

Report on Arctic Policy



International Security Advisory Board

September 21, 2016

Disclaimer

This is a report of the International Security Advisory Board (ISAB), a Federal Advisory Committee established to provide the Department of State with a continuing source of independent insight, advice, and innovation on scientific, military, diplomatic, political, and public diplomacy aspects of arms control, disarmament, international security, and nonproliferation. The views expressed herein do not represent official positions or policies of the Department of State or any other entity of the United States Government.

While all ISAB members have approved this report and its recommendations, and agree they merit consideration by policy-makers, some members may not subscribe to the particular wording on every point.



United States Department of State

Washington, D.C. 20520

September 21, 2016

MEMORANDUM FOR UNDER SECRETARY GOTTEMOELLER

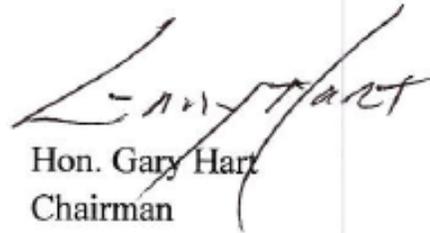
SUBJECT: Final Report of the International Security Advisory Board (ISAB) on Arctic Policy

I am forwarding herewith the ISAB's report on Arctic Policy. The report responds to your request of April 7, 2015 that the Board undertake a study of Russia's interests, intentions, and capabilities as it has been increasing its presence – both military and civilian – in the Arctic. The report was drafted by members of a Study Group chaired by Gen. Lester Lyles (USAF, Ret.) and was reviewed and approved by all ISAB members by September 16, 2016.

The report recommendations address the following matters: 1) Continue U.S. leadership in the Arctic; 2) Speed ratification of the United Nations Convention on the Law of the Sea (UNCLOS) as an urgent imperative for U.S. national interests; 3) Advance increased “presence” and “domain awareness” in the Arctic region; 4) Increase and continue cooperation among the Arctic nations; 5) Adopt appropriate policies regarding Russian interests, policies, and activities in the Arctic; and 6) Strengthen possible ‘Transparency and Confidence Building Measures’ in the Arctic region.

Among other recommendations, this report calls for renewed or expanded contacts, exchanges, and co-operation on certain Arctic issues with Russian experts in science and areas like search-and-rescue (SAR), and, in some cases, military and security forces, as well. While the Board believes taking the steps specified would serve our national interest generally and the advancement of our Arctic policies in particular, the timing and in some cases the extent and character of their implementation will require a further assessment of their merits within the broader context of U.S. policy toward Russia.

The report is intended to inform a broad audience within the United States and beyond. The Board stands ready to brief you and other members of the Administration on the report.

A handwritten signature in black ink, appearing to read "Gary Hart", is written over a vertical line. The signature is stylized and cursive.

Hon. Gary Hart
Chairman
International Security Advisory Board

INTERNATIONAL SECURITY ADVISORY BOARD

Report on

Arctic Policy

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ISAB Report on Arctic Policy

I. Overview/Executive Summary (Study Objectives and Recommendations)

The Arctic region has become one of the most important areas of interest in the world, and a popular topic of discussion both nationally and internationally. The advent of the United States' two-year term of leadership of the 'Arctic Council' in 2015, along with concerns about climate change that, among other critical effects, has resulted in dramatic melting in the polar ice, explains some aspects of the growing American interest in the Arctic. However, this fact is intertwined with major concerns with the activities that Russia has undertaken in the Arctic over the last few years. Trying to understand Russia's interests, intentions, and capabilities in the Arctic and how the United States should respond to them are a primary focus of this study by the International Security Advisory Board (ISAB).

There are news articles in the media almost daily about the Arctic region – from the impacts of climate change; to planned cruise ship trips through the Northwest Passage (NWP) made possible by the decline in the ice; to the challenges of drilling for oil in the Arctic; and to concerns about the buildup of Russian military facilities and capabilities along Russia's northern borders. Human activities have grown in the Arctic by almost 400% in the last decade because of shipping, mining, energy exploration, fishing, and tourism.

The eight Arctic Council nations – Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States – have facilitated several agreements to promote greater cooperation in this important region. These include:

- Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic;
- Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic; and
- Ongoing negotiations for an Agreement on Enhancing International Arctic Scientific Cooperation.

There are clearly major benefits to the United States, in both public and private sectors, from this cooperation, which also extends to several other countries. This cooperation should be augmented to the extent possible and consistent with American and global interests.

At the same time, however, the growing presence and activities of Russia have raised concerns within the United States and among other Arctic nations:

- A significant growth in Russia's military presence, base infrastructure, and personnel in the Arctic;
- Ambitious attempts to assert through various international channels its legal claims, some of which are inconsistent with U.S. – and many other nations' – positions on the relevant provisions of the UN Convention on the Law of the Sea; and
- An expressed desire to exploit the diminishing polar ice cap by encouraging transit through the Northern Sea Route (NSR), critical parts of which Russia claims as internal waters, thus enabling Russia to charge transiting ships and on which it might impose other conditions.

The Terms of Reference of this ISAB study focused on the impacts of these various activities, especially Russian activities and intentions, and directed the ISAB to:

- Examine Russia's interests in the Arctic, including the economic impact of the NSR; development of oil and gas fields; and mining and fishing activities;
- Assess the geopolitical, economic, military, and environmental factors which should be considered in shaping U.S. Arctic policy;
- Determine the possible reactions of the other Arctic states and factors that guide their responses in order to operationalize current Arctic nation agreements; and
- Define 'Confidence Building Measures' which could enhance transparency and cooperation among the Arctic States as they implement their operational plans in the Arctic and as other non-Russian Arctic States deal with Russia's growing presence and activities.

To address these important and complex topics, the ISAB Arctic Policy Study Group conducted extensive discussions and other communications with as many stakeholders affected by the Arctic region as possible, including representatives

from the other Arctic nations. Their inputs, plus the inputs of U.S. government officials from all engaged agencies and experts from academia and think-tanks, formed the basis of our Arctic Study Recommendations.

Our Arctic Study Recommendations fall into six major categories: 1) Continue U.S. leadership in the Arctic; 2) Speed ratification of UNCLOS as an urgent imperative for U.S. national interests; 3) Advance increased “presence” and “domain awareness” in the Arctic region; 4) Increase and continue cooperation among the Arctic nations; 5) Adopt appropriate policies regarding Russian interests, policies, and activities in the Arctic; and 6) Strengthen possible ‘Transparency and Confidence Building Measures’ in the Arctic region.

This report addresses each of the areas requested in the Terms of Reference and provides the rationale and findings for our Arctic study recommendations. The Board recognizes that some of the recommendations in this report involve activities/issues that are within the jurisdiction of U.S. government Departments/Agencies other than the U.S. Department of State. The Board believes that the Department of State needs to be a strong advocate regarding these activities/issues within the U.S. Government.

Some of the recommendations in this report call for renewed or expanded contacts, exchanges, and co-operation on certain Arctic issues with Russian experts and, in some cases, also Russian military and security forces. The Board believes taking the steps specified would serve our national interest generally and the advancement of our Arctic policies in particular, and the Board has previously indicated its view that appropriate military-to-military contacts are in our national interest.¹

That said, the Board recognizes that any increase in current levels of cooperation with Russian governmental entities and security and military organizations, specifically, needs to be considered in the context of overall U.S. policy decisions taken in response to Russia’s actions in Crimea and other parts of Ukraine. The National Defense Authorization Acts for fiscal years 2015 and 2016 restrict U.S.-Russia military contacts as part of the U.S.-led effort to sustain international sanctions and restrictions on a range of engagements with Russia. Accordingly, implementing the recommendations in this area would require an assessment, not

¹ U.S. Department of State, *International Security Advisory Board: Report on U.S.-Russia Relations*, December 9, 2014 at <http://www.state.gov/t/avc/isab/234902.htm>.

only of the merits of the particular interactions at issue as a matter of Arctic policy, but also of whether the particular steps are appropriate in the broader context of U.S.Ukraine policy and other aspects of U.S. policies toward Russia. That assessment would require analysis of the effect of implementation on Russian and other foreign perceptions, progress (or lack thereof) in implementing the Minsk II Agreement, and potential impact on U.S. efforts to persuade other countries to maintain sanctions and to continue implementing other relevant measures. These Ukraine and other related factors would need to be considered and balanced against the advantages in the strictly Arctic context of the steps proposed.

The Board has not, in this study, considered this broader assessment from the perspective of U.S.Ukraine policy to be within its purview. That being so, our recommendations should be understood as being made on the assumption that the actions proposed will have been judged to justify an exception to the policy of limiting exchanges with Russian security and military organizations, or that the Ukrainian situation has changed so that the policy is itself changed.

In preparing this Study the Board has been aware of the U.S. Department of Defense effort to update its 2013 *Arctic Strategy*, as required by Section 1068 of the National Defense Authorization Act for Fiscal Year 2016.

II. Importance of the Arctic to the Arctic States and to the Broader International Community

In 2014 and 2015, the rate of warming in the Arctic was twice that of the rest of the world, a phenomenon known as Arctic amplification. This rate of climate change is significantly faster than had been expected earlier in the decade, *making the demands to mitigate and prepare for the catastrophic effects of climate change increasingly urgent*. Arctic amplification will speed up the rate of Arctic ice loss and melting of the Greenland ice sheet. This will result in a more rapid sea-level rise earlier than expected, causing much-increased concerns for coastal, and particularly low-lying, states. It will also exacerbate and increase the frequency of extreme weather and accelerate the release of carbon from defrosting permafrost, thereby contributing to the rise in global temperature, already projected at 1.5 degrees Fahrenheit by the year 2100. At the same time, in addition to these negative environmental impacts, melting ice induced by climate change will also

lead to economic and commercial opportunities, such as new trade routes and accessibility to oil and gas resources.

The Arctic Council's policy on the Arctic includes protecting indigenous populations; preserving marine environments and biodiversity; combating climate change that causes extreme weather patterns; and maintaining safety in the region, particularly as air and maritime traffic increases.

Since the founding of the Arctic Council in 1996, the importance of the region has evolved for each of the Arctic states – the United States, Canada, Russia, Norway, Denmark, Iceland, Sweden, and Finland. Other regional and emerging powers increasingly aspire to exert influence in the region. Significantly, the Arctic Council doubled the number of observer states in 2013 from six European countries – the United Kingdom, Germany, the Netherlands, Poland, France, and Spain – to include China, Italy, India, Japan, South Korea, and Singapore. Although not yet observer states, Turkey, Mongolia, Switzerland, and Greece have requested observer status.

The importance of the region varies widely among non-Arctic states. For example, shorter trade routes provided by access through the Arctic will benefit export-driven countries, while diversified energy resources will help countries meet their domestic demands. Some countries view their role in the Arctic as a means to enhance their standing in the international community – meaning exerting themselves as regional powers or securing seats in negotiations that could benefit them economically – or to develop bilateral relationships. For a variety of reasons, there is a risk of increased tensions between Russia and other Arctic Council states. Russia may be less cooperative on issues of environmental protection since the effects of climate change sometimes have economic benefits, including expanded use of the Northern Sea Route (NSR) for trade and access to new oil and gas resources, that will help Russia, as well as other countries, meet domestic demands. All states will have to reconcile environmental protection and sustainable development with their economic interests.

Arctic Council Member States

All eight Arctic Council member states have territory north of the Arctic Circle. Five are considered coastal states, sharing a coast with the Arctic Ocean – the United States, Canada, Russia, Norway, and Denmark.

The United States

The United States places a high priority on the protection of indigenous people in Alaska, maritime governance and security, and research on climate change; particularly the impacts on fisheries and the environment in Alaska. It is also hedging by conducting various presence activities in the region. There is potential for the United States to benefit economically and commercially from the region beyond what it already enjoys. For instance, melting Arctic ice will allow for greater use of the Northwest Passage, which can provide a trade route between the U.S. east and west coasts as an alternative to the Panama Canal and between northeast Asia and northeastern North America. However, rough conditions make it less viable than other routes, and, currently, the United States lacks the necessary infrastructure, particularly icebreakers and ports, to support any substantial commercial use of the Northwest Passage. The United States currently only has two functional icebreakers – one heavy icebreaker that can break up to 6-foot-deep ice at 3 knots and ram 21 feet of ice, and one medium icebreaker that can break up to 4.5-foot-deep ice and ram 8 feet of ice. It plans to acquire one more in 2020, and the U.S. Coast Guard has proposed leasing icebreakers from private American and Canadian companies to meet anticipated demands.² Portions of the outer continental shelf in Alaska contain approximately 27 billion barrels of oil and 131 trillion cubic feet of natural gas.³ Although the United States has imposed a block on oil exploration, should environmentally-responsible access to hydrocarbon resources be feasible and future U.S. hydrocarbon demand increase, the United States could be interested in accessing these resources.⁴ The United States could also potentially benefit from tourism opportunities and, once activity in the region

² The U.S. Coast Guard determined in 2015 that it would need three heavy and three medium icebreakers to meet anticipated demands in the Arctic and Antarctica. It has considered leasing these icebreakers from private American or Canadian companies, similar to how the National Science Foundation leases its research icebreaker, the *Nathaniel B. Palmer*.

³ Bureau of Ocean Energy Management, *2017-2022 Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program*, January 2015, p. 5-9.

⁴ "Interior Department cancels Arctic Offshore Lease sales," U.S. Department of the Interior, October 16, 2015.

accelerates, from investments in Arctic infrastructure such as a forward base for the Coast Guard, ports and harbors, research facilities, and search-and-rescue centers.

Canada

Canada has the largest landmass in the Arctic, and more than 100,000 Canadians reside there. Supporting development and protecting indigenous populations is therefore important to Canada. However, given that maintaining and exerting control over its Arctic territory is a symbol of Canada's sovereignty, the country's top Arctic priority is security, particularly hedging against Russian ambitions, and it regularly conducts military exercises in the Arctic. Canada also claims control over the Northwest Passage, which the United States considers international waters, and it could potentially seek to collect fees from vessels moving through the passage. Similarly, it wants to improve air and sea transportation to encourage investment and trade in the region. Canada has invested in its ports in hopes of increasing exports and trade with other northern ports.⁵

Russia

Russia encompasses over half of the Arctic coastline, 40% of the land beyond the Arctic Circle, and 42% of the population.⁶ Russia has claimed that the Arctic is a “strategic resource base of the Russian Federation providing the solution of problems of social and economic development of the country.”⁷ There is potential for Russia to be less cooperative in some areas with Arctic states, where its economic interests take precedence. While many countries have expressed interest in extracting energy resources from the Arctic, 20% of Russia's gross domestic product (GDP) and exports – mostly oil and gas – already comes from the Arctic.⁸ With an economy that relies heavily upon hydrocarbons, Russia is a leading investor in energy development in the region. Between 5% and 9% of Russia's

⁵ *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad*, Government of Canada, 2013.

⁶ Joan Nymand Larsen and Gail Fondahl (eds.), *Arctic Human Development Report*, Norden, 2014, p. 101.

⁷ *Principles of the State Policy of the Russian Federation in the Arctic Until 2020 and Future Perspectives*, Russian Federation, adopted September 18, 2008, published March 30, 2009.

⁸ Heather A. Conley and Caroline Rohloff, "The New Ice Curtain: Russia's Strategic Reach to the Arctic," Center for Strategic and International Studies, August 2015.

http://csis.org/files/publication/150826_Conley_NewIceCurtain_Web.pdf

liquid hydrocarbon resources and almost 12.5% of its gas resources are contained in the Russian Arctic shelf. Forty-three of the sixty-one large oil and natural-gas fields in the Arctic are located in Russia. Russia has also stated that it will use the Northern Sea Route – the Arctic shipping lane that connects the Arctic and Pacific Oceans, also known as the Northeast Passage – as a “national” transport route. This would be the shortest maritime route between the Eastern and Western parts of Russia; it also plans to expand air routes. Maintaining security⁹ through a military presence in the Arctic, particularly as traffic in the NSR increases, is important to Russia, given its territorial and maritime claims, plus military policies in the region. Russia maintains major military forces in the Arctic and those have recently been more active than in the past. It has already equipped six new military bases in the region, both on its shores and on outlying Arctic islands. Russia's pursuit of economic benefits in the Arctic could have severe consequences for the environment, potentially creating tension with other Arctic States which are working to protect the environment or mitigate climate change. However, to make optimal use of these resources will require Western technology and investment. Russia first pursued partnerships with France and Norway, but must now look elsewhere so long as sanctions remain in place. Even after sanctions were lifted, investors would be concerned about whether Russia’s legal and political systems would be safe for their investments.

Nordic States

The Nordic states coordinate with one another to take a collective voice on Arctic issues that they agree upon, but they also pursue their independent interests in the region. Given Norway’s and Denmark’s Arctic coastlines and the close proximity of Iceland, Sweden, and Finland to the Arctic Ocean, maintaining security in the region is a priority for the Nordic States. As a result, they have prioritized maritime security, expressing the need for a legal agreement to govern the Arctic. They also agree on the importance of protecting indigenous populations, which reside in all Nordic countries except Iceland. However, while the Nordic states would benefit from shorter trade routes and increased port traffic, the economic importance of the Arctic varies by state.

⁹ “Security” here is differentiated from potential Russian ambitions versus other Arctic nations that could develop a military component.

Norway

Norway has serious security concerns regarding Russia, to which it has responded both in diplomatic and military terms. It also has one of the largest Arctic indigenous populations of the Nordic states, and therefore, like other states, has a vested and long-standing interest in protecting their rights and culture. In addition to recognizing the need to mitigate the consequences of climate change in the Arctic, Norway is pursuing its economic interests. It has claimed that “development of the High North” has been its top foreign policy priority since 2005 and now considers Arctic Norway to be a “fully-fledged petroleum province.” The country has already begun energy exploration efforts in the Arctic, with its petroleum industry increasingly shifting north. Norway has expressed interest in utilizing the Arctic for shipping and has committed to developing a transport system in North Norway to connect northern countries with the global market. Given that Norway's Arctic coast will see increased maritime traffic, security of the region is important to it, and it has vowed to expand its military presence. It has also invested in infrastructure in its Arctic areas, including airports, hospitals, and expanded satellite communications. As development continues, Norway also hopes to utilize its business sector's offshore drilling technology and expertise in managing natural resources, fisheries, and Arctic tourism.

Denmark

For Denmark, a priority of maintaining security in the Arctic has led it to authorize an Arctic military command. It has also expressed an intent, as the ice cap melts, to establish a naval presence in Greenland and the Faroe Islands, both of which are Danish territory although they have substantial autonomy in matters other than defense and foreign affairs. Denmark has significant potential economic benefits in Arctic development. It has already permitted Chinese investments in Greenland, which could utilize its potential for energy and resources and in the long run increase some Chinese influence there. There are also additional opportunities for resources and investment in the Lomonosov Ridge, or encompassing the North Pole, which Denmark claims is on the continental shelf connected to Greenland, though Russia claims it is part of the Siberian continental shelf.

Denmark is concerned about how best to maintain security and defense, for which it is responsible, in an increasingly autonomous Greenland. Local Greenlandic officials have welcomed economic investments from countries such as China, and mineral and energy resources will become more accessible as Arctic ice continues to melt.

Finland

Like Norway, Denmark, and Sweden, Finland has increased concerns about Russia's military buildup along its eastern periphery, where Russia has built up its military presence, and has conducted regular air exercises. The country has numerous business opportunities, given its experience in Arctic maritime technology and shipping, sustainable mining, and energy. It has also expressed concern for the Sami indigenous peoples, who inhabit the northern parts of Norway, Sweden, Finland, and Russia, stretching into the Arctic.¹⁰

Sweden

Sweden has businesses already operating in the Arctic, primarily in the mining sector, and already benefits from Arctic tourism, which it hopes to expand. As investment in the Arctic grows, Sweden hopes to contribute its expertise in research and development in Arctic environments, shipping, and energy extraction.¹¹

Iceland

Iceland, which does not have a military, has faced Russian incursions into its airspace in recent months. In response and as part of the overall U.S. reaction to revived Russian military activity, the United States deployed Air Force combat aircraft to Iceland in 2016.¹² On June 29, 2016, Iceland signed a new defense cooperation agreement with the United States, under which Iceland agrees to continue to permit U.S. forces to use Icelandic facilities and the United States commits to maintain a "resilient" defense plan for Iceland.

¹⁰ "Finland's Strategy for the Arctic Region 2013," *Government Resolution 16/2013*, Office of the Prime Minister of Finland, August 23, 2013.

¹¹ *Sweden's Strategy for the Arctic Region*, Government Offices of Sweden, 2011.

¹² The long-standing deployment of U.S. military aircraft was ended, for budgetary reasons, in 2006.

Additionally, Iceland already relies on Arctic resources for fishing, tourism, and energy production, and it has stated that it could offer expertise on oil extraction, mining operations, and Arctic technology.¹³

Finland, Sweden, and Iceland could benefit economically from the Arctic, and have all welcomed Chinese investment in the region, in hopes that their ports will serve as trading posts for Chinese trade and as a way to cooperate on energy-source exploration.

Arctic Council Observer States

Seven European and five Asian countries comprise the Arctic Council observer states. Five of the European countries have official Arctic strategies – the United Kingdom, Germany, the Netherlands, Poland, and Italy. France and Spain have not yet released formal policies. In recent years, the Council has expanded its observers to include regional and emerging powers that are not geographically close to the Arctic, including China, Japan, South Korea, Singapore, and India. For growing economies, the Arctic has opportunities to help them meet their demands for energy resources. For export-dependent countries, new trade routes through the Arctic could help or hurt their economies. Moreover, for regional powers, such as South Korea and India, just being at the negotiating table could enhance their international standing and influence among world powers, while increasing domestic popular support.

United Kingdom

The United Kingdom (UK), the “Arctic’s nearest neighbor” among Arctic Council observer states, considers itself a research expert, particularly on climate change; it established a station in Svalbard in 1991 and operates two to three Arctic research cruises per year. The UK also has many commercial opportunities in the Arctic. The UK ports and shipping industry will likely benefit from expanded trade routes, and a growing tourism industry for Britons traveling to the Arctic provides an opportunity for business development. As the UK seeks to transition toward a low carbon economy, it will become increasingly reliant upon natural gas imports, primarily from Norway, to meet its energy security demands. Finally, the UK has

¹³ A *Parliamentary Resolution on Iceland’s Arctic Policy*, Iceland Ministry of Foreign Affairs, approved March 28, 2011.

promoted itself as a "centre of commercial expertise" on insurance and risk management, maritime management, and hydrocarbons and mineral extraction, and it hopes to increase business opportunities for British companies in the Arctic.¹⁴ As a NATO member, a major North Atlantic oil producer, and operator of one of the largest militaries in Europe,¹⁵ the UK has responded to the Russian military buildup by somewhat increasing its own defense budget and operations, including to its north.

Germany

Germany shares with other coastal states concern for the effects of melting Arctic ice and calculates that it will see rising sea levels on its shores on the North and Baltic Seas. As one of the largest shipping nations, routes through the Arctic would trim travel time and thus costs, while reducing dependence on pirate-ridden routes through the Indian Ocean. Energy exploration in the Arctic is also important to Germany as it relies heavily upon imported energy, with Norway as a primary supplier of oil and gas. As the European Union seeks to reduce greenhouse gases to 5% of 1990 levels by 2050, Germany may seek to increase oil and natural gas imports from the Arctic through Norway.¹⁶ Additionally, Germany has an established mining sector and hopes to lend its companies' expertise and technologies to Arctic development.

Netherlands

Similar to Germany, the Netherlands is concerned with potentially rising sea levels that have implications for its coast and ports. However, the Arctic is important for commercial reasons as well. Arctic resources will be important to the Netherlands' energy security, as it is increasingly dependent on foreign gas and oil imports due to declining gas reserves. As trade via the NSR increases, the port of Rotterdam could potentially be used as a storage port for oil.¹⁷ Additionally, the Netherlands hopes new business opportunities in the Arctic will make use of its expertise in

¹⁴ "Adapting to Change: UK policy towards the Arctic," UK Foreign and Commonwealth Office, 2013.

¹⁵ In defense spending, the UK is second only to Russia in Europe (2015 figures). See International Institute for Strategic Studies, the Military Balance, 2016 at: <https://www.iiss.org/-/media//images/publications/the%20military%20balance/milbal2016/mb%202016%20top%2015%20defence%20budgets%202015.jpg?la=en>.

¹⁶ Mia Bennet, "Norway and Germany discuss Arctic energy cooperation," Foreign Policy Association, February 22, 2013.

¹⁷ Malte Humpert, "Arctic Shipping: An Analysis of the 2013 Northern Sea Route," in *Arctic Yearbook 2014*.

land reclamation, maritime, and offshore technologies, resource extraction, pipelines, shipbuilding, and fisheries.

Poland

Poland has stated that it has “neither vital nor direct political and economic interests in the Arctic,” but views the region as important to maintaining national security and enhancing its international standing among other European states. In particular, along with other European countries, it has a shared concern about Russian military ambitions in the region. The country sees opportunities for Polish businesses in the Arctic regions of Norway, Iceland, and Greenland for the mining, construction, energy, communication technology, and research and development sectors. Polish exploration companies are already operating in the Barents Sea and Greenland, and the country has expressed an interest in enhancing opportunities for smaller supply companies and contractors. Development in the Arctic will also have commercial benefits for Poland’s leading Arctic-equipped shipbuilding industry, and its major Baltic port of Gdansk for transit between Europe and Asia. In the long-term, Poland hopes to expand its fishing industry by securing opportunities in the Barents Sea and, potentially, the waters surrounding Iceland and Greenland.¹⁸ The country has also expressed concern for indigenous populations, as Polish immigrants reside in the Arctic.

Italy

Italy does not have a formal strategy for the Arctic. However, like others, Italy could benefit from oil and gas resources and has stated it could contribute its experience with geothermal energy.¹⁹ Numerous Italian companies are operating in the region, including energy company Eni, which opened the northernmost offshore oil platform in 2015.²⁰ Italy has also collaborated with Russia to build a drillship capable of operating in ice up to 1.5 meters thick. It is expected that

¹⁸ Michal Luszczuk, et al., “Poland’s Policy towards the Arctic: Key Areas and Priority Actions,” *Policy Paper No. 11 (11)*, The Polish Institute of International Affairs, May 2015.

¹⁹ “Towards an Italian Strategy for the Arctic National Guidelines,” Ministry of Foreign Affairs and International Cooperation, 2015.

²⁰ Eric Sylvers, “Italy’s Eni Plans to Pump Arctic Oil, After Others Abandon Field,” *Wall Street Journal*, November 23, 2015, online, <http://www.wsj.com/articles/italys-eni-set-to-begin-arctic-oil-quest-even-as-others-abandon-field-1448274602>.

similar deals will be made in the future, subsequently benefiting Italy's shipbuilding industry.²¹

France

France has not established formal policies governing its strategy in the Arctic, insisting instead that it has no strategic interest and its engagement is to promote the greater global good. The Arctic is still important to France for environmental and commercial reasons, and it has long invested in research in the region. Major French corporations are currently active in the Arctic, including in the oil and gas and tourism sectors; a French cruise company was the first to traverse the Northwest Passage from Greenland to Siberia in 2015.²² Because of French business operations and the country's proximity to Nordic states, maritime safety and security is also of great importance. France has also spearheaded European Union policy in the Arctic, emphasizing the need to balance protecting the environment with benefiting from sustainable economic opportunities.

Spain

Spain has not released a strategy for the Arctic. However, it could benefit commercially from development of the Arctic. The NSR could shorten shipping distances from Asia to Spain, which has a major port for container traffic.²³ The country may also have an interest in Arctic fisheries as it has the largest fishing industry in Europe, where current stocks are declining.²⁴

China

China does not have a formal Arctic strategy, but has referred to itself as a “near-Arctic” state. The country has a long-term, strategic objective of pursuing economic development and growth in the Arctic. However, its pursuit of energy resources conflicts with efforts to protect the environment and mitigate the effects of climate change, which will be significant for China. Climate change in the

²¹ Atle Staalesen, "Italian Arctic strategy unfolding in Russian oil," *Barents Observer*, November 29, 2013, online, <http://www.barentsobserver.com/en/energy/2013/11/italian-arctic-strategy-unfolding-russian-oil-29-11>.

²² "Arctic Cruise Ship First for France," *The Maritime Executive*, September 21, 2015, online, <http://www.maritime-executive.com/article/arctic-cruise-ship-first-for-france>.

²³ Container port traffic, World Bank, 2013, accessed April 1, 2016; and Sung-Woo Lee and Ju-Mi Song, "Economic Possibilities of Shipping through Northern Sea Route," *The Asian Journal of Shipping and Logistics*, Vol. 30, No. 3, December 2014, pp. 415-430.

²⁴ "Fishery statistics," *Eurostat*, updated June 2015, accessed April 10, 2016.

Arctic has affected climatic conditions in China, resulting in extreme weather, including flood threats to Chinese coastal cities and adverse effects on food production. However, economic opportunities in the Arctic are important to China in the short-term, as sea and air routes would allow for expanded shipping to markets in Europe and North America. In the long-term, China could benefit from access to resources, including oil, other hydrocarbons, minerals, and fisheries, and expanding its tourism and bioprospecting industries to the region. Physical access to the region is also intrinsic to expanding the coverage of its BeiDou navigation satellite system. Finally, many U.S. officials and academics suspect that part of China's expressed interest in the Arctic is to exert influence as a rising regional power, through partnerships with Arctic countries and a presence in the region, in order to pursue its economic interests and political influence.

Japan

For Japan, routes through the NSR could shorten trade route travel time to Europe by 40%, compared to current routes through the Suez Canal.²⁵ The Arctic also provides an opportunity to develop oil and gas fields, which have been increasingly in demand as alternatives to nuclear power in the post-Fukushima era. Japan, however, like other countries that do not have territorial or maritime claims in the Arctic, faces barriers to oil and gas development due to maritime border disputes between Arctic countries, such as the United States and Canada in the Beaufort Sea, and Denmark and Canada regarding Hans Island.

Additionally, the warming of sea temperatures could cause fish populations to migrate north to the central Arctic Ocean and help to sustain the Japanese fishing industry. Security in the Arctic is of increasing importance to Japan, particularly as China and South Korea, two countries with which Japan has ongoing disputes in the East and South China Seas, increasingly devote resources to, and express interest in, the Arctic.

Republic of Korea

The Republic of Korea (ROK) recognizes the importance of developing the NSR and Arctic Ocean in order to realize the country's "creative economy" by securing new energy sources and potentially using the NSR for shipping. As a country

²⁵ "Japan's Arctic Policy," Office of the Prime Minister of Japan, October 16, 2015.

dependent on imported energy, the potentially-reduced prices for Arctic oil and gas shipped to East Asia by the NSR are promising. Additionally, given that exports account for more than 50% of the country's GDP, the NSR could shorten the shipping distance for ROK products to Europe and eastern North America.²⁶ An added advantage for the ROK's involvement in Arctic issues is increasing its role as a regional power among Asian countries.

Singapore

Singapore's involvement in the Arctic is expected, given its active role in global governance regimes for maritime management, including the International Maritime Organization (IMO). As a low-lying country, Singapore's highest point sits just 164 meters above sea level, and it is therefore concerned, like other countries, about rising sea levels as Arctic ice melts. It expressed in 2013 that "The melting of the Arctic sea-ice can pose a threat to our survival."²⁷ However, Singapore has stated that the Arctic is important for reasons other than physical security. It is currently a key shipping port on the trade route between East Asia and the Mediterranean through the Suez Canal, but its status is threatened. As the melting of Arctic ice in warmer months creates longer navigational seasons for ships using the NSR (or the NWP) the opportunity to cut transit times from Asia to Europe by some 30%-40% would eventually lead to a reduction in shipping through the Strait of Malacca, bypassing Singapore.²⁸ Singapore could also benefit economically from development in the Arctic. It has claimed that its experience with and knowledge of energy-efficient methods, responsible shipping regulations, shipbuilding, offshore drilling technologies, and marine engineering could be useful for states developing the Arctic and would subsequently benefit Singapore's economy. It has already invested in Arctic infrastructure by collaborating with an Alaskan company to develop the Port of Adak into an international shipping hub and by selling two icebreakers to Russia.

²⁶ World Bank, "Exports of goods and services (% of GDP)," online, accessed April 9, 2016, <http://www.data.worldbank.org/indicator/NE.EXP.GNFS.ZS>.

²⁷ Visit of Senior Parliamentary Secretary for Foreign Affairs and Culture, Community and Youth Mr. Sam Tan to Reykjavik, Iceland from 11 to 14 October 2013, Singapore Ministry of Foreign Affairs, October 14, 2013.

²⁸ Ian Storey, "Russia's Arctic shipping ambitions go off course," *The Straits Times*, February 16, 2015, online, <http://www.straitstimes.com/opinion/russias-arctic-shipping-ambitions-go-off-course>.

India

India has stated that its “interest is purely scientific,” but it would gain many commercial and economic benefits from engaging in the Arctic. The country is the fourth largest energy consumer worldwide and, although its energy sector is growing, it will not keep pace with modernization and economic growth. Energy use has nearly doubled since 2000, and it risks shortfalls in coming years that could decelerate economic growth.²⁹ India has much to gain from diversifying and reducing dependence on its energy sources through hydrocarbon exploration, on which it has offered to collaborate with five Arctic countries. As an emerging power, engaging in the Arctic also strengthens India’s international standing and influence.

Aspiring Arctic Council Observer States

Turkey, Mongolia, Switzerland, and Greece have submitted candidatures for the Arctic Council, all of which are pending. These countries do not have formal Arctic strategies, but will each be impacted by climate change and, for Turkey, Switzerland, and Greece, the outcome of negotiations in the Arctic could potentially have implications for trade routes or energy and mineral resources. Switzerland reiterated the shared concern of many states in protecting indigenous populations and cited its historical role as an advocate for them. Turkey and Greece so far have primarily energy-resource and commercial concerns relating to the Arctic. Russian President Vladimir Putin cut off 60% of Russia’s energy supply to Europe in reaction to sanctions, causing crises in Greece and Turkey and requiring them to find alternative energy suppliers.³⁰

Other Multi- and Inter-National Institutions

Nine inter-governmental and inter-parliamentary organizations and eleven non-governmental organizations have observer status at the Arctic Council, all of which promote protection of indigenous populations, environmental protection, biodiversity, or sustainable development.³¹ The European Union (EU) has

²⁹ *India Energy Outlook*, International Energy Agency, 2015, p. 19.

³⁰ *Arctic Perspectives*, p. 61.

³¹ The nine inter-governmental and inter-parliamentary organizations include: International Federation of Red Cross and Red Crescent Societies (IFRC), International Union for the Conservation of Nature (IUNC), Nordic Council of Ministers (NCM), Nordic Environment Finance Corporation (NEFCO), North Atlantic Marine Mammal

requested, but not yet been granted, observer status. Regardless, the EU has its own Arctic strategy. Aside from being a venue for intergovernmental collaboration, it prioritizes the importance of protecting and preserving indigenous populations, some of whom reside in the Arctic regions of member states, and promoting sustainable development.³²

NATO also recognizes the importance of the Arctic. NATO Allies would be concerned with any security threat in the Arctic. Norway has expressed an interest in a more active NATO role in the Arctic, but so far no action has been taken, largely because of competing priorities like the Baltic and Canadian preference that Arctic military issues be handled bilaterally.

In addition to the UN agencies that serve as Arctic Council observers, the International Maritime Organization (IMO) is considered the appropriate venue through which to establish a Polar Code for maritime safety and security in the Arctic. The IMO is a specialized UN agency responsible for the safety, security, and environmental standards for international shipping.³³

Other forums focus specifically on issues such as indigenous populations, private sector engagement, and science. The Barents Euro-Arctic Council is an inter-governmental institution that includes all of the Arctic Council members except the United States and Canada, plus the European Commission. The group's primary interest is to protect and promote the sustainable development of indigenous Arctic populations.³⁴ The International Arctic Science Committee was created to facilitate and promote state cooperation on scientific research in the Arctic. Effective cooperation could help states limit the negative environmental impacts of their Arctic activities and understand how climate change will affect their interests.

Commission (NAMMCO), Standing Committee of the Parliamentarians of the Arctic Region (SCPAR), United Nations Economic Commission for Europe (UN-ECE), UN Development Program (UNDP), UN Environment Program (UNEP); The eleven NGOs include: Advisory Committee on Protection of the Seas (ACOPS), Arctic Institute of North America (AINA), Association of World Reindeer Herders (AWRH), Circumpolar Conservation Union (CCU), International Arctic Science Committee (IASC), International Arctic Social Sciences Association (IASSA), International Union for Circumpolar Health (IUCH), International Work Group for Indigenous Affairs (IWGIA), Northern Forum (NF), University of the Arctic (UArctic), World Wide Fund for Nature-Global Arctic Program (WWF).

³² EU Arctic Policy, European Union External Action, accessed April 10, 2016,

http://www.eeas.europa.eu/arctic_region/.

³³ "Introduction to IMO," International Maritime Organization, accessed April 10, 2016,

<http://www.imo.org/en/About/Pages/Default.aspx>.

³⁴ "The Barents cooperation," The Barents Euro-Arctic Group and International Barents Secretariat, updated October 31, 2013.

Finally, the Arctic Economic Council facilitates business activities in the Arctic and responsible economic development. It works closely with the Arctic Council to provide a business perspective, and is a forum for its members, which include companies in the mining, shipping, and development sectors, in order to share best practices, policies, information, and technologies.³⁵

Non-state Actors

Recognizing that the importance of the Arctic stretches beyond nation states, former Icelandic President Olafur Ragnar Grimsson established the Arctic Circle in 2013 – an NGO that strives to engage business and political leaders, scientists, indigenous communities, and other international partners on challenges posed by climate change in the Arctic. It is more encompassing than the Arctic Council and provides a forum for discussion on commercial and economic challenges, such as shipping infrastructure, oil and gas drilling, fisheries, tourism, and business cooperation.

Private companies, primarily in the oil and gas industry, are already engaged in the Arctic and view the region as strategically important for their corporate growth. For example, petroleum companies ExxonMobil and Russia-owned Rosneft signed a strategic cooperation agreement in 2011 and have since formed ten joint ventures for oil exploration and production in the Russian Arctic, Black Sea, and Western Siberia.³⁶ China has also invested significant sums in LNG extraction and processing in Russia's Yamal Peninsula.

III. Russian Objectives, Developments, and International Relationships in the Arctic

In reviewing relevant sources and numerous interviews with those involved in Arctic issues, it is clear to the Board that Russia has strong and unique Arctic interests, as it controls over 50% of the Arctic coastline.³⁷ This gives Russia both a geographical position and solid reasons of national interest to extend its influence

³⁵ "About Us," Arctic Economic Council, accessed April 10, 2016, <http://www.arcticeconomiccouncil.com/about-us/>.

³⁶ "Russia," ExxonMobil.com, accessed April 10, 2016, <http://www.corporate.exxonmobil.com/en/company/worldwide-operations/locations/russia/about/overview>.

³⁷ Conley, Heather A. and Rohloff, Caroline. "The New Ice Curtain." Center for Strategic and International Studies, 2015. p. VII . http://csis.org/files/publication/150826_Conley_NewIceCurtain_Web.pdf

and – to the extent it can – control over the Arctic. Russia has major military interests and activities in the Arctic through strategic assets based in the region and the operations they conduct. Russia also views its Arctic coastline as a valuable source for natural resources, a potentially important shipping route, a major fishing zone, and a future generator of increased revenues through several means, both directly from extraction of oil and other resources and from revenue derived from the Northern Sea Route (NSR), including from taxing by transit fees shipping passing through the NSR, as well as from providing infrastructure and support services along the route.³⁸ Despite current declining economic activity in the Arctic (due to slumping oil prices and difficulties regarding foreign investment), Russia has a great economic stake there, since 20% of its GDP is produced north of the Arctic Circle).³⁹ Moreover, Russia regards influencing, even dominating, the Arctic as an important element of re-asserting its national pride and identity and its leading international role.

Hydrocarbon harvesting, fishing, and, at some point in the future, user fees (for icebreaker escort) and other NSR-related income will be the primary sources of Russia’s revenue in the Arctic.⁴⁰ Russia claims that it has increased its military presence in the region to protect these revenue streams and economic interests, although there is some doubt as to the validity of this claim. Some view this military increase as another of President Putin’s demonstrations that Russia is a major power, increasingly determined to challenge the West. However, this increased military presence has yet to rise to the level of the military strength that the USSR maintained there during the Cold War, even as recently as the 1980s. During the 1990s and early 2000s, there was significant deterioration of its military assets, including in the Arctic, and Russia’s military presence, despite recent increases in force levels and operational tempo, is still well below the levels of the late Soviet era.⁴¹

³⁸ Russia considers the NSR to be “internal waters” subject under international law to its full sovereignty and jurisdiction. The United States (consistent with its position vis-à-vis the similar Canadian claim with respect to the Northwest Passage) insists that the NSR passes through “international straits” open to navigation on a high seas basis. The effect of the NSR passing through “internal waters” would be that Russia could not only exact transit fees but could also legally block passage altogether when it chose to do so, e.g. closing the NSR to foreign naval vessels or to commercial vessels of certain nations.

³⁹ Laruelle, Marlène. *Arctic 2014: “Who Gets a Voice and Why It Matters.”* Wilson Center, 2014. 1-4.

⁴⁰ *Ibid.* 7, 11, 59.

⁴¹ Conley/Roholff, *Ibid.*

With diminishing sea ice due to climate change, the NSR is becoming increasingly navigable, and Russia sees this both as an economic boon and as a potential security vulnerability. Consequently, the impact of climate change is starting to become a principal driver of Kremlin policy in the Arctic.⁴²

Russia has continued to attempt to expand its legal claims in the Arctic including through established channels – such as the United Nations Convention on the Law of the Sea (UNCLOS) and the International Maritime Organization (IMO). In particular, in August 2015, in order to expand its Exclusive Economic Zone (EEZ) Russia filed with the UNCLOS Commission on the Limits of the Continental Shelf its claim to an “extended continental shelf” reaching far to the north.⁴³ *Russian engagement in this forum and the use of the provisions of UNCLOS demonstrate the significant problems for U.S. interests that arise from not having ratified UNCLOS – and hence having no say in UNCLOS’ deliberations. UNCLOS has been a long debated topic (30 years plus) in Congress, and, despite support from several administrations of both parties and both the U.S. Navy and Coast Guard, it has proved impossible to obtain the two-thirds vote needed for the Senate to consent to ratify it. The conventional wisdom is that, given the current political atmosphere, there is probably little hope of success in the near future. However, it is the view of the Board that failure to ratify UNCLOS, with the result that we are one of the few nations in the world that is not a full party, remains a self-imposed strategic vulnerability and undercuts significant U.S. national economic and security interests. Our security interests, like our economic, environmental, and legal interests, would be served by ratification of UNCLOS, and obtaining the necessary bipartisan support should be a high national security priority for the next administration – and for the next Congress.*

Russia has invested heavily in its infrastructure in the Arctic, far more than has the United States. For example, it now has about 40 icebreakers and an extensive system of deepwater ports and other facilities in the region. This investment reflects its anticipation of taxing transiting ships and deriving income from NSR-

⁴² Olofinskaya, Natalia et al. “Integrated Climate Change Strategies for Sustainable Development of Russia’s Arctic Regions.” Moscow, 2009. 1-19. This analytical study has been prepared by a team of Russian experts and consultants on Moscow’s UN Development Programme in Russia.

⁴³ It is important to recognize that Russia’s claim is only to continental shelf status beyond what it would be entitled to under other continental shelf determination rules, not “territorial sea” status, much less full sovereignty or “possession.”

related services, which requires that the NSR be viable and that in turn requires an ample supporting infrastructure for transits. By contrast, the United States has two heavy polar icebreakers, only one of which is operational.⁴⁴ The United States is, and will remain, woefully short of icebreaking potential, even with requested (but so far not approved) budgeting for a third ship. While this disparity is startling (and to some degree reflects the facts of geography and population distribution), considering Russia's huge Arctic coastline and potential investment, it will always outrank any other Arctic nation in this category. However, it is also important to note that most of Russia's icebreakers (including those that are nuclear-powered) have been in service for several decades.

In addition to the region's importance to Russia's other interests, the Arctic is a major focus of Russian military efforts, as will be detailed, below. Russia's 2014 *Military Doctrine* declares that the Russian military must protect Russia's national interests in the Arctic. Reflecting this mission, Russia's Arctic region is home in its "fortified zone" to one of Russia's main concentrations of military units.⁴⁵ A key element of this concentration is the Northern Fleet, the mission of which is described by the Ministry of Defense (MOD) as fourfold – protection of Russia's naval strategic forces, of its economic interests in the northern regions, of safety of navigation, and advancing Russia's foreign policy interests.⁴⁶ A new Northern Joint Strategic Command headquartered in Murmansk, equivalent to a military district, has been established to coordinate operations of the various services with forces in the region.⁴⁷

To execute those missions, the Russian Federation has continued the Soviet Union's Cold War practice whereby the most powerful of Russia's four fleets is the Northern Fleet.⁴⁸ To that fleet are assigned 42 of Russia's 72 submarines,

⁴⁴ O'Rourke, Ronald. "Coast Guard Polar Icebreaker Modernization: Background and Issues for Congress." Congressional Research Service, 2016. 1-43. Check this CRS study for more in-depth icebreaker numbers, (i.e., public vs. privately owned, number of icebreakers in other countries). <https://www.fas.org/sgp/crs/weapons/RL34391.pdf>

⁴⁵ The mission of protecting the borders is assigned not to the military but to the Federal Security Service (of which the Russian Coast Guard is a part), in line with the FSB's general border control responsibilities.

⁴⁶ <http://www.eng.mil.ru/en/structure/forces/navy/associations/navy/north>.

⁴⁷ M. Bodner, "Russia's Polar Pivot," *Defense News*, March 11, 2015; <http://www.globalsecurity.org/military/world/Russia/vo-northern.htm>.

⁴⁸ Russia is also expanding the capabilities of its Coast Guard (a part of the Border Guards Service) planning to build at least seven new icebreakers, ten new SAR stations, and the "Project 22100 border patrol ships with a displacement of 2700 tons. *Defense News*, *Op.cit.*

including 8 of its 13 ballistic missile submarines (SSBNs), 4 of its 9 cruise missile submarines (SSGNs), and 38 major surface combatants, including Russia's largest aircraft carrier, the *Kuznetsov* and the large cruiser *Pyotor Veliki*.⁴⁹ SSBNs assigned to the Northern Fleet account for 80% of Russia's submarine-launched ballistic missile (SLBM) arsenal. These naval assets are based in Murmansk, Severodvinsk (which is also the location of Russia's main submarine-building yard), and other ports in the Barents and White Seas. Of course many of these vessels are not based in the Northern Fleet for Arctic strategic/security purposes, but rather relate to Russia's engagements more broadly – e.g. its SSBNs.

These naval deployments are supplemented by substantial air, air defense, and brigade-level ground units, including augmented special forces units, based in the Kola Peninsula and islands in the region and in other locations in the north of Russia. Air bases in the Kola Peninsula that were decommissioned in the drawdown of the Russian military with the end of the Cold War have been reopened and a new base established in the New Siberian Islands. Shore-based anti-ship missile systems have been upgraded and are being exercised.⁵⁰ Ten new air-defense radar stations are being constructed. These expanded military operations in the Arctic have not been limited to the Barents area, but have included activities in other parts of the Russian north farther to the east.

The operational concept of the Northern Fleet is that of the “bastion,” that is, concentrating Russian strategic submarines in these waters and using nuclear-powered attack submarines (SSNs) and surface (as well as air) assets to protect them against any potential effort by U.S. and other NATO Anti-Submarine Warfare (ASW) campaigns and potentially to deny the United States or NATO access to the region as a basis for operations against the Russian mainland.⁵¹

In line with the general revival of Russian military operations in recent years, the forces in the region have increased operational tempo and conducted major exercises and simulations, some of which included a nuclear element.⁵² For

⁴⁹ It is not clear how many of these ships are fully operational. The Russian Navy is still in the process of overhauling and recommissioning vessels taken out of service in the '90s but sometimes counted in its tabulations of order of battle. [Http://www.russianships.info/eng/today](http://www.russianships.info/eng/today).

⁵⁰ <http://arctic.ru/infrastructure/20160323/321682.html>

⁵¹ Y. Goleta, “Safeguarding the Arctic,” 6m *Russia in Global Affairs 100* (Jul-Sep 2008).

⁵² Conley, Heather A. and Rohloff, Caroline. “The New Ice Curtain.” Center for Strategic and International Studies, 2015. p 79. http://csis.org/files/publication/150826_Conley_NewIceCurtain_Web.pdf

example, in March 2015, an exercise in the Barents Sea involved 41 warships, including 15 submarines, 38,000 ground troops, and 110 aircraft.⁵³ President Putin has personally observed a Northern Fleet exercise.⁵⁴ Aerial surveillance missions, some of which penetrated into, or came close to, the air space of neighboring nations or were flown in Air Defense Identification Zone (ADIZ) areas without transponders operating, have also increased.⁵⁵ Submarines from the Northern Fleet have conducted operational patrols from their bases in the region on a scale rarely seen since the Cold War. These have not been confined to the “bastion” but have included patrols through the so-called Greenland-Iceland-United Kingdom (GIUK) Gap into the North Atlantic.⁵⁶ These activities reflect the generally more ambitious scale of Russian military, and particularly naval, operations but have not restored the levels of activity maintained prior to 1991.

These activities serve to assert Russian sovereignty in the region and to demonstrate its ability to defend against perceived (or imputed) NATO and U.S. threats.⁵⁷ They also serve the critical direct military functions of protecting the patrol areas of Russia’s submarine-launched ballistic missile force, providing a secure venue for training and testing, and defending against any U.S. or NATO effort to attack Russia from the region.

In many respects, these military activities by Russian forces in the Arctic are simply the sort of things that any similarly-situated nation would undertake consistent with its military resources – to defend a major source of resources and revenues, protect the survivability of a key element of its nuclear deterrent, and assert its sovereignty. They are also elements of a return to a prior level of activity after the hiatus following the collapse of the Soviet Union as additional resources for all military purposes become available to the Kremlin. In this sense, the Russian military effort in the Arctic is defensive – to forestall successful U.S. and NATO operations in the region, should such be mounted in a hostile environment,

⁵³ <http://barentsobserver.com/en/security/2015/03/northern-fleet-put-full-combat-alert-exercise-16-03>.

⁵⁴ [Hhttp://www.pulseheadlines.com/tensions-russia-rise-arctic-circle/4377/\(photo of Pres. Putin with MOD on board Pyotor Veliki\).](http://www.pulseheadlines.com/tensions-russia-rise-arctic-circle/4377/(photo%20of%20Pres.%20Putin%20with%20MOD%20on%20board%20Pyotor%20Veliki))

⁵⁵ [Http://www.usatoday.com/story/news/world/2014/08/07/russia-bombers-arctic/13746681/](http://www.usatoday.com/story/news/world/2014/08/07/russia-bombers-arctic/13746681/)].

⁵⁶ “Russia Bolsters Its Submarine Fleet,” *New York Times*, p.1, April 20, 2016.

<http://www.nytimes.com/2016/04/21/world/europe/russia-bolsters-submarine-fleet-and-tensions-with-us-rise.html>

⁵⁷ Russia has also expressed concerns about “non-Arctic” nations’ activities in the region, which may reasonably be understood as a reference to Chinese expressions of interest in the region.

and to ensure the survivability of Russia's sea-based nuclear deterrent. There is, for example, no doubt that the Russians view their submarine bases at Severomorsk and elsewhere in the region as a strategic deterrent asset that they will protect at all costs.

However, these increased activities also reflect a more assertive and ambitious policy and a shift away from a focus on political and administrative decentralization within Russia and cooperation with other Arctic states. It is almost always difficult to distinguish "defensive" and "offensive" military potential. For example, by denying NATO an option to conduct military operations in the Arctic, in the event of a conflict engaging NATO and Russia, the latter would enhance its flexibility to engage in other theaters. Russia's recent significant increase in submarine patrols through the GIUK Gap demonstrates that it is going to flex its military muscle as a demonstration to NATO and the United States. Russia's Arctic facilities would support its operations, chiefly by submarines, in the North Atlantic, and Russian Arctic deployments provide local superiority that is a potential threat to the interests of Nordic countries, including NATO ally Norway.

However, Russia's military buildup in the Arctic must compete for funding and assets with other theatres of operation, especially the operations in Crimea, elsewhere in Ukraine, and Syria.⁵⁸ Given Russia's precarious economic condition, resulting from falling oil prices, inflation, and EU/NATO sanctions, maintaining the recent pace of increases in operations in the Arctic would pose a significant challenge for Russian planners and budgeters. That said, given the recent tensions between NATO and Russia's forces in Eastern Europe, Russia both fears NATO expansion into the Arctic and regards a strong Russian military posture in the region as supporting its overall military potential.

U.S. and Other Nations' Military Activities in the Arctic

Russia is by no means the only nation that conducts military activities in the Arctic. For their part – and in response to the revived but still-limited Russian

⁵⁸ Conley/Rohloff, *Ibid.* p. IX. This piece details Russia's military buildup over the past decade. http://csis.org/files/publication/150826_Conley_NewIceCurtain_Web.pdf

military effort in the Arctic – the United States and other NATO nations, notably the UK and Norway, have identified the northern seas as a significant theater. The U.S. Navy’s Arctic Road Map designates the region as an area for “undersea and air operations.”⁵⁹ Russia has alleged that U.S. submarines have been detected in Russian-claimed territorial waters in the Barents Sea⁶⁰ and in “military training zones.”⁶¹ As with all submarine operations, the U.S. Navy has said little publicly about its activities in the region. However, the Navy has stated that on two occasions in the early 1990s, U.S. and Russian submarines collided in the Barents Sea.⁶² U.S. submarine patrols in northern waters have been described as “routine,”⁶³ and the Navy has made public announcements of under-ice operations by nuclear submarines.⁶⁴

Other NATO nations also operate in the region. Norway has shifted the allocation of its naval and other forces northward and conducted exercises in Finnmark.⁶⁵ The UK Royal Navy has resumed submarine operations in the Arctic after a decade-long hiatus.⁶⁶ Arrangements are being made with Iceland for continued and expanded security cooperation, including resumed ASW surveillance flights from Keflavik.⁶⁷

These activities reflect that the United States and some other NATO members have important strategic and military interests in the Arctic. To protect their interests, the United States (and NATO) need to continue to conduct appropriate military and intelligence operations in the Arctic and to avoid agreements or practices that would compromise that ability. More specifically:

- From the perspective of both immediate Arctic interests and global precedent, the United States should not accept claims by Russia (or anyone else) of sovereignty or littoral state jurisdiction beyond those

⁵⁹ U.S. Navy Arctic Roadmap 2014-2030, p. 18. http://www.navy.mil/docs/USN_arctic_roadmap.pdf

⁶⁰ <http://www.rt.com/news/179216-us-submarine-russian-waters/>.

⁶¹ “U.S. and Russian Subs in Collision In Arctic Ocean Near Murmansk ,” New York Times, March 23, 1993, www.nytimes.com.

⁶² http://www.Latimes.com/1993-03-23/news/mn-14205_1_barents-sea.

⁶³ <http://www.Marinelink.com/news/deployment-completes396880.aspx>

⁶⁴ <http://www.Military.com/daily-news/2016/03/04/us-conducts-submarine-drill-in-arctic.html>] USN operations in the Arctic may be expanded to include more substantial air activity. *Navy Times*, Feb. 11, 2015.

⁶⁵ G. O’Dwyer, “Norway Prioritizes High North Equipment,” *Defense News*, March 11, 2015

⁶⁶ <http://www.royalnavy.mod.uk/news-and-latest-activity/news/2016/april/08/160408-submariners-get-stuck-into-arctic-role>

⁶⁷ <http://thebarentsobserver.com/security/2016/02/us-military-returns-iceland>

- established in international law. (This means, for example, rejecting excessive Russia “internal waters” claims.)
- The United States has an interest in maintaining its rights under international law to freedom of navigation, including for the conduct of legal military operations in the waters north of Russia. (This means exercising recognized rights to freedom of navigation operations by naval units.)
 - While direct United States- (or NATO-) Russia conflict remains highly unlikely, in the event of such a conflict, the Arctic could be a theater of operations. (This means that the U.S. military needs to be prepared in terms of planning and training for such operations – which will continue to require training and other preparations for operations in Arctic conditions.)
 - For the same reason, the United States has a requirement for collection of intelligence relevant to the region. (This means both conducting necessary intelligence efforts and rejecting Russian political and legal efforts to constrain them.)

At the same time, *the United States has a very strong interest in seeking to ensure that Russian and U.S. military activities in the region do not increase tensions and the risk of unintended conflict*, including those risks arising from collisions, buzzing of aircraft/ships, or other incidents that would add to tensions and could even result in unintended conflict. Accordingly, the United States should:⁶⁸

- Make clear that although Russia has been increasing its military presence in the Arctic – and holding exercises – we do not view this as a direct threat to the United States, at least not at this time.
- Continue to abide by the 1972 Incidents at Sea Agreement⁶⁹ and recognize (and insist) that it applies fully to both Arctic naval operations

⁶⁸ As argued above, engagement with Russia on Arctic issues, as on other matters, must, of course, take into account the need to continue to impose costs for the Russian invasion of Crimea and support for separatists in eastern Ukraine. However, in many respects – particularly avoiding unwanted escalation resulting from incidents – this engagement comes under the basic principle that engagement and cooperation should continue in areas where the United States has a strong positive reason for cooperