economy. Access to natural resources and shortened shipping routes have prompted China to look at what the Arctic might provide. China as a non-

¹⁴⁰ See International Herald Tribune, September 19, 2012, p. 1.

¹⁴¹ Campbell, Caitlin, "China and the Arctic – Objectives and Obstacles." U.S. - China Economic and Security Review Commission Staff Research Report, April 13, 2012, p. 6. See more about China's Energy Security demands Downs, Erica, S., "Who's afraid of China's Oil Companies?" *Energy Security. Economics, Politics, Strategies and Implications*, Washington D. C., 2011, pp 73 – 102.

Arctic littoral state has no Arctic coast, and, as such, neither sovereign rights over the region's continental shelves nor the resources that lie beneath them.

China is developing its abilities to operate in the Arctic region by developing its second icebreaker.¹⁴² Most likely there will be more to follow. The nation already has the world's biggest nonnuclear icebreaker. And its main interest is to be able to operate independently in the area and to utilize the natural resources, which—in its view—belong to no single nation.

China is an emerging global power and permanent member of United Nations Security Council. It is expected to seek a role in determining the framework and legal foundations for the future management of the Arctic region. China wants to maximize its influence and presence so that its views will be taken into consideration when important decisions on the Arctic are made. That is why China pressed for permanent observer status in the Arctic Council, a position that was finally realized in Kiruna in May 2013.

Huebert sees that China's ambitions in the Arctic are driven by the following factors:¹⁴³

1. Interest in climate change. Climate change will have an impact on China's coastal sea level. China wants to have a better understanding of the processes that are occurring.
2. New international shipping routes. China's economic prosperity is driven by international trade.
3. China's growing need for new energy resources. China is developing its oil companies in the Arctic region and wants to buy into these companies as much as the market allows. China wants to be a major economic player.
4. Governance. China wants to have a say in the governance of any international region within the international system.
5. Geopolitics. Growing recognition that the Arctic is going to become an increasingly important geopolitical environment.

¹⁴² This second icebreaker will have operational capability in 2015.

¹⁴³ Alaska Dispatch, January 28, 2013. <http://www.alaskadispatch.com/article/artic-council-has-tightrope-walk-potential-decision-admit-china>

Paula Briscoe at the Council of Foreign relations believes that China has three different goals in the Arctic:¹⁴⁴

1. Securing a share of the Arctic's natural resources.
2. Securing considerably shorter shipping routes from the Pacific to the Atlantic.
3. Obtaining fishing rights and conducting research in the Arctic.

Although China has not yet published any official strategy towards the Arctic, the nation's actions suggest a careful approach towards showing greater involvement in the region in order to avoid alarmism among the Arctic states. In relation to the sovereignty debate, China asserts that the Arctic belongs to all people and the region is part of the "common heritage of mankind." China's strategic interest in the region is clear and the country is taking concrete diplomatic steps to ensure that it should be recognized as a key player in the region. Besides the diplomatic overtures, like frequent high-level visits to Iceland, Denmark, and Norway, China has begun to focus its domestic institutions, like its navy, on Arctic concerns. For example, recently China's navy has reoriented itself towards the Arctic as it is stated that exploration of the Arctic will become a future mission of the navy.¹⁴⁵

Changes in the Arctic will further increase territorial claims and border disputes between Arctic and non-Arctic states. China's interest in the region is magnified by the fact that it is the world's largest shipping nation with 46 percent of its GDP being related to the shipping industry and 85 percent of its energy imports coming from abroad. That is why shipping routes are extremely important for China's well-being.¹⁴⁶ Already today China is spending more on Arctic sea route research than the United States. China sees that, as early as 2020, it could send as much as 15 percent of its international trade through Arctic waters.¹⁴⁷ This would multiply the shipping traffic in the Arctic and increase the security policy importance of that area.

¹⁴⁴ See <http://blogs.cfr.org/asia/2013/02/01/paula-briscoe-greenland-chinas-foothold-in-europe/>

¹⁴⁵ See for example Jakobson, Linda, "China Prepares For An Ice-free Arctic," *SIPRI Insights On Peace and Security*, No. 2010/2, March 2010. South China Morning Post, "Admiral Urges Government To Stake Claim In the Arctic," March 6, 2010.

¹⁴⁶ Spears, Joseph, "China and the Arctic: The Awakening Snow Dragon," China Brief 9, no 6, March 18, 2009. [http://www.jamestown.org/programs/chinabrief/single/?tx_ttnews\(tt_news\)=34725&Hash=9638471049](http://www.jamestown.org/programs/chinabrief/single/?tx_ttnews(tt_news)=34725&Hash=9638471049).

¹⁴⁷ Barents Observer , March 25, 2013 and http://www.business-standard.com/article/economy-policy/china-spending-more-on-arctic-sea-route-research-than-us-113031400028_1.html

China's economy would benefit immensely from shorter shipping routes. China's economy is heavily dependent on exports to Europe and energy imports from the rest of the world. The nation's alternative shipping routes could in the future have profound impacts on its trade and shipping patterns. For example, the NSR is 6,400 kilometers (4,000 miles) shorter than China's route to Europe via the Malacca Strait and the Suez Canal.¹⁴⁸ Today, 80 percent of Japan's and South Korea's oil, 40 percent of China's oil supply, and as much as 78 percent of Chinese energy imports pass through the Malacca Strait—a 800 kilometers long (500 miles) and at its most only 65 kilometers (40 miles) wide between Malaysia and the Indonesian island of Sumatra.¹⁴⁹ Pirates prey upon these waters, as well as in the Indian Ocean east of Africa, and there have been terrorist plans to seize an oil tanker. It would be in China's best strategic interest to utilize an alternative route for its critical and strategically sensitive imports.

To be able to use the NSR would reduce both sailing times and costs. China's concern is that the advantage of the shorter Arctic route will decrease if Russia charges service fees for ships passing through its EEZ waters. China does not want to be excluded from the Arctic through such nationalistic policies. The same benefits of the shortened shipping routes also apply to Japan and South Korea, but they have not been as active as China in promoting their interests in the region. The main reason is that Japan and South Korea are not growing as fast as China.

China's attitude toward the Arctic can be seen in the March 2010 announcement by Admiral Yin Zhou of the People's Liberation Army, when he said that: "The Arctic does not belong to any particular nation and is rather the property of all the world's people." According to him: "China must play an indispensable role in Arctic exploration as it has one-fifth of the world's population."¹⁵⁰ Effectively, China sees that the Arctic with all of its routes and resources, is the inherited wealth of all humankind.¹⁵¹ Various Chinese researchers like Li Zhenfu, Xu Zhenwei, and Xu Yuayuan, express an enormous sense of

¹⁴⁸ Campbell, Caitlin, "China and the Arctic: Objectives and Obstacles," U.S.-China Economic and Security Review Commission Staff Research Report. April 2012, p. 6. China is today's highly dependent of the Malacca Strait for its seaborne trade. As much as 78 percent of its energy imports pass through this narrow passage. Alternative routes would be highly recommended in order to raise China's energy safety.

¹⁴⁹ Yergin, Daniel, "The Quest. Energy, Security, and the Remaking of the Modern World," p. 282. Campbell, Caitlin, "China and the Arctic: Objectives and Obstacles," April 13, 2012, p. 6.

¹⁵⁰ Akin, David, "Harper deals with New Arctic Rival: China," Toronto Sun, June 23, 2010.
<http://www.torontosun.com/news/g20/2010/06/22/14484401.html>.

¹⁵¹ See International Herald Tribune, September 19, 2012, p. 1.

entitlement vis-à-vis Arctic resources and argue that China needs access to Arctic assets while insisting the country should not adopt a “neutral” position as an outsider.¹⁵²

China has been backing up its political words with actions. China already has the world’s largest nonnuclear-powered icebreaker, the *Xuelong* (“Snow Dragon”).¹⁵³ The *Xuelong* has been very active in different kinds of scientific expeditions in the Arctic. The most recent manifestation of this new Chinese strategic interest is the 2012 voyage of the *Xuelong* from China to Iceland.¹⁵⁴ This follows on earlier Chinese interest in Arctic research going back to the 1990s. To further these endeavors, China has been active in building relations with Canada and the Nordic countries.¹⁵⁵

Due to the transformation of the Arctic region, pressure from China is likely to increase and could escalate the friction between littoral and non-Arctic states. Thus, China is expected to expand its role as a decisive power in the region’s management. China has had a permanent presence in the Arctic since 2004, when it established a research station, Huang He Zhan, in Svalbard, Norway, which is well inside the Arctic Ocean in the Barents Sea. China is reportedly planning three Arctic research expeditions over the next three to four years. The country has announced its intention to build a new 8 000-ton icebreaker, which would be an addition to its current vessel, the *Xuelong*, in order to cruise the Arctic region to conduct various expeditions. No Arctic state has a larger nonnuclear-powered icebreaker than China.¹⁵⁶ Despite this new ship, China’s icebreaker fleet is rather modest and it will need more icebreakers in order to achieve its goals in northern shipping by 2020.

¹⁵² See more Campbell, Caitlin, “China and the Arctic: Objectives and Obstacles,” U.S.-China Economic and Security Review Commission Staff Research Report. April 2012, pp. 3–4.

¹⁵³ *Xuelong* was purchased from Ukraine 1993. China is building a new vessel, China’s first domestically-constructed icebreaker, which is planned to be completed in 2014. See more: China Daily, “New icebreaker to improve China’s polar research,” November 4, 2011. http://chinadaily.com.cn/usa/china/2011-10/25/content_13976000.htm

¹⁵⁴ See International Herald Tribune, September 19, 2012, p. 1 and “Chinese icebreaker concludes Arctic voyage,” Barents Observer, September 27, 2012. <http://barentsobserver.com/en/arctic/chinese-icebreaker-concludes-artic-voyage-27-09>. The *Xuelong* left Qingdao July 2, 2012 for the voyage through the so-called “north-east” route along the coast of Russia for Iceland. *Xuelong* returned to Shanghai at the end of September 2012 after almost a three-month voyage. The trips was altogether 18,500 nautical miles of which 5,370 were in the Arctic ice zone.

¹⁵⁵ See “A New Security Architecture for the Arctic,” *CSIS*, January 2012, p. 40.

¹⁵⁶ Makki, Muhammad, “China’s Quest for Arctic Access and Resources,” *Journal on Energy Security*, issue April 2012. http://www.ensec.org/index.php?option=com_content&view=article&id=351:chinas-quest-for-arctic-access-aamp-resources&catid=123:content&Itemid=389

China's relationship with Canada is an important factor that will shape China's future role in the Arctic since from 2013 Canada holds a two-year term as the Chair of the Arctic Council. From the Chair, Canada will formulate the Council's agenda over the next two years. So far, the two nations' bilateral relationship appears to be strong on both the diplomatic and trade fronts, especially with respect to energy sector development and cooperation. Chinese investments in Canada have grown significantly, with Chinese state-owned companies purchasing minority and controlling stakes in multiple Canadian oil and gas projects worth U.S. \$16 billion in 2010 and 2011 combined.¹⁵⁷

China's foreign policy towards the Arctic has been active with other Arctic countries as well, especially with the Nordic countries. In October 2003, China established its first Arctic station, named Yellow River Station, in Ny-Ålesund, Svalbard.¹⁵⁸ In August 2012, the first Chinese vessel went from China to Iceland. China has been developing partnerships and relationships with small Arctic states, namely Iceland, Denmark, and Greenland, as a means of enhancing and maintaining its position and influence in the Arctic. China has bolstered its embassy in Iceland, and now the Chinese embassy in Reykjavik is the largest embassy in Iceland with the expectation of Iceland's becoming a major shipping hub. In April 2012, Premier Wen Jiabao visited Sweden and Iceland. Two months later, President Hu Jintao went to Denmark. In both meetings, the two top Chinese leaders discussed possibilities of large-scale investments in the region.¹⁵⁹ In April 2013, China signed a free-trade deal with Iceland.¹⁶⁰ Diplomats also visited Greenland, where China is investing in a developing mining industry, with plans to import Chinese work crews for construction.¹⁶¹ All of these diplomatic overtures show increasing Chinese investment, both in the short and long term, in the Arctic.

The Arctic remains an area where there are still disputed territorial claims, along with questions regarding the international status of the northern waterways. Given China's wide-reaching claims to large parts of the East China Sea and the South China Sea based on island baselines, it is highly likely that China will continue to be wary of taking any

¹⁵⁷ Campbell, Caitlin, "China and the Arctic: Objectives and Obstacles," April 13, 2012, p. 5.

¹⁵⁸ "Chinese icebreaker concludes Arctic voyage," Barents Observer, September 27, 2012. <http://barentsobserver.com/en/arctic/chinese-icebreaker-concludes-arctic-voyage-27-09>.

¹⁵⁹ See for example O'Rourke, Ronald, "Changes in the Arctic: Background and Issues for Congress," August 1, 2012, p. 46.

¹⁶⁰ See International Herald Tribune, April 16, 2013. This was China's first free-trade-agreement with a European country.

¹⁶¹ International Herald Tribune, September 19, 2012, p. 1.

positions on Arctic disputes that could undermine its territorial claims closer to home. In general, its position on the Arctic appears to still be evolving, but it is based on the premise that the Arctic remains a global commons, with non-Arctic states having the right to access the region and its resources.

Although there are contending territorial claims, a “race” for land in the Arctic is unlikely, because most of the resources are already located in areas clearly in the possession of one state versus another. Basically, most of the potential oil and gas resources are located within the territorial jurisdiction of the Arctic states.¹⁶² Thus, China will try to gain influence through a strategy it is also using in Africa and Latin America: investing in and partnering with local companies and financing. In Greenland, for example, Chinese companies are financing the construction of mines. China will try to get involved in the energy companies in the Arctic as much as the market allows. It is different from the United States in that many Chinese energy companies have close ties with the Chinese government.

China’s chief concerns are related to Russia’s possible territorial claims and its potential attempt to restrict the access of non-Russian entities to large areas of the Arctic. China is also worried about Russian plans to collect passage fees on the NSR. This would erase some or most of the potential efficiency gains for Chinese shippers in Russian Arctic waters.¹⁶³ That is why China is exploring new shipping routes outside the Russian territorial waters and has a need to develop its own icebreakers.

In the coming years, China’s interests in the Arctic, the possibilities for expanded navigation and shipping, access to resources, concerns over the environmental impact of the melting ice packs, and defense and security issues in the region, are only going to grow. Much of the outcome will depend on how aggressive China will be in dealing with these issues with the Arctic countries. It will still take several years before Chinese navy ships will sail in the area to show a military presence of a growing great power. It will be interesting to see how the Arctic countries will, or can, react to such an event.

¹⁶² Campbell, Caitlin, “China and the Arctic: Objectives and Obstacles.” U.S.-China Economic and Security Review Commission Staff Research Report. April 2012, p. 5.

¹⁶³ See more Campbell, Caitlin, “China and the Arctic: Objectives and Obstacles.” U.S.-China Economic and Security Review Commission Staff Research Report. April 2012, p. 8.

3.4 Other Actors in the Arctic—A Short Overview

This paper would go well beyond its scope if the other Arctic actors aside from the United States, Russia, and China were included in detail. Canada, Denmark, Finland, Iceland, Norway, and Sweden, however, along with the EU and NATO, are increasingly asserting their own interests in the Arctic and are playing a role in shaping the discourse about the Arctic domain. Thus, it is important to highlight the major interests of the other powers involved to get a fuller, more nuanced picture concerning Arctic relations.

The North Atlantic Treaty Organization (NATO) is increasingly interested in the Arctic, despite the fact that the area is considered “low tension.” The entire Arctic region is covered by the NATO treaty: several Arctic actors, specifically the United States, Canada, Denmark, Iceland, and Norway, are NATO members and, as such, NATO plays a central role in these countries’ security policies. Given that they are Arctic countries, this inevitably ties NATO to the Arctic region in some capacity.

NATO members, however, are divided about what NATO’s role should be in the Arctic, and if it should be involved at all. Canada stands opposed to NATO involvement, concerned that non-Arctic countries will be enabled by NATO to influence Arctic policy.¹⁶⁴ Moreover, Canada views its own sovereignty as sufficient in the region. Other NATO members are reluctant to further integrate NATO into the Arctic due to negative Russian reaction.¹⁶⁵ In contrast, Norway has been pushing for more NATO involvement in the High North to provide a counterweight against Russia’s increasing military presence in the region.¹⁶⁶ The UK (as well as other non-Arctic member states) has also been an advocate for an increased NATO presence in the Arctic.¹⁶⁷ Although the member states have different motives, as an entity NATO has not formally declared an Arctic policy, and NATO Secretary General Jaap de Hoop Scheffer urged in January 2009 that member states not allow the Arctic to become a divisive issue.¹⁶⁸

¹⁶⁴ Conley, Heather, Toland, Terry and Jaime Kraut. “A New Security Architecture for the Arctic: An American Perspective.” *Center for Strategic & International Studies*. CSIS Europe Program. January 2012. p. 30.

¹⁶⁵ Conley, Heather, Toland, Terry and Jaime Kraut. “A New Security Architecture for the Arctic: An American Perspective.” *Center for Strategic & International Studies*. CSIS Europe Program. January 2012, p. 30.

¹⁶⁶ Coffey, Luke. “NATO in the Arctic: Challenges and Opportunities.” *The Heritage Foundation*. June 22, 2012, p. 2.

¹⁶⁷ *Ibid*, p. 2.

¹⁶⁸ O’Rourke, Ronald, “Change in the Arctic: Background and Issues for Congress.” August 1, 2012, p. 47.

NATO's current role in the Arctic is to provide increased security, specifically in Iceland, from which the U.S. military withdrew in 2006, giving it a legitimate foothold in the region. NATO's security impact has increased after the Russian air force resumed long-range bomber patrols in 2007, passing over the Arctic up to U.S. and Canadian airspace for the first time since the Cold War.¹⁶⁹ Not only do NATO aircraft now shadow these patrols, it has also organized several high-profile war-games in the High North. Since 2006, there has been a multinational crisis management Arctic exercise called *Cold Response* held in Norway focused on cold weather amphibious operations, including special and ground operations, in which Finland has taken part. NATO has increasingly engaged in exercises with non-NATO countries, which Russia finds provocative.¹⁷⁰ These coordinated exercises are promoted for the purposes of building confidence and cooperation among the Arctic actors that take part, enhancing capabilities, and improving interoperability in such harsh climate conditions.

NATO's key current objective in the region is increasing situational awareness.¹⁷¹ With growing economic and tourism activity in the Arctic, it is becoming necessary for the Arctic countries to develop coordinated security and SAR protocols. NATO is the best coordinating body currently available for such operations. But some (particularly Russia), believe the increase in NATO activity in the region is to blame for the escalating military presence in the Arctic, which all Arctic countries are, at least nominally, against.

The European Union (EU) has an Arctic policy due to its close links to the region, despite the fact that it does not have a direct coastline with the Arctic Ocean. The EU includes three Arctic states (Finland, Denmark, and Sweden) as well as several "sub-Arctic" states including the U.K. and other Arctic-interested actors. Iceland is also applying for membership in the EU. If it accedes to the union, the EU would have greater prominence in the Arctic region, as well as more influence and political capital behind Arctic issues in the European forum.¹⁷² The EU wanted to become an observer to the Arctic Council, but observer status was not granted in Kiruna in May 2013.¹⁷³ The EU is also involved in the

¹⁶⁹ See more "U.S. Strategic Interests in the Arctic . An Assessment of Current Challenges and New Opportunities for Cooperation," CSIS, April 2010, p. 16.

¹⁷⁰ "Canada Uncertain about Joining NATO's Arctic War Games? Is the Harper Government's Rhetoric on Arctic Sovereignty Overblown?" *The Canadian Press*. 24 August 2012.

¹⁷¹ ISS Forum for Arctic Climate Change and Security: Military Cooperation Workshop. October 12, 2012, p. 6.

¹⁷² Castle, Stephen. "E.U. Body Sees Strategic Reasons to Encourage Iceland." *New York Times*. February 24, 2010.

¹⁷³ Kiruna Declaration, May 15, 2013. Most likely EU will gain observer status later this year.

Barents Euro-Arctic Council. Aside from its political maneuvers, the EU is one of the biggest financial supporters of scientific research in the Arctic.¹⁷⁴

The EU's interests in the Arctic were made clear in 2008, when the High Representative and the European Commission made a report to the European Council. In this report, it is argued that "the increased accessibility of the enormous hydrocarbon resources in the Arctic is changing the geostrategic dynamics of the region with potential consequences for international stability and European security interests." This development is, according to the report, "illustrated by the...planting of the Russian flag under the North Pole." The report calls attention to the "intensified competition over access to, and control over, energy resources," and maintains that "there is an increasing need to address the growing debate over territorial claims."¹⁷⁵ If the Arctic becomes the "new frontier" of international relations, the EU fears that it could be marginalized, especially if the geopolitical relevance of the territory is emphasized. The EU could play a greater role if the geoeconomic and the geoecological nature of the Arctic are emphasized.¹⁷⁶ This is because the EU is one of the largest energy consumers of Arctic resources.¹⁷⁷ Moreover, the EU believes that it has a responsibility in the environmental field to the Arctic as its members contribute to the increasing pollution and climate change that is and will continue to affect the Arctic, especially with the potential growth in overseas trade due to the opening of Arctic sea routes.¹⁷⁸ That is why the EU has emphasized its role in environmental protection and advocacy against pollution and global warming when it is addressing Arctic forums.

The EU's major concern is resource and energy security, and, with the possible increasing military presence in the Arctic, this potential resource haven for Europe could be threatened. Arctic energy would enable the EU to obtain cheaper energy and more autonomy from oil imported from elsewhere, but increasing military presence would

¹⁷⁴ "EU's Arctic Policy: Questions and Answers." European Commission Memo 12/517. March 07, 2012. <http://europa.eu/rapid/press-release_MEMO-12-517_en.htm>

¹⁷⁵ "Climate Change and International Security." Paper from the High Representative and the European Commission to the European Council, 3 March 2008, http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf, pp. 4 and 6.

¹⁷⁶ "The EU as an Arctic Actor? Interests and Governance Challenges. *Geopolitics in the High North*. 3rd Annual Geopolitics in the High North International Conference. Berlin. May 22-25, 2012.

¹⁷⁷ "Arctic Futures Symposium 2011: The Arctic in a Time of Change. Final Report." *Polar Foundation*. Lippens Auditorium, the Royal Library of Belgium, Brussels, p. 11. <http://www.polarfoundation.org/assets/uploads/publications_files/afs_2011_report.pdf>

¹⁷⁸ Bergh, Kristofer and Oldberg, Ingmar, "The New Arctic: Building Cooperation in the Face of Emerging Challenges." *SPIRI Conference Report*. 26 April 2011, p. 7.

produce anxiety concerning access to these resources. Some member states are reacting to these developments in the High North. The UK has been a strong advocate for increased attention to Arctic issues and has held conferences with the Nordic countries and the Baltic states, who have found the increasing military presence of Russia threatening, to further developing relationships in the region.¹⁷⁹ Furthermore, France has announced plans to equip and prepare part of its military for Arctic engagements.¹⁸⁰ Norway, a non-EU member state, has been supportive of the European Commission's bid for observer status in the Arctic Council as well as increased involvement in Arctic affairs.

Beyond the nonstate actors, there are several prominent Arctic states that have considerable influence in Arctic development. In particular, **Canada** controls the second largest part of the Arctic behind Russia. The area is sparsely populated, a fact that the Canadian Prime Minister Stephen Harper utilized to promote the "Use it or lose it" Arctic policy, which accurately describes the increase in both military and developmental activity in the region.¹⁸¹ Canada sees the Arctic as an integral part of its national identity.¹⁸² Therefore, Canadian "rhetoric" and military posture could be due to domestic political concerns regarding the Arctic. Harper's government rides on nationalist sentiment and could be using the Arctic as a galvanizing issue. A recent survey suggests that more than 50 percent of Canadians believe that the North is an area of security concern, suggesting that such a hypothesis would not be unfounded.¹⁸³

Because much of its Arctic territory is huge and, as mentioned before, sparsely populated, Canada has military and security issues including a surveillance deficit in the north as well as underdevelopment of northern military bases. This has been addressed to some extent by Canadian purchases of satellites and potential purchases of drones to monitor northern areas,¹⁸⁴ the increased development and aid sent to northern bases for revitalization of

¹⁷⁹ Rozoff, Rick. "NATO's Arctic Military Alliance: Britain Spearheads 'Mini-NATO' in Arctic Ocean, Baltic Sea." January 23, 2011.

¹⁸⁰ Huebert, Robert; Exner-Pirot, Heather; Lajeunesse, Adam, and Jay Gulledge. "Climate Change & International Security: the Arctic as a Bellwether." *Center for Climate and Energy Solutions*. May 2012, p. 8.

¹⁸¹ "Harper on Arctic: Use it or lose it," Canada.com, July 10, 2007.

¹⁸² <http://canada.com/topics/news/story.html?id=7ca93d97-3b26-4dd1-8d92-8568f9b7cc2a>.

¹⁸³ Boswell, Randy. "Canada Asserts Arctic Policy, Sovereignty." *National Post*. Ontario. July 26, 2009.

¹⁸⁴ <http://www.nationalpost.com/story/html?id=1831005>.

¹⁸⁵ Campbell, Clark, "Harper's Tough Talk on the Arctic Less Stern in Private." *The Globe and Mail*. August 24, 2012.

¹⁸⁶ "Arctic Surveillance by Unmanned Planes Proposed: U.S. Defence Contractor Pitches Drones to Patrol Northwest Passage." *CBC News*. June 1, 2012.

Jang, Brent. "Who Owns the Arctic? Sovereignty and International Relations." *Globe and Mail*. January 11, 2013.

deep water ports, and the purchase of 65 F-35 Lightning II fighters from the United States. In 2008 Canada announced it was increasing its military alertness as a response to Russian military flights along their border. Canada has also increased its military presence in the Arctic during the last few years.¹⁸⁵ For example, military activity under the Harper administration has increased with the organization of war games, like NANOOK 12. There was also a meeting held in April 2012 to discuss cooperation on common issues with the Arctic Chiefs of Defense, which had several Arctic states in attendance.¹⁸⁶

The increasing military build-up stands in relation to the numerous contested maritime boundaries Canada has. Canada's claim of the Lomonosov Ridge is one of several competing claims, which includes counterclaims from Norway and Russia. Canada's official claim will be submitted in 2013 in accordance with UNCLOS regulations. Canada also has several disputes with Denmark. Hans Island is still under discussion between the two countries, and the Lincoln Sea border dispute was only just settled in 2012. Canada, Greenland, and the Faroe Islands are also involved in a dispute over illegal fishing within contested waters. Finally, Canada has several long-standing disputes with the U.S.: maritime boundaries in the Beaufort Sea, the Dixon Entrance, the Juan de Fuca Strait, and most importantly the Northwest Passage.

The ever-shrinking ice cap is bringing new challenges to Canadian policymakers, particularly with regard to the navigability of the Northwest Passage, the fabled historic trade route from Europe to China on which so many hopes have foundered. The passage is becoming increasingly important as it becomes more navigable, as the route would dramatically reduce shipping time and costs, connecting the world's biggest markets. The United States, the EU, and Russia all believe the passage should be considered an international waterway.¹⁸⁷ In contrast, Canada contends that the passage qualifies as an internal waterway. There is some potential, however, for Canada to cooperate with Russia in order to leverage against the United States in its Northern border disputes, due to the

¹⁸⁵ See *U.S. Strategic Interests in the Arctic. An Assessment of Current Challenges and New Opportunities for Cooperation*. CSIS, April 2010, p. 18.

¹⁸⁶ "General Natynczyk and Fellow Northern Chiefs of Defence Discuss Shared Arctic Interests." *National Defence and the Canadian Forces: News Room*. April 13, 2012.

¹⁸⁷ *U.S. Strategic Interests in the Arctic. An Assessment of Current Challenges and New Opportunities for Cooperation*. CSIS, April 2010, p. 16.

“comparable” economic attractiveness of the Northwest Passage and the NSR, among other common foreign policy issues.¹⁸⁸

Beyond the regulation and potential financial gains from the opening of the Northwest Passage, Canada is also very interested in resource development, not only of oil and gas, but also mining for minerals. Currently, it has economic programs in the North to help support and develop native populations through resource exploitation. Canada has huge oil, gas, and fish reserves in its territory, but it is also concerned over oil spill management and conflicts that can arise between industrial interests and the native aboriginal population.¹⁸⁹ In comparison with the other Arctic actors, Canada has put a heavy focus on resource development, and this has been clearly observed internationally. Canada assumed the position of Chair of the Arctic Council in 2013 for a two-year period, and some members are concerned with its being too focused on resource development.¹⁹⁰

Another Arctic country with significant regional importance is **Denmark**, with its possession of Greenland. Denmark is considered one of the five coastal states of the Arctic due to Greenland being part of the Danish kingdom. Although Denmark is part of the EU, Greenland is not. Greenland, however, is developing closer ties with the EU.¹⁹¹ Greenland gained more autonomy from Denmark in 2009.¹⁹² Specifically, Denmark retains authority in terms of foreign policy and defense, but the most relevant concession to Greenland was control of its natural resources. This is particularly important as the ice cap continues to melt in Greenland, which stands to gain immense resource wealth with this development. Greenland has a “hypermarket” of resources that are becoming increasingly critical and strategic to global markets, including gold, oil, rare earth elements, and fresh water.¹⁹³ Greenland is also much more politically stable than other countries with established extraction economies, enabling the pursuit of more favorable resource extraction. There

¹⁸⁸ Serquinin, Alexander and Valery Konyshchev. “Canada’s Arctic Strategy.” *Russian International Affairs Council*. 19 September 2012.

¹⁸⁹ “Northern Strategy.” *Foreign Affairs and International Trade Canada*. <http://www.international.gc.ca/polar-polaire/northern-strategy_strategie-nord.aspx?lang=eng&view=d>

¹⁹⁰ Weber, Rob. “Canada Criticized for Focus on Development at Arctic Council.” *Canadian Press*. 3 December 2012.

¹⁹¹ Keil, Kathrin. “U.S. Interests in Greenland – On a Path Towards Full Independence.” *The Arctic Institute*. 29 August 2011.

¹⁹² *Kingdom of Denmark: Strategy for the Arctic 2011-2020*. Published jointly by the Ministry of Foreign Affairs of the Kingdom of Denmark, the Government of Greenland, and the Government of the Faroes. August 2011, p. 20. <<http://uk.nanoq.gl/~media/29cf0c2543b344ed901646a228c5bee8.ashx>>

¹⁹³ Degorges, Damien. “Role of Greenland in the Arctic.” *Laboratoire de l’IRSEM n7 -2012*. Institut de Recherche Stratégique de l’Ecole Militaire, p. 45.

may be even more resources coming under Denmark's tutelage as well, as the Danes are actively submitting claims to more territory north of Greenland. One northern shelf, in particular, is likely to be part of competing claims from Canada and Russia.¹⁹⁴ Moreover, Denmark still has further disputes with Canada over the Hans Islands between Ellesmere Island and Greenland.¹⁹⁵

The abundance of resources has attracted a wide array of investment from outside the Arctic, which puts Denmark, in charge of Greenland's foreign affairs, in a unique political situation. Many non-Arctic countries seeking observer status in the Arctic Council and increased influence in the Arctic in general have been courting Danish political figures and providing funds for research and development, the most prominent among them being China.¹⁹⁶ Denmark also supported the EU, South Korea, and Japan's bid for observer status, seeing their participation in Arctic affairs as economically beneficial.¹⁹⁷

Although Denmark has been relatively encouraging about investment, there is some tension between the desire for increased wealth from extraction and the potential negative impacts on both Denmark and Greenland. If Greenland manages to reduce its financial dependence on Denmark, it could push to achieve full independence. If this were to occur, Denmark would lose its claim as an Arctic state.¹⁹⁸ Conversely, Greenland's population and infrastructure may not be up to the task of regulating and monitoring rapid industrial development.¹⁹⁹ Moreover, there is concern that, if Greenland develops too quickly and becomes dependent on one (potentially non-Arctic) actor, there could be significant consequences for global energy security.²⁰⁰

Many Greenlanders want to use the island's mineral resources, including rare earth metals and uranium, as a way to reduce dependence on subsidies from Denmark, which now

¹⁹⁴ Stanners, Peter. "Arctic Expedition to Prove Territory Claim." *The Copenhagen Post*. 8 March 2012.

¹⁹⁵ Åtland, Kristian: *Climate Change and Security in the Arctic*. A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 11.

¹⁹⁶ Acher, John and Mette Fraende. "Greenland's Minerals Loom in China-Denmark Ties." *Reuters*. 16 June 2012.

¹⁹⁷ *Kingdom of Denmark: Strategy for the Arctic 2011-2020*. Published jointly by the Ministry of Foreign Affairs of the Kingdom of Denmark, the Government of Greenland, and the Government of the Faroes. August 2011, p. 20. <<http://uk.nanoq.gl/~media/29cf0c2543b344ed901646a228c5bee8.ashx>>

¹⁹⁸ Keil, Kathrin. "U.S. Interests in Greenland – On a Path Towards Full Independence." *The Arctic Institute*. 29 August 2011.

¹⁹⁹ Scrutton, Alistair. "Insight: Great Expectations Fill Greenland as China Eyes Riches." *Reuters*. 11 May 2012.

²⁰⁰ Degorges, Damien. "Role of Greenland in the Arctic." *Laboratoire de l'IRSEM n7 -2012*. Institut de Recherche Strategique de l'Ecole Militaire. 7.

account for about two-thirds of the island's economy.²⁰¹ Despite some concern that Greenland could become a “foothold” for China in the Arctic and speculation about Greenland’s future, there are several factors that should contribute to the maintenance of the status quo regarding Greenland’s independence for the near future. Denmark is putting more effort into streamlining the defense structures in Greenland and the Faroe Islands to produce a joint service Arctic Command to help increase the security in the region.²⁰² And, while China is seen as a major actor in Greenland, the United States also is increasing its role in Greenland through investment in resources and strengthening cultural ties through English teaching and visitor invitation programs.²⁰³ There is also Thule Air Base, which is a common effort with the United States.²⁰⁴ Greenland plays an important role as the U.S. outpost in the northeast corner of the North American continent; Thule radar is commonly referred to as the “eyes and ears” of U.S. defense.²⁰⁵ Since Greenland is so strategically significant to the United States, it is hard to imagine Greenland becoming economically “occupied” by China. Moreover, there are still many infrastructural and political issues that need to be settled before a major amount of resource extraction can take place. For instance, there is still a zero-tolerance ban on extracting radioactive materials proscribed by the Danish crown that has Greenland politicians split on the issue.²⁰⁶

Another minor state actor in the Arctic is **Iceland**. Iceland is located just within the Arctic Circle and asserts that it is a coastal state.²⁰⁷ This claim, however, has been ignored by the “Arctic-5,” which includes the United States, Canada, Russia, Denmark, and Norway on the basis of their “coastal state” status. These five states signed the Ilulissat Declaration, which calls for greater cooperation and stewardship in the Arctic and they are

²⁰¹ <http://www.cbc.ca/news/business/story/2013/03/13/north-greenland-election-results.html>

²⁰² *Kingdom of Denmark: Strategy for the Arctic 2011-2020*. Published jointly by the Ministry of Foreign Affairs of the Kingdom of Denmark, the Government of Greenland, and the Government of the Faroes. August 2011, p. 20.

²⁰³ <http://uk.nanoq.gl/~media/29cf0c2543b344ed901646a228c5bee8.ashx>

²⁰⁴ Keil, Kathrin. “U.S. Interests in Greenland – On a Path Towards Full Independence.” *The Arctic Institute*. 29 August 2011.

²⁰⁵ See more *U.S. Strategic Interests in the Arctic. An Assessment of Current Challenges and New Opportunities for Cooperation*. CSIS, April 2010, pp. 20 – 21.

²⁰⁶ Degorges, Damien. “Role of Greenland in the Arctic.” *Laboratoire de l’IRSEM n7 -2012*. Institut de Recherche Stratégique de l’Ecole Militaire, p. 44.

²⁰⁷ Scrutton, Alistair. “Insight: Great Expectations Fill Greenland as China Eyes Riches.” *Reuters*. 11 May 2012.

²⁰⁸ Parliamentary Resolution on Iceland’s Arctic Policy – Approved by Althingi at the 139th Legislative Session, p. 28 March 2011. <http://www.mfa.is/media/nordurlandaskrifstofa/A-Parliamentary-Resolution-on-ICE-Arctic-Policy-approved-by-Althingi.pdf>

For further understanding about the relevance of the “coastal” status to Iceland: Dodds, Klaus and Valur Ingimundarson. “Territorial Nationalism and Arctic Geopolitics: Iceland as an Arctic Coastal State.” *The Polar Journal*. 2012.

particularly concerned over boundary and continental shelf claims.²⁰⁸ This is seen as extremely problematic for Iceland whose EEZ stretches into the Arctic Circle. Iceland's perceived position as a potential "maritime hub" and a "gateway country" to the Northwest Passage and polar passages from the Atlantic to the Arctic Ocean should increase its political capital in the region.²⁰⁹ On the whole, however, Iceland's geopolitical position has diminished since the end of the Cold War, as evidenced by the U.S. military's withdrawal from the country in 2006.²¹⁰ Iceland's position has been weakened further by the financial crisis in 2008, when the country effectively went bankrupt. Iceland is seeking to gain entry to the EU; some speculation is that this will ease certain economic after-effects of the crisis.

The economic crisis Iceland has faced has been cited as a speculative vulnerability; a potential weak "point of entry" into the Arctic for non-Arctic countries willing to supply the dollars to bring back its economy. The international community has become acutely aware of this potential after China's visits to Iceland. China is seen as "courting" Iceland with money for research, and oil and gas development.²¹¹ But, despite the effects of the financial crisis, Iceland stands to gain economically from the melting of the Arctic. Its main focus is on protecting its fisheries and fishing grounds, which makes oil spills and pollution from increased shipping activity in the Arctic one of Iceland's top concerns with regard to Arctic development.²¹² Iceland is expecting an uptick in tourism, especially environmentally friendly tourism, as well as an increase in infrastructural activities in preparation for the maritime industries that will proliferate with Arctic accessibility.²¹³ Iceland has potential for increased profits from oil extraction in its EEZ as well as from the Drenki offshore region.

²⁰⁸ *Kingdom of Denmark: Strategy for the Arctic 2011-2020*. Published jointly by the Ministry of Foreign Affairs of the Kingdom of Denmark, the Government of Greenland, and the Government of the Faroes. August 2011, p. 52.

<<http://uk.nanoq.gl/~media/29cf0c2543b344ed901646a228c5bee8.ashx>>

²⁰⁹ Iceland's Application for Membership to the EU "High North- Iceland's Arctic Policy." Screening Iceland, Chapter 31; Foreign, Security and Defence Policy – Bilateral. Brussels. May 20, 2011.

<[²¹⁰ Ingimundarson, Valur. "Iceland's Post-American Security Policy, Russian Geopolitics and the Arctic Question." *RUSI Journal*. Vol. 154, Issue 4, 2009.](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=27&cad=rja&ved=0CD8QFjAGOBQ&url=http%3A%2F%2Fwww.vidraedur.is%2Fmedia%2FESB%2Fsamningskaflar%2F31%2F4.-31-High-North---Arctic.ppt&ei=VLiAUMa4MKaR0QGJv4CYDw&usq=AFQjCNHj8MDg8qaISQ5PbXrYGVXh-yOdPw>></p>
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²¹¹ Zabarenko, Deborah. "Exclusive: As China Leads in the Arctic, Iceland's President looks to U.S." *Thomson Reuters: Sustainability*, September 21, 2012. < <http://sustainability.thomsonreuters.com/2012/09/21/exclusive-as-china-leads-in-the-arctic-icelands-president-looks-to-u-s/>>

²¹² Ingimundarson, Valur. "Iceland and the Arctic: the Politics of Territoriality." *University of Iceland*.

<[http://www.esi.nus.edu.sg/docs/event/iceland's-arctic-policies-final-14-december-valur-ingimundarson-\(2\).pdf](http://www.esi.nus.edu.sg/docs/event/iceland's-arctic-policies-final-14-december-valur-ingimundarson-(2).pdf)>

²¹³ Ibid.

Although Iceland does not have any territorial disputes as of yet, it has recently become the focal point of tension due to the increasing military presence of Russia. Iceland is the only Arctic country without its own military and relies completely on NATO and other states who volunteer assistance. Iceland wants to keep the United States involved in its security. The closure of the U.S. Keflavik Air Base due to economic problems has been a disadvantage in responding to the increased flight activity from Russia in the Arctic and sub-Arctic regions.²¹⁴ It is unclear as to what Russia's intentions are in the area or why its bombers are intruding into Iceland's airspace.²¹⁵ This has caused a flurry of activity in the Arctic concerning NATO, which took charge of Iceland's defense after the U.S. withdrawal in 2006 and legitimates NATO's increasing presence in the Arctic region. Already there have been lively discussions about air policing around Iceland, where non-NATO members such as Finland and Sweden have decided to take part as well.²¹⁶

The last Arctic coastal state to be mentioned is **Norway**. Norway considers its "High North" of great importance. Norway today is one of the world's leading petroleum nations and has jurisdiction over a maritime area more than six times size of its land territory.²¹⁷ Specifically, oil has a significant implication in Norway's Arctic policy. Norway's geostrategic position as a coastal state is significant as it entitles Norway to large tracts of potentially profitable oil reserves in the Barents Sea. In 2012, Norway's Arctic holdings attracted record interest from oil companies. One hundred eighty-one blocks in the Norwegian Arctic were nominated by firms and 37 oil firms bid in Norway's licensing round.²¹⁸ Oil can also be considered a major motivating factor for the resolution of the Barents Sea border dispute with Russia in 2010, as both countries immediately began oil exploration activities after the agreement was settled.²¹⁹

Although Norway appears to be much more focused on oil extraction than on green technologies like the other Scandinavian countries, some observers have noted that

²¹⁴ Ingimundarson, Valur. "Iceland's Post-American Security Policy, Russian Geopolitics and the Arctic Question." *RUSI Journal*. Vol. 154, Issue 4, 2009.

²¹⁵ IISS Forum for the Arctic Climate Change and Security: Military Cooperation Workshop, October 12, 2012, p.2.

²¹⁶ O'Dwyer, Gerard. "Nordics Agree to Joint Air-Policing Solution For Iceland." *DefenseNews*. November 23, 2012.

²¹⁷ Åtland, Kristian, "Climate Change and Security in the Arctic," A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 18. <<http://www.ffi.no/no/Rapporter/10-01097.pdf>>

²¹⁸ "UPDATE: 1-Norway's Arctic Attracts Record Interest." *Reuters*, January 23, 2012.

²¹⁹ "Russia, Norway Resolve Barents Sea Boundary." *Arctic Security.org*. April 28, 2010. <<http://www.arcticsecurity.org/?p=296>>

Norway's approach to Arctic drilling can be seen as a "model" for minimizing environmental impact.²²⁰ Furthermore, Norway is very interested in promoting environmental standards and procedures, specifically developing a mandatory code through the IMO as its fishing industry in the Barents Sea and Svalbard waters are an important national resource that could be damaged by pollution from the increase in seafaring traffic from tourism, cruise lines, and oil extraction and trade vessels. There is a significant risk for accidents and oil spills due to the fact that many vessels that are traveling through Arctic waters are ill equipped, along with the lack of accurate maps and the inability of GPS to reach large stretches of the Arctic Ocean.²²¹ Norway will also experience much of this oceanic traffic as it has one of the most developed Arctic navies, which could be called upon to provide assistance to distressed ships or in environmental disasters in the future.

Norway's military development over the past few years has been significant.²²² Not only has their navy been fully reequipped, but it has also improved its ground capabilities for Arctic combat. It is one of the few countries to have actually increased its defense spending during the recession, signalling its high priority to Arctic security.²²³ Moreover, Norway's military presence has shifted north: Norway moved its joint operations headquarters from Stavanger to Bodö as well as the army staff from Oslo to Bardufoss. This shows the importance of the Arctic to Norway and is partly due to the activities Russia has undertaken in the Arctic since 2007. Norway has a common land and sea border with Russia that has been a source of tension between the two countries. During the last few years, however, Norway's focus on Russia has shifted from emphasizing a potential threat to the entire state of Norway to the potential for conflicting interests of the Arctic area as a whole.²²⁴ At the same time, however, Norwegian–Russian relations are considered to be good. Norway and Russia are increasingly cooperating in the European Arctic area, with activities including common regular exercises. Norway is a member state of NATO, which exacerbates some tension, especially when Norway hosts Arctic war games for NATO and

²²⁰ Wang, Yong. "Norway's Arctic Strategy: Profitability and Environmental Responsibility." *American Security Project*, December 4, 2012.

²²¹ Conley, Heather A; Toland, Terry; Kraut, Jamie, and Andreas Osthagen. "A New Security Architecture for the Arctic: An American Perspective." *Center for Strategic & International Studies*. A Report of the CSIS Europe Program. January 2012, p. 12.

²²² Huebert, Robert; Exner-Pirot, Heather; Lajeunesse, Adam, and Jay Gulledge. "Climate Change & International Security: the Arctic as a Bellwether." *Center for Climate and Energy Solutions*. May 2012, p. 19.

²²³ *Ibid*, p. 31.

²²⁴ Wezeman, Siemon T., "Military Capabilities in the Arctic." *SIPRI Background Paper*, March 2012, p. 7.

other Scandinavian countries. In particular, a military exercise in 2009 simulating a Russian incursion into Norway demonstrated Norway's anxieties about its powerful northern neighbor.²²⁵

Norway is supportive and encouraging of more robust NATO involvement in the Arctic, especially in light of increasing Russian military activity in the region. Specifically, there has been a dramatic increase in Russian bomber flights through Norwegian airspace. For example, in 2006, there were only 14 Russian bomber flights; in 2007, 88 were recorded.²²⁶ Norway also is contesting Russian claims, among several other states, to the Lomonosov Ridge and is considering extending Norway's EEZ over the Svalbard region where both Russia and Norway fish commercially. Finally, there is increased intelligence activity in Norway and Denmark focused on business espionage and security issues. In Norway's threat assessment in 2012, an ambiguous reference of a potential intelligence threat seemed to be pointed at Russia: "Some of the states that are most active in their intelligence against Norway have implemented comprehensive military rearmament and modernization."²²⁷ Russia's military rearmament and modernization plans, specifically to address Arctic concerns, makes this inference plausible.

Despite the tensions, however, Norway has been sticking to a moderate foreign policy approach in terms of the Arctic. Norwegian leaders have avoided incendiary rhetoric in foreign policy statements, unlike Canada and Russia.²²⁸ Their calls for cooperation have been backed up by participating in and organizing military exercises with many countries, including an exercise with both the United States and Russia called Northern Eagle 2012.²²⁹ Moreover, it encourages dialogue and military cooperation among the Nordic countries.

The other Scandinavian countries are pursuing active Arctic policies as well. **Sweden** was the chairman of the Arctic Council until 2013. Under its chairmanship, Sweden focused on environmental sustainability, promoting research in the Arctic, and had a distinct concern

²²⁵ Huebert, Robert; Exner-Pirot, Heather; Lajeunesse, Adam and Jay Gullledge. "Climate Change & International Security: the Arctic as a Bellwether." *Center for Climate and Energy Solutions*. May 2012, p. 31.

²²⁶ Walsh, Eddie. "How Norway Sees the Arctic." *The Diplomat*. February 22, 2012.

²²⁷ Pettersen, Trude. "More Spies in the Arctic." *Barents Observer*. October 5, 2012. Link to 2012 Norwegian threat assessment: <<http://www.pst.no/media/utgivelser/trusselvurdering-2012/>>

²²⁸ Huebert, Robert; Exner-Pirot, Heather; Lajeunesse, Adam and Jay Gullledge. "Climate Change & International Security: the Arctic as a Bellwether." *Center for Climate and Energy Solutions*. May 2012, p. 31.

²²⁹ Coffey, Luke. "NATO in the Arctic: Challenges and Opportunities." *The Heritage Foundation*. June 22, 2012, p. 2.

for Arctic peoples and their inclusion in the Council.²³⁰ Sweden does not have a direct national energy interest in the Arctic, but is more concerned about the development of economic interests of other states in the Arctic region.²³¹ Recent government strategy, however, has shifted emphasis regarding oil and gas resources in the Barents Sea region over mining, which has traditionally been the main industry of northern Sweden.²³² The structure of the Swedish government's strategy developed in 2011 suggests that economic interests will be gaining more influence and prominence in regard to Arctic issues in the future.

Sweden is somewhat disadvantaged in pursuing an Arctic policy in that it is landlocked and therefore is not entitled to any EEZ rights in the Arctic. It is also excluded from the "Arctic 5" (the five coastal states, i.e., the United States, Russia, Canada, Norway, and Denmark) which has convened separate forums under the Illulissat Declaration in 2008 and in 2010. Sweden does have several points of leverage though. First, it has a well-developed oceanic fleet, which could become more in demand, especially in icebreaking, as Arctic oceanic traffic grows.²³³ It also has a significant level of expertise in Arctic research, a fact that has drawn the attention of China. China is specifically focusing on research and environmental sustainability projects in partnership with Sweden, in contrast to its focus on extraction in Greenland and Iceland.²³⁴ Sweden supported China's bid for permanent observer status in the Arctic Council as well. It also has military cooperation with the other Nordic countries and has been engaging with NATO in military exercises.²³⁵

Sweden's traditionally neutral stance in international affairs may make it an appealing partner or arbiter in Arctic conflicts. Some, however, view Sweden as being used by Europe to gain access to Arctic issues.²³⁶ Given this tradition of neutrality and the end of

²³⁰ Heininen, Lassi. "Arctic Strategies and Policies: Inventory and Comparative Study." *Northern Research Forum*. April 2012. p. 52. <http://www.nrf.is/images/stories/Hveragerdi/Arctic_strategies_7th_draft_New_20120428.pdf>

²³¹ "Sweden's Strategy for the Arctic Region." Ministry for Foreign Affairs: Government Offices of Sweden. 2011, p. 37. <<http://www.government.se/content/1/c6/16/78/59/3baa039d.pdf>>

²³² Heininen, Lassi. "Arctic Strategies and Policies: Inventory and Comparative Study." *Northern Research Forum*. April 2012. p. 52. <http://www.nrf.is/images/stories/Hveragerdi/Arctic_strategies_7th_draft_New_20120428.pdf>

²³³ "Sweden's Strategy for the Arctic Region." Ministry for Foreign Affairs: Government Offices of Sweden. 2011, p. 36. <<http://www.government.se/content/1/c6/16/78/59/3baa039d.pdf>>

²³⁴ Bennett, Mia. "China Wins Swedish Support for Arctic Council Permanent Observer Status." *Foreign Policy Association*. April 19, 2012.

²³⁵ Rozoff, Rick. "NATO's Arctic Military Alliance: Britain Spearheads 'Mini-NATO' in Arctic Ocean, Baltic Sea." January 23, 2011.

²³⁶ Degorges, Damien. "Role of Greenland in the Arctic." *Laboratoire de l'IRSEM n7 -2012*. Institut de Recherche Strategique de l'Ecole Militaire, p. 33.

Sweden's chairmanship of the Arctic Council, it has yet to be determined what Sweden's role in Arctic affairs will be in the future.

In addition, there has been an increase in regional cooperation between NATO members Denmark and Norway with Sweden and Finland formally called the Nordic Defense Cooperation Agreement (NORDEFECO), concentrating on collective military collaboration. NORDEFECO could be a natural basis for cooperation between Nordic countries in Arctic issues.

In non-Arctic **Japan**, it has also been realized that the Arctic should get more attention. For Japan, the shipping route from Europe is particularly important. Japan was accepted as an observer to the Arctic Council in May 2013. The importance of the Arctic for Japan is well shown in the new report produced by the Japan Institute of International Affairs, a private Japanese policy think-tank focused on foreign affairs and security issues. This report concludes with six policy recommendations for the Japanese government:²³⁷

1. Construct a win-win relationship with Arctic coastal states regarding resource exploration and development;
2. Secure appropriate implementation of UNCLOS;
3. Build closer cooperation with the United States on Arctic issues;
4. Play a leading role in environmental conservation, using Japan's knowledge and environmental technology;
5. Institute more active Arctic diplomacy;
6. Strengthen the government system for Arctic policy, such as establishing an Arctic Headquarters within the Cabinet Office.

²³⁷ It released a report on Arctic Governance and Japan's Foreign Strategy.
<http://www.thearcticinstitute.org/2013/04/review-arctic-governance-and-japans.html>

4. THE FUTURE OF THE GREAT POWERS AND POSSIBLE DISPUTE AREAS IN THE ARCTIC

4.1 Future developments involving the great powers

In order to be able to understand the importance of the Arctic in the future, it is necessary to consider how the great powers will look politically, economically, and security-wise in the future.²³⁸ First, important future trends concerning the United States will be explored, followed by Russia, and lastly China.

The United States

It is assumed that the United States will remain militarily as the world's most powerful nation state during the coming decades, but at the same time it will start to feel the limits of military power. The United States has a network of allies around the world, and this will probably not change in the near future. U.S. security interests in Europe²³⁹ and the Middle East in the 2020s will be reduced. The main reasons for this are Europe's increased stability and the U.S.'s domestic energy production, which is growing significantly because of the new methods making it possible to produce shale oil and shale gas. The United States is the fastest-growing oil producer in the world: by around 2020 the nation is projected to become the largest global oil producer.²⁴⁰ It is even possible that the United States will become an energy exporter in the 2030s.

It should be noted that, though the Middle East remains important to U.S. allies, like Japan and South Korea, in the Far East, the Middle East is not any more interesting in terms of security as it is today for the United States. With the coming energy revolution, the Middle East countries will also face an era when their standard of living will stagnate and possibly even decline. This might cause more instability in the Arab world. The new energy reservoirs, however, will allow the United States to look inward for energy if needed enabling the nation to take less interest in international affairs. Despite this possibility the

²³⁸ See more about global trends "Global Trends 2030: Alternative Worlds," National Intelligence Council December 2012, <http://www.dni.gov/index.php/about/organization/national-intelligence-council-global-trends>

²³⁹ Europe will still rank as the most important economic ally and most loyal to NATO.

²⁴⁰ <http://iea.org/publications/freepublications/publication/english.pdf>. This will also accelerate the switch in direction of international oil trade towards Asia, putting a focus on the security of the strategic routes that bring Middle East oil to Asian markets.

United States will likely remain committed in world affairs in order to protect and support its allies worldwide.

The United States is now acting as a “world policeman” and is stretching its military too thin, operating in too many places and on too many fronts at the same time.²⁴¹ This will be economically more difficult in the 2020s. In the coming years, the United States must invest in its infrastructure and rebuild electricity networks, bridges, roads, and rails. This will demand huge sums of money. One estimate is that the United States will have to invest a minimum of \$10 billion each year for the next ten years to bring its infrastructure up to date. The second reason that might lead the United States to turn more emphasis inward is the predicted demographic change. The demographic development seen today in California may be representative of the rest of the United States in 20 years: more Latinos and Asian immigrants are coming to the United States. Domestic concerns will most likely gain more attention, at least at the local level, in the future as a result of these developments, and this might also have consequences relating to U.S. foreign policy. In the 2020s, the United States might concentrate more on its own internal challenges rather than waging wars around the world.

Despite this development, the United States will care about the rest of the world, because the U.S. commitment to global security and its vulnerability to global oil prices will most likely keep it engaged in the future as well. This trend of keeping the world safe in the future as well was heard in President Obama’s speech at his second inauguration ceremony in January 2013.

Russia

In the future, Russia will face several challenges with regard to international politics, and there is concern that these will weaken the state even more. The first issue is that its population is declining rapidly. It has been estimated that the decline is as many as 1 million per year. Second, Russia’s economy is by no means competitive with the

²⁴¹ See, for example, RAND study entitled “Conflict with China: Prospects, Consequences and Strategies for Deterrence” by Dobbins, James; Gompert, David C.; Shlapak, David A., and Scobell, Andrew, See also James Dobbins “War with China,” Survival, ibid; and White, Hugh, “The China Choice: Why America should share power,” 2012.

economies in the Western world of the 21st century. It has major problems keeping the same level of development as its rivals the United States and China. Third, Russia does not have allies as it had during the Cold War. Fourth, Russia's conventional military capabilities need restructuring. The critical mass is still there, but it is aging fast. With the current economy, Russia faces an uphill battle to modernize it. A fifth future challenge for Russia is China. China's economic, and in the future decades also military, potential is growing quickly and Russia is worried about this, even if China and Russia have a special relationship. This relationship is demonstrated by the tradition that the elected Chinese president makes his first foreign visit to Russia. This tradition continued in March 2013 as well. There are three reasons for this special Chinese-Russian relationship. Firstly, China needs Russian energy products. Secondly, only Russia is selling weapons to China that it needs for security. Thirdly, China and Russia are trying to build better international relationships in order to be able to balance themselves against the United States.

Russia's main security issues are in the south. Russian internal stability and security are an ever-growing problem in the region. Another burgeoning concern for Russia is the revolution in energy markets. Russia cannot rely on high energy prices to fuel its domestic growth as new methods of extracting shale gas and shale oil have emerged, reducing oil costs.

Russia's economic and military development is tied to the price level of energy products. Simply put, high energy prices mean more money for Russia. The Arctic area will become more important for Russia in the future as oil and gas fields yield less and less production from traditional areas. At the same time, the energy revolution in the world casts a shadow of uncertainty on Russia's future. Oil and gas supply capacity is growing worldwide at such an unprecedented level that it might outpace consumption. This could lead to a glut of overproduction and a steep dip in oil prices. This would be a disaster for Russia's economy and its plans for restoring its great power position.

China

China's future is the most ambiguous of the three great powers. China does not have a developed ally network as the United States has. China has grown economically a great deal during the past ten years, but it has the capability to grow and strengthen considerably more. On the basis of 2005 purchasing power parity (PPP), China is projected to surpass the European economic area in 2013 and the United States in a few more years in GDP, thus becoming the largest economy in the world.²⁴² Still, the living standard of the majority of people in China is far behind that of Western countries.

China's internal concerns, however, might become troublesome for its growth. The population is aging rapidly as a result of China's one-child policy, creating a problem for financing the benefits and health care of future retirees. The potential for unrest is increased by the discrepancy between male and female birth rates (13 percent more male babies are born than female babies), leading to tens of millions of young men who have no prospects of finding a wife. Statistically, unhappy males are more likely to be violent and protest the government than unhappy females. China's slowing economic growth,²⁴³ environmental degradation, and rising social instability will create huge challenges for China's leaders in the future.

There are already now serious hidden social tensions between the Chinese elite and the rest of its people. A series of recent scandals and revelations that the families of top officials hold billions of dollars' worth of investments have also led to greater scrutiny over the role of patronage. Pertinent examples of these tensions are the incidents in which poor people have killed themselves in government offices in order to protest the regime.²⁴⁴ The murder of a British businessman in Chongqing and the aftermath of this event is another example of the hidden tensions, misbehavior, and corruption among the political elite.²⁴⁵

²⁴² OECD, "Looking to 2060: long-term growth prospects for the world."

<http://www.oecd.org/economy/looking2060.htm>. Despite this, it will leave significant gaps in living standards between the economies of advanced nations and China.

²⁴³ During the past ten years, China's yearly GDP growth has been as high as 9.2 – 14.2 percent and even during the last four years 9.2 – 10.4 percent, but is likely to be around 6 percent during the near future. See more <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>

²⁴⁴ See for example <http://www.thenational.ae/news/world/asia-pacific/chinese-firms-ask-workers-to-pledge-not-to-kill-themselves-as-migrant-suicides-rise>

²⁴⁵ See for example <http://www.bbc.co.uk/news/world-asia-china-20216757>

These inner tensions in China are likely to grow and they might, in the long run, seriously affect the internal stability of the nation. This would have implications for China's role in international politics as well, as it would be forced to spend more time and effort to control and contain its citizens rather than putting effort into developing military forces capable in operations abroad. It is hard for the elite to keep their tenuous position without making major changes towards democracy.

The burgeoning male population also means that China's military forces stand only to become more formidable with regard to sheer manpower. Significant portions of the armed forces' personnel and resources are devoted to guarding the country's borders and providing support to the security forces. China is, in any case, the only nation that could challenge the United States in the future, but this will take time. The United States cannot contain China as it did with the former Soviet Union. China is simply too big and it has invested considerable financial resources in the United States and around the world. Economically, China needs the United States and the United States needs China. Though it has a limited alliance network, China's investments are everywhere in the world, standing in contrast to the former Soviet Union, which practically had no investments outside its own territory.

By the 2020s, China will have the world's largest economy. It has huge, potentially the largest in the world, shale gas reservoirs, but for the time being it has not been able to benefit from them. To be able to continue its tremendous growth, China needs energy.²⁴⁶

In the Arctic, the Chinese approach is particularly worth following when it is searching for energy. It can cause tensions between the great powers if it acts as belligerently in the Arctic as it does in the South China and East China seas.

Militarily, China cannot challenge the United States before the 2030s. China, rather than Russia, is the state actor that the United States is worried about. If China's defense expenditure continues to rise at the average 10 percent plus rate of the last two decades, at some point in the late 2020s it could match the U.S. defense budget.²⁴⁷ Still, this does

²⁴⁶ See more about energy security "Energy Security. Economics, Politics, Strategies and Implications." Brookings Institution Press, Washington DC, 2010.

²⁴⁷ See Dobbins, James, "War with China." *Survival*, August-September 2012, International Institute of Strategic

not mean that China's military capability will be larger than that of the United States at that point, because U.S. military spending has been overwhelming for decades.

Everyone who has visited Russia and China sees the difference. In Russia, there is not much infrastructural or economic development going on. The growth, if it exists, is slow. But in China, there is a tremendous amount of economic activity, with many new skyscrapers, roads, bridges, airfields, factories, and other buildings being constructed. Very soon, China will open 24 new nuclear power plants. Recently, China got its first aircraft carrier, but it cannot be used for take-off and landing yet. In addition, China is building a new icebreaker, but to be able to operate in the Arctic it will need more. China will also need more energy, and it is looking for new possibilities to fulfil its energy demands. Though the Chinese have a "special relationship" with Russia, Russia is beginning to fear the growth of China as well.

The U.S. military strategy underpinning the Obama administration's "pivot" to Asia is known in Pentagon as "Air-Sea-Battle." It depends upon the long-range capabilities of the U.S. Navy and Air Force. The United States sees that the Air-Sea-Battle is designed to maintain the military capabilities necessary to uphold security guarantees in the Middle East and Asia-Pacific. The "Air-Sea-Battle" has attracted the most attention in the Asia-Pacific region, where U.S. allies see it as a way to respond to an increasingly confrontational China. China, in turn, has interpreted it as a clear sign of Washington's aggressive policy toward it. And, of course, capabilities can be used everywhere, if needed. During the past year, there seems to be some kind of dilution of the "pivot" as new voices in the United States are suggesting more peaceful coexistence with China. The relationship between the United States and China is the major security policy challenge of this century. If the 20th century was Century of Europe, the 21st century is set to become the Century of the Pacific.

As the "pivot" is disputed in reference to China, there is also international concern regarding U.S. missile defense, especially on the part of Russia. Missile defense is seen as a key capability of NATO in the future. It will officially be created against threats from

Iran and North Korea. The United States is worried about its forces in the Mediterranean and its allies Turkey, Bulgaria, and Romania. Russia sees that it is against Russia.

These above-mentioned examples show that the power politics of realism are not dead. Rivalry happens every day between the great powers, even when these great powers try to live together peacefully. The Arctic is more important for the great powers in the future than today as the great powers try to strengthen their economic and military capabilities. The great powers surveil each other carefully. Mutual suspicion can, in the worst case, escalate into costly and dangerous rivalry, which would have implications for the Arctic as well.

4.2 Possible disputes

As partly already stated in this study, the melting sea ice in the Arctic includes the following four main variables that can cause tension in the future.

1. Oil, gas, and minerals
2. Shipping routes
3. Fishing
4. Tourism

The main reasons for the great power interests in the Arctic are the new shipping routes and natural resources such as oil, gas, and minerals, which are becoming increasingly accessible as the sea ice continues to melt. Increasing energy drilling, shipping, and tourism create challenges for the Arctic states. These challenges can be environmental problems, SAR-related tasks, and even disputes over fishing areas. Challenges are more linked to the safety of the personnel in the Arctic than to the actual security of the states. The Arctic countries individually do not have enough resources to meet these new challenges alone as the area is vast, conditions are harsh, and communications are poor.

The great powers are completely aware of the potential hydrocarbon resources and economically critical minerals in the Arctic region. They also recognize the significance of new Arctic routes in controlling new passages for their economic and international strategy, which refers to shortened sea routes, and the strategic military significance of the

region. The increasing military importance of the region is reflected in several discussions among littoral states in recent years concerning strengthening their military capabilities and overcoming complex sovereign disputes in the region.

Even at the present time, the Arctic is important for the great powers in their military planning. Nuclear deterrence is important for the great powers. Nuclear submarines can operate autonomously under the cover of the Arctic ice canopy for long periods of time. They can rise to the surface, push their way through several meters of ice, and take up firing positions anywhere in the Arctic Basin, including the North Pole. Such scenarios, including the launch of missiles, are being rehearsed by the navies of Russia and the United States on a relatively regular basis.

It has also to be taken into account that ballistic-missile defense systems are shifting towards more sea-based components. That may lead to more ship-based systems operating in the Arctic. This may be regarded as a show of power by the United States and its allies and “misunderstood” by the Russians. The Russians are especially sensitive around the changes in the ballistic-missile defense systems.

In the following quote, in a December 2011 Washington Post op-ed, Heather Conley, a senior fellow at the Center for Strategic and International Studies, clearly describes several recent security developments in the Arctic:

“In April (2011), President Obama signed a new command plan that gives NORAD and the U.S. Northern Command greater responsibility in protecting the North Pole and U.S. Arctic territory. ... In 2009, Norway moved its operational command to its northern territories above the Arctic Circle. Russia has plans to establish a brigade that is specially equipped and prepared for military warfare in Arctic conditions. Denmark has made it a strategic priority to form an Arctic Command. Canada is set to revitalize its Arctic fleet, including spending \$33 billion to build 28 vessels over the next 30 years.”²⁴⁸

A potential problem area is the far northern Arctic Ocean, as it does not belong to any country and the conditions there are severe. With the ice melting where exact boundaries were never much of a concern, some border disputes have already come up. The changing situation in the Arctic has raised many questions and uncertainties about its future and could lead to new geopolitical challenges for both Arctic and non-Arctic states.

²⁴⁸ Conley, Heather, “The Colder War: U.S., Russia and Others Are Vying for Control of Santa’s Back Yard,” *Washington Post*, December 23, 2011.

These issues are primarily related to free passage and resource extraction rights. To this end, countries across Asia, including China, Europe, and North America are concerned with this transformation and its economic, territorial, and geopolitical implications.

The possible dispute areas can be summarized as follows:

1. The delimitation of Norway's and Russia's economic zones and continental shelves in the Barents Sea (formally solved in late 2010 after 40 years of dispute, but some still think this area might cause issues).²⁴⁹
2. The legal status of the Svalbard Fisheries Protection Zone and the shelf area around Svalbard (Norway and Russia, primarily).
3. The Bering Sea (United States and Russia).
4. The Beaufort Sea (United States and Canada).
5. The Nares Strait/Hans Island (Canada and Denmark).
6. The Northwest Passage (Canada and the United States).
7. The NSR (Russia and the United States, primarily).
8. The delimitation of the Arctic continental shelf outside the 200 nautical-mile boundary (Russia, Canada, and Denmark, primarily).²⁵⁰

There are several competing claims that will be seen in the near future concerning the Arctic. Canada, Denmark, Norway, and Russia are in the process of preparing territorial claims,²⁵¹ which will be dealt with in 2013 and 2014. The United States cannot claim anything in the Arctic because it has not ratified UNCLOS. By not ratifying UNCLOS, the United States is only hurting itself.

Russia's most significant claim is, at the same time, the most unsettled territorial claim in the Arctic: the underwater Lomonosov Ridge (see figure 5). If accepted, it would grant Russia almost half of the Arctic area.²⁵² Disputes may arise among Russia, Norway, Canada, and Denmark over parts of the Arctic shelf, as it may be argued that the Lomonosov Ridge is an extension of not only Russia's Siberian Shelf, but also of the Canadian shelf north of Ellesmere Island or the Danish shelf north of Greenland.

²⁴⁹ O'Rourke, Ronald, "Changes in the Arctic: Background and Issues for Congress," August 1, 2012, p. 45.

²⁵⁰ Åtland, Kristian, "Climate Change and Security in the Arctic." A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 12. See more details *ibid* pp. 12-16. See also O'Rourke, Ronald, "Changes in the Arctic: Background and Issues for Congress," August 1, 2012, pp. 13 – 14.

²⁵¹ O'Rourke, Ronald, "Changes in the Arctic: Background and Issues for Congress," August 1, 2012, p. 13

²⁵² *Ibid*, p. 13.

Norway and Russia have signed the Norwegian-Russian Delimitation Treaty, which was an example of the resolution of a 40-year dispute between Russia and Norway.²⁵³ Despite this resolution, several disputed claims over extensions of the national continental shelves through UNCLOS still remain.



Figure 5: The Russian Claim.²⁵⁴

In a worst-case scenario, these disputes could lead to a conflict between Russia and NATO/the United States, because Canada, Denmark, and Norway are members of NATO. If any one of these member states were to engage Russia over the ridge or other territorial dispute, NATO could be asked to respond. As the Arctic ice cap retreats, new conflicts

²⁵³ Åtland, Kristian, "Climate Change and Security in the Arctic," A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 11. A New Security Architecture for the Arctic. CSIS, Jan 2012, p. 10.

²⁵⁴ *Outer limits of the continental shelf beyond 200 nautical miles from the baselines: Submission by the Russian Federation.* http://www.un.org/Depts/los/clcs_new/submissions_files/rus01/RUS_CLCS_01_2001_LOS_2.jpg.

may arise between Canada and other Arctic nations, most notably the United States, over the legal status of the straits along the Northwest Passage, as well as the inlet to the Bay of Fundy, where the Canadians are planning to put a ban on supertanker traffic.²⁵⁵

It is most likely that potential conflicts between the United States and Canada will be solved peacefully because both states try their best to remain partners. Despite these disputes, these countries are close allies. That is why it does not seem to be likely that these disputes will end in conflict. All claims are closely monitored by China, because, in the worst case for China, the decision about Lomonosov Ridge could restrict access of non-Russian entities to large areas of the Arctic. This dispute over access to the Arctic is only one example of possible future disagreements. These kinds of disputes can lead to new “remilitarization” of the region, where Arctic states increase their military presence to enforce their particular interests.

If there will be disputes in the Arctic among NATO countries, for example, between the United States and Canada, or Canada and Norway, or Denmark and Canada, they will be most probably solved peacefully. The most difficult disputes in the Arctic, which might have larger security policy implications, would be those involving the United States, Russia, and China.

Russia does not want to cooperate with NATO or non-Arctic countries in the Arctic. According to Russian President Dmitry Medvedev, the Arctic can do fine without NATO. The Russian government believes that the involvement of NATO in Arctic issues would seriously increase tensions in the area.²⁵⁶ Due to the Arctic’s spatial placement, military weaponry could reach any and all targets within Russia from the Arctic region. The trans-regional implication of military competition within the region is, therefore, particularly important to Russia. NATO involvement or military presence within the Arctic, from a Russian perspective, would be extremely threatening and could result in increasing military activities, creating a “Great Game” of increasing militarization that increases the risk of conflict.

²⁵⁵ Åtland, Kristian, “Climate Change and Security in the Arctic,” A paper prepared for the 51st Annual Convention of the International Studies Association, New Orleans, February 2010, p. 11. Canada may ban gas tankers from key passages. Portland Press Herald/Maine Today, 11 September 2007, <http://pressherald.mainertoday.com>.

²⁵⁶ O’Rourke, Ronald, “Changes in the Arctic: Background and Issues for Congress,” August 1, 2012, p. 47.

Russia is unhappy about the military exercises in the area. The nation is particularly concerned by Cold Response, a NATO winter exercise, which takes place yearly in March in Norway and Sweden. The annual exercise involves fifteen countries and around 16,000 troops. Russia sees this exercise as a provocation and reacted in March 2012 with an exercise involving its 200th Motorized Infantry Brigade from Murmansk. Russia, however, has also undertaken joint exercises with both Norway and the United States as well.²⁵⁷ In addition, these kinds of military exercises, if not communicated properly, can lead to tensions between the Arctic states, especially if Russia begins to feel isolated.

With the effects of climate change, the Arctic region is constantly changing, and polar coastal states should expect future geopolitical challenges as the new environment develops.²⁵⁸ One of the biggest developments, yet to be seen, is how China will act in the Arctic. China's economic growth and increasing military capacity are further making Arctic nations uneasy about China's increasing interest in the region. A crucial question will be how to ensure a balanced approach and effective policies to confront the pressure from non-Arctic states that will arise when the Arctic is opened for oil, gas, and mineral extraction, international shipping, and other developments.

Arctic melting provides a unique opportunity for China to enact its significant plans to benefit from new sea routes and access to natural resources. China's intent to use these opportunities should not be underestimated. It would not be easy for China to sail through the new passages without clarification of the legal status of these routes, especially once its new icebreaker is fully operational. Therefore, there is a pronounced need to comprehensively understand all of the issues as interpreted by Arctic littoral states and non-Arctic nations alike, as all will try to maneuver in this new Arctic environment at once.²⁵⁹

China will most likely

²⁵⁷ See more <http://www.iiss.org/EasysiteWeb/getresource.axd?AssetID=32755>

²⁵⁸ This is one of the key points in the U.S. Navy's "A Cooperative Strategy for 21st Century Seapower," October 2007, <http://www.navy.mil/maritime/MaritimeStrategy.pdf>, p. 6, which states that "climate change is gradually opening up the waters of the Arctic, not only to new resource development, but also to new shipping routes that may reshape the global transport system." These developments may offer new opportunities for economic growth, but they are also, in the words of the Strategy, "potential sources of competition and conflict for access and natural resources."

²⁵⁹ Journal on Energy Security, issue April 2012.

1. Continue to increase its influence by buying oil and gas companies and mining facilities.
2. Concentrate its economic activities, especially on Greenland and Iceland.
3. Protect its interests in the Arctic by developing a strong, Arctic-capable navy.

The Arctic Security Public Opinion Survey²⁶⁰ shows very clearly the preferences in collaborative partners between the Arctic actors. All Arctic nations seem to prefer working with Scandinavian countries, except the United States, which prefers Canada as its first choice.

According to the same survey, one of the most problematic players in the Arctic is China. China is the least preferred Arctic partner among all the Arctic countries except for Russia, which named the United States its least preferred partner.²⁶¹ During the past several years, China has become aggressive in wording its rights to exploit natural resources in the region. This can be a potential source for conflict.

Beyond oil and gas, there have already been tensions over fishing ships operating in the Arctic region. To the north of Finland, the Norwegian Coast Guard and Russian trawlers have had problems with regard to activities in fishing grounds. For example, the Norwegians arrested a Russian trawler, *Sapphire II*, for illegal dumping of fish in waters around Svalbard in late 2011.²⁶² With increased fishing and other activities in the Arctic, these kinds of incidents could create more compromising conflict, if the parties involved are not able to negotiate and solve problems. Like the example given above, future conflicts may arise with increased vessel traffic in the murky waters of the Arctic. Arctic waters are not well demarcated and are often contested spaces for state control; thus similar intrusions made by vessels like the Russian trawler can cause international incidents as maritime activity increases in the Arctic region. Just as the Norwegians did not take to military action to resolve the transgression, future vessel infringement into ill-

²⁶⁰ "Rethinking Top of the World: Arctic Security Public Opinion Survey." Ekos Research Associates, January 2011, p. 36.

²⁶¹ Ibid, p. 27.

²⁶² Nielsen, Thomas, "No Conflict on Svalbard Fisheries." *Barents Observer*, October 13, 2011. <http://www.barentsobserver.com/no-conflict-on-svalbard-fisheries.4971611.html>.

marked maritime regions may not lead to war or deadly conflict, but may increase tensions and create a more hostile diplomatic environment in the Arctic in the future.

The material resources in these disputes are clearly on the Russian side of the Arctic. The United States has just one seaworthy icebreaker, which is not really suited for Arctic missions. China operates one icebreaker and is building a second one, although it is not an Arctic country. Russia has 18 icebreakers and more troops in the Arctic than all other Arctic states combined.

The development of military forces in the Arctic region points to a process of modernization and the creation of new capacity to address challenges associated with the environmental, economic, and political changes anticipated in the region, rather than as a response to major threat perceptions. Conventional military forces specially adapted to the demanding Arctic environment are projected to remain small scale, especially given the size of the Arctic region, and are predicted to remain considerably below Cold War levels.²⁶³

But the increase of military forces in a region where several states claim maritime zones that are expected to contain extensive natural resources does give some reasons for concern, including unexpected incidents between claimants. In order to help mitigate negative perceptions about security policies in the region as well as the possibility of misunderstandings, the Arctic littoral states need to be clear about their military policies, doctrines, and operational rules, and should include military confidence-building measures in their bilateral or multilateral relations associated with the Arctic.²⁶⁴

The problem with misperception, along with the presence of increasing militarization, is that there is a risk that a conflict can break out for reasons originally considered to be minor. We have already seen examples in the East China Sea and South China Sea in 2012, where tiny little rocky islands have become a matter of a great power dispute between China and Japan. There was supposed to be oil located there, which made this area particularly advantageous to different parties. It started with verbal and diplomatic disputes, moved to sending people and ships to the dispute areas, and ended up with

²⁶³ Wezeman, Siemon T, "Military Capabilities in the Arctic," *SIPRI Background Paper*. March 2012, p. 14.

²⁶⁴ Ibid.

some military demonstrations of aggression. A similar scenario could happen in the Arctic as well. The most likely and most dangerous scenario would be a conflict between the United States and China, the United States and Russia, or Russia and China.

Small-scale security problems may arise from increased tourism. We have seen one example of an accident, which luckily resulted in a “best-case scenario.” In August 2010, the Clipper Adventurer ran onto an unmapped rock in the west of Nunavut.²⁶⁵ None of the 128 passengers was hurt, but it provides a reminder of the lack of preparation if something should go wrong with a tourist vessel in Arctic waters. The international community has to establish a mechanism to meet the challenges of increasing tourism, shipping and drilling in the Arctic in the future.

The issues of working and shipping in the Arctic, where humans have not experienced industry on a large scale before, are already in the forefront of the Arctic states’ minds. That is why there have been proposals that suggest that oil drilling and fishing should be kept to a minimum before the infrastructure is in place and there are enough resources, cooperation, and exercised operations so that the Arctic countries are prepared if something happens.

Ultimately, it is not likely that the melting of the sea ice in the Arctic will have dramatic effects on the security of the Arctic countries’ in the coming decades. The Arctic countries (except Russia) are, from the U.S. point of view, NATO members or friendly to NATO.²⁶⁶ Rivalry could happen so that countries like the United States, Russia, and China are challenging each other in looking for new energy sources, however. This rivalry can in theory, in the long run, lead to changes in the U.S. presence in the Pacific, if the U.S. Navy gives more emphasis to the Arctic. With the new possibilities of extracting shale oil and shale gas in the United States and Canada, it is not likely that the United States will be very active in the disputed Arctic areas. It will operate mostly in Alaska, where the borders are not disputed. Russia and China are also not likely to challenge the United States in Arctic matters. Possible border disputes will most likely be solved peacefully, as the

²⁶⁵ Cohen, Toby, “*Canadian Rescue Capacity Questioned in Wake of Arctic Ship Grounding*,” Postmedia News, August 29, 2010.

<http://www.canada.com/news/Canadian+rescue+capacity+questioned+wake+arctic+ship+grounding/3457291/story.html>

²⁶⁶ See Kraska, James, “The New Arctic Geography and U.S. Strategy,” *Arctic Security in an Age of Climate Change*. p. 256.

economic pressure to utilize the new energy sources becomes higher, as exemplified by the agreement reached in a 40-year border dispute between Norway and Russia. The fact that 95 percent of the Arctic mineral resources are within agreed national boundaries makes disputes less likely.²⁶⁷ Additionally, the missing 5 percent are located in areas still considered too harsh of an environment and that would be expensive to exploit. Still, looking 30 or 40 years ahead, when the sea ice is completely melted during the summer months, states will eventually try to claim those areas for themselves. Despite the predictions of peaceful development, in the future we will most likely see more military presence in the Arctic, as each state will want to protect its interests in a “worse-case scenario.”

In order to analyze Arctic security development accurately, care needs to be taken in interpreting the situation. The main question revolves around the “remilitarization” of the Arctic—how much of it is actually increasing due to mistrust, insecurity, or potential aggression versus simple improvements in capacity to make the Arctic an area that can be utilized by nonmilitary personnel. The Arctic is, at present, an area of low tension. The main challenge for security is how to keep it that way in the future.

To sum it up, the most likely disputes, tensions, or problems in the Arctic region are caused by the following factors:

1. Oil and gas development can cause environmental problems and draw protests from environmental activists.
2. Limited incidents related to freedom of navigation are possible (for example, in Bering Straits and NSR).
3. Denial of outer continental shelf claims can lead to unilateral claims.
4. Rejection of non-Arctic actors can increase tension.
5. Mutually escalating fears resulting from misperception can increase tension.
6. Fisheries disputes are possible as ice melts and fisheries change location.
7. Increasing tourism and traffic may cause accidents where SAR capabilities are needed.

²⁶⁷ “The Arctic: Special Report,” *The Economist*, June 2012, p. 10.

The Arctic states recognize the role of UNCLOS in the settlement of current and future interstate disputes over access to maritime and shelf areas in the region. Unlike other conflict regions, the Arctic is a region of economically developed and politically stable countries, which have a long tradition of peaceful coexistence. Thus, the consequences for regional instability will be less severe than in many other parts of the world.

Not one of the Arctic nations has the capacity to control the entire Arctic region. Now would be a great time to establish confidence-building cooperation between the Arctic nations and non-Arctic nations sailing in the area. It is in everyone's interest, for example, that there be a good SAR capability in the Arctic region when shipping, tourism, and other activities increase.

In the future, the Arctic coastal states' coast guards, naval and air forces will have to take more active roles in the region. With many more activities in the area than today, there is a clear need at least for ocean surveillance, SAR operations, border control, and law enforcement at sea. It is a good sign that the Arctic countries have already signed the Arctic Search and Rescue Agreement and an Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic. It remains to be seen, however, how these agreements work in reality.

When living in the world of 2013 it seems very unlikely that the Arctic issues will cause major disputes between great powers. Today, great powers are economically so tightly interlinked with each other that it is unlikely that they will risk their well-being over possible Arctic disagreements. Their nuclear arsenals guarantee that they will not challenge each other by using military power, because this could escalate to a nuclear war. Still, as realism would suggest, the rivalry in the area between the great powers can, to some extent, lead to higher tensions between them in the Arctic in the future.

The risk of military confrontation in the Arctic is unlikely, although increased tension in the area is possible. The prime dispute revolves around the U.S.'s and Russia's views regarding the NSR. As Russia tries to claim that it alone has the right to control the route, the United States sees that true freedom of movement is a number one priority for internationally important waterways.

Tensions in some other parts of the world would raise tension in the Arctic as well. This kind of conflict could result in spillover from disputes in other areas gravitating into Arctic region. The traditional frontlines run between the United States and NATO vis-à-vis Russia and/or China. There is also a risk of conflict between Russia and China as well, if China believes it has the right to sail through the passages it sees as the property of mankind, or if it takes oil, gas, and minerals from the area it sees as belonging to no one particular, or it brings its navy to the Arctic to protect its interests.

It seems that the international community is not yet very well prepared to address the growing economic dynamics of the Arctic and the implications for security policy. In order to avoid any major problems and human disasters, the international community should take a much more active role in discussing possible dispute and security risk areas. Only by taking up possible problematic scenarios can these problems be solved, rather than dealing with them unprepared as they arise. It seems now that, only if a sudden disaster occurs will we see more development in Arctic capabilities especially in the United States.

5. IMPLICATIONS FOR FINLAND

Finland is a nonlittoral Arctic state, meaning it does not have an Arctic coastline. The great powers' interests in the Arctic would have more implications for Finland, if Finland were an Arctic coastal state. Still, the changes in the Arctic have security policy and economical implications for Finland. According to this study, the security implications create challenges and economic implications create possibilities for Finland.

Around one-fourth of Finland's territory is located north of the Arctic Circle. This area is sparsely inhabited, with less than 100,000 inhabitants.²⁶⁸ The Finnish Arctic is already now a popular tourism region. The Finnish Arctic also contains mining areas; thus, mining is likely to be more important in the future for Finland than it is today. Besides tourism and mining, agriculture is important for the inhabitants as well, and it will be affected by the climactic changes occurring in the Far North.

²⁶⁸ Lapland has a total of 183,000 inhabitants, but Rovaniemi, Kemi, Tornio and Ranua are located south of the Arctic Circle with total of 100,000 inhabitants. See more http://www.lapinliitto.fi/lapin_liitto/lappi_lukuina (in finnish).

In the Finnish government's white paper in 2012, besides the EU, for Finland, China, the United States, and Russia are seen as important.²⁶⁹ That is partly why it is important to know what the United States, Russia, and China are doing in the Arctic. The white paper also says that the importance of the Arctic's security policy is growing. The Arctic is seen as an area of low conflict, but with growing economic interests.²⁷⁰ As a small state, Finland generally supports the work done in international organizations, like the Arctic Council, Barents Euro-Arctic Council, and the IMO.²⁷¹ Moreover, the Arctic has never been as important in Finnish security and defense policy after the Second World War than it is today. This is clearly seen when comparing the Finnish government's white papers. For example, the rate in which Arctic issues are mentioned has increased: Arctic issues were mentioned on nine pages in the 2012 white paper compared to only one page in the previous white paper published in 2009.

Finland recognizes the Arctic's importance and published a first strategy for the Arctic region in 2010.²⁷² This strategy defines the goals of Finland's Arctic policy and means for their promotion. Even though it concentrated more on foreign relations than the newest strategy from 2013, it did not deal with military development and hard security issues in the Arctic. Ultimately, the first strategy was not very concrete, providing only for general measures. The latest strategy, which will be published in August 2013, will be much more concrete with several detailed tasks for different ministries and actors.²⁷³ With this strategy, Finland is trying to do a lot in order to develop its Arctic policy. As in the United States, Finland also needs to refocus on its Arctic policy and provide more resources and more attention to Arctic issues in order to achieve goals set in the Arctic strategy.

The Finnish Arctic is significant in Arctic geopolitics because it lies between an unstable Russia, a NATO-member (Norway), and nonaligned Sweden. In particular, the Finnish Arctic territory in Lapland lies near the energy-rich Barents Sea, an area which is an integral part of Russia's energy strategy. Further, Russia's NSR passes just north of Lapland, putting the area in question in direct contact with several geopolitically sensitive

²⁶⁹ Suomen turvallisuus- ja puolustuspolitiikka 2012. Valtioneuvoston selonteko. Valtioneuvoston kanslian julkaisusarja 5/2012, p. 9 (in Finnish).

²⁷⁰ Ibid, p. 12 and 64.

²⁷¹ Ibid, p. 64.

²⁷² See Finland's Strategy for the Arctic Region. Prime Minister's Office, 8/2010.

²⁷³ See Finnish Government's press release June 12, 2013. Arktinen Suomi –strategia, <http://valtioneuvosto.fi/ajankohtaista/tiedotteet/tiedote/fi.jsp?oid=388204> (in Finnish).

Arctic zones. To fully understand Finland's role within the Arctic in relation to the great powers of today, it is important to trace its role during the Cold War, from which many of today's solutions stem.

During the Cold War, changes in relations between NATO and the Soviet Union directly affected Finland's position and maneuverability to negotiate her position in the international arena. It was difficult for Finland to use leverage in the Cold War due to its physical position being so close to the Soviet Union. Unlike Norway, neither Finland nor Sweden joined NATO, partly due to their positions vis-à-vis the powerful state. Often, Finland and Sweden were seen as buffer states between NATO-affiliated Norway and the Soviet Union. Even though the Cold War is over, it does not mean that great power rivalry or even conflict is not possible. In today's world, as a member of the EU, Finland has a greater ability to negotiate its international position than during the Cold War. The security situation today is much better thanks to the NATO enlargement around the Baltic Sea and the collapse of the Warsaw Pact, reducing the tension and likelihood of conflict in the area. Due to these developments, it is difficult to foresee any military security threats for Nordic countries in the near future.

In evaluating military security threats it is necessary to understand that a "threat" is considered to be a multiple of capacity and intent. It is important for every sovereign country to follow other states' military capacity in its security policy environment. It is more important to know the security situation in the neighborhood where a state is vulnerable to sudden, direct military conflict, than in distant zones that would require time and effort to mount an attack. There are still considerable military capabilities in the Finnish neighborhood, and in particular, Russian capabilities appear to be growing in the Arctic. The other half of the threat equation, the intent, can change rapidly. That is why nobody can exclude the fact that even military conflicts involving Nordic countries are possible. Governments always have to prepare for the worst in order to be able to adequately protect their populations.

Even though the Nordic area would not be the primary location of an aggressive military action, tension or conflict between great powers in the Arctic would have a significant effect on Finland's security. It seems that Arctic challenges will be solved peacefully because states have such huge economic interests in the area and crisis would be very

expensive for everyone. But realism suggests that such violent encounters cannot be completely dismissed when developing a security policy.

As a sovereign country, Finland is responsible for the defense of its land, sea, and air area. Even though the most important Finnish areas (In terms of population, industry, and infrastructure) are in the south, the defense of the Arctic territory of Lapland should not be weakened in the future. The missile paths between the United States and Russia go over Finland as well. That is why developing a robust air defense is of great importance in defending Finnish sovereignty in the Arctic. Finland should also have ground troops, which could be projected to north Finland, in case of emergency. In this sense, it was a major decision that the Arctic Brigade in Sodankylä should continue its activities even as the Finnish defense forces undergo a huge reform in the years to come.

As noted before in this study, according to realist theory, nation states will try to benefit from the new Arctic situation as much as possible, and they will protect the national interests they see as important. With this in mind, it is likely that the international community will see some increasing military presence of the Arctic before the 2020s. Due to the increasing rates of Arctic ice melt, the Arctic will be more important for the great powers in 2020s than it is in the 2010s. It is anticipated that Russia will be as active as it can, because it believes it will benefit the most from Arctic change. Russia will attempt to get more money from Arctic energy products: historically, any surplus finances tend to be directed to the military. It is likely that more military activities will occur in the Arctic in the future. This increased activity is predicted mainly to involve naval and air forces. For Finland, it is important to follow through with military development in the Kola Peninsula. The stability of that area is one of Finland's key interests as it is located just behind the Finnish border.

Despite the military development, the military implications of Arctic change should not be overestimated. The main implication of Arctic change is not military. As human activities in the Arctic increase, the surveillance of territorial waters and EEZs will gain more attention. At the same time, there is an increasing need for SAR and environmental protection in the area. These types of operations will require an accurate estimation of the Arctic security environment and an accurate situation picture of the actors operating within it. Implications regarding the need for international cooperation in SAR, research, transport and cross-

border work, and interagency cooperation between different authorities and different Arctic actors are much more important in the immediate future than implications stemming from Arctic military development.

Possible small-scale problems should be resolved by cross-border cooperation. More cross-border exercises are needed so that Arctic states have readily available plans on how to act in different situations, for example, in environmental accidents and SAR-tasks. The Finnish authorities should develop plans for different worst-case scenarios. International cooperation and open dialogue in the Arctic is essential in the future in order to avoid misunderstandings. Finland, not being an Arctic littoral state, could propose the creation of additional fora to discuss military and security matters between the Arctic states in order to increase stability in the area. The Arctic chiefs of defense have had yearly meetings since spring 2012. The last two-day meeting was in Greenland in June 2013. This kind of exchange of information among the Arctic states' armed forces on a regular basis is a good example of the new approach in dealing with emerging issues, especially because the Arctic Council is unable to discuss security policy matters.

Military capabilities are valuable when we look at the possible disputes and safety problems created by increased drilling, shipping, fishing, and tourism in the future. For example, in SAR-related activities, military "know-how" is essential. In possible environmental accidents, military capabilities in the Arctic will be required. The military also has a lot of different equipment that can be used to support other authorities in SAR-situations, natural disasters, and various humanitarian activities. It is likely that nonmilitary actors' capabilities will be limited in dealing with a situation in the vast and hostile Arctic. Militaries control usable material, including airplanes in reconnaissance tasks, helicopters in transport or SAR tasks, transport vessels and aircraft, radios and other communication devices, as well as trained and equipped personnel capable of operating in the harsh Arctic environment.

In the long run, there should be more exercises as well, where Finnish Defense Forces could exercise with different Arctic forces in support of other authorities in possible scenarios. Cold Response is a great example of a military exercise that demonstrates training with different Arctic actors in order to be able to operate together in the Arctic.

Coordinating with volunteers for air-policing in Iceland is another way of improving this kind of cooperation among armed forces.

The Arctic region's extreme climatic conditions and lack of satellite communications make it challenging to operate in the region. Surveillance arrangements in the Arctic could be one area where Finland could act as an example for the international community. Finland has good experiences to share already in the Baltic Sea with regard to how different authorities and states can cooperate in a confined region. The extreme Arctic temperatures have the potential to influence any operation and require specific training, which Finnish forces have already undertaken.

Finland has significant experience in operating in hard winter conditions. This is not the case for many other Arctic countries, particularly in the United States.²⁷⁴ Operations in the Arctic require special cold-weather gear, tactics, techniques, procedures, and especially training for the armed forces. In Finland, the military is used to operating in cold weather circumstances. Finland's Arctic Brigade (Jääkäriprikaati) in Sodankylä constantly tests and develops new methods, procedures, and gear for hard winter conditions. Finland airmobile special forces training center in Utti (Utin Jääkärirykmentti) also specializes in performing in severe conditions. They are able to operate even when the outside temperature is as low as -40 Celsius. Also the Finnish Navy and Air Force are prepared for cold-weather operations. This training in operating in cold climate conditions is a tangible resource Finland could offer to other Arctic nations.

Besides military development in the Arctic, the region should provide fodder for Finnish decision makers from the economic point of view. Finland is a leading country in many Arctic technologies, fighting oil catastrophes in the ice conditions, leading winter vessel traffic, and undertaking winter maritime security and winter weather and ice forecasts. Finland's Arctic expertise and research are internationally recognized. These endeavors should be supported in the future so that they can be advantageous for Finland as conditions in the Arctic develop.

²⁷⁴ See for example Kraska, James, "The New Arctic Geography and U.S. Strategy," *Arctic Security in an Age of Climate Change*, p. 263.

In the future, more and more international trade will pass near Finland. New shipping routes and the exploitation of natural resources are an opportunity for Finland. In the best case, the nation could be a central traffic hub between Europe and Asia. Finland should benefit from this possibility by investing in Northern Finland's transport routes and logistics. The distance to the Barents Sea from Lapland is not long, but the roads are too narrow and a rail connection is lacking. Finland does not have good connections to the Barents Sea and its ports, like Murmansk and Troms. The new shipping routes could benefit from the Finnish connections, such as a rail connection from Kolari or Rovaniemi to Norway. This would shorten transports from Asia to Finland and to Baltic Sea states significantly. Now, the ships have to pass Norway and the Straits of Denmark before entering the Baltic Sea. The ports in north Norway are always ice free, contrary to the Baltic Sea's ports. Connection through Finnish Lapland would save considerable expense and time, and making transport safer to and from Asia. Further, it would also bring new working places to Finland.

The Nordic countries should also cooperate with one another more than the current standard in order to speed up projects that would be useful in developing their Arctic areas and connections to the NSR. In Finnish Lapland, new mineral fields are being found all the time. Potential resources in the Arctic are growing. It is thus likely that the mining business will bring many more employment opportunities and revenue in the future. When the mining industry and Arctic shipping routes become more important, it is valuable to be proactive and to invest in logistics so that the minerals can be shipped to world markets. This endeavor will require enhanced Nordic cooperation.

The above-mentioned survey result that all Arctic nations seem to prefer working with Scandinavian countries is welcome news for Finland. The nation should be active in reaching out to potential partners and follow the Arctic situation carefully. Finland should be prepared to act as a negotiator between the great powers in case of possible disputes, since it would be a desirable arbiter between them. To be prepared for this occasion, Finland might need a special interagency working group to follow developments in the Arctic, to enable government and nongovernmental actors to have the highest-quality information available for assessment.

In case of problems concerning operations in severe ice conditions, Finland has extremely good icebreakers. The problem if something were to happen is, of course, the issue of response time. It would inevitably take a long time to transfer icebreakers from Finland to the area of distress. Finland could advertise its capabilities in building quality icebreakers. When shipping in the Arctic increases, it is likely that more icebreakers will be needed despite the decreased extent of the sea ice.

For Finnish industry, cooperation in the Arctic can create significant opportunities. There could be joint procurement activities, for example in SAR equipment, navigational aids, satellite communications, icebreakers, or other Arctic ships. Finland should look for these opportunities and develop its capabilities.

Finland should work out in detail and clarify its short-, medium- and long-term strategic and economic interests in the Arctic. The new role of the Arctic as a huge energy province and transport corridor implies that the stakes are high for all of the involved parties, and none of the Arctic states seems to be willing to offer substantial concessions to their neighbors in the name of regional stability. This may point towards an increase in the level of interstate tension. Finland should continue to be active in the Arctic Council. This regional arrangement is important for interaction and cooperation among Arctic states on issues of common concern.

6. CONCLUSIONS AND POLICY RECOMMENDATIONS

The retreat of the Arctic sea ice will most likely accelerate in the coming years. This opens new possibilities for extracting oil, gas, and minerals from previously inaccessible areas in the Arctic. New shipping routes will be opened and tourism and fishing will move further north. Even though the security policy situation will be more demanding in the future than it is today, the biggest challenges are not related to security issues, but to environment problems, pollution, SAR, and other challenges that arise when more ships and people are moving in a vast area with poor communications.

In the United States, the energy revolution will decrease the need for still relatively expensive Arctic energy for a while. This is not the case in Russia and China, where there is a growing need for more energy from the Arctic. The United States will get more cheap

energy from shale oil and shale gas during at least the next 50 years than from the Arctic. Russia will benefit the most from the new situation in the Arctic. For Russia, new possibilities for extracting energy products are important for economic and military development. For Russia, the all-important NSR might be usable for shipping several months a year well before the 2020s well north of the 200 nautical mile border. If so, Russia is not going to benefit so much from the fees it has been planning to collect.

China will try to use the new situation in the Arctic to get access to as many oil and gas fields as possible to attempt to satisfy its increasing demand for energy. The NSR is of great importance for China in its trade with Europe. Most likely, there will be more Chinese ships in the Arctic in the near future. This may cause tension between the great powers.

The new shipping routes are to be used in coming years, but it seems that the traffic will not expand as rapidly as some have thought because of the continued harsh conditions. Shipping is likely to grow steadily during in the coming ten years; after that, how the future shipping volumes on the NSR might look should be reassessed. Considering how fast the changes have come in the last ten years, there could be new developments that might alter the timeline for increased shipping traffic that cannot be predicted from the current conditions.

There will be some increasing military presence in the Arctic. Russia will concentrate more capabilities on the Kola Peninsula and along the NSR in order to protect this vital area of energy resources. As power politics still count, Arctic rivalry among the great powers will occur to some extent. Most likely, this will not lead to any military conflicts. It is more probable that environmental problems, some increased tension between actors, and safety problems and rescue tasks related to more shipping, energy drilling, increased tourism, and fishing will arise. These are challenges all the Arctic actors should focus their resources on and increase cooperation with each other so that development in the Arctic will be under control and major disasters can be avoided.

Based on this study, the policy recommendations and the main implications of this Arctic change for Finland are:

1. Closely follow military developments in the Arctic region.
2. Maintain surveillance and defensive capability in the Finnish Arctic.
3. Develop interagency cooperation in order to support other authorities in possible Arctic disaster scenarios.
4. Form an interagency (including private sector) Arctic group to follow Arctic development and make recommendations for action as the Arctic develops.
5. Take part and organize cross-border exercises and cooperation in preparing for possible safety and security challenges in the Arctic.
6. Follow the development of the NSR shipping volumes in order to be able to evaluate the possible Finnish contribution to taking part in its development and the technology needed.
7. Make a study that evaluates in the long term what infrastructural changes should be made in the Finnish Arctic in order to utilize the development subsequent to the melting of the sea ice.
8. Evaluate how Finnish expertise and knowledge of the Arctic can be used in the different areas of Arctic development.
9. Continue dialogue with all parties acting in the Arctic.

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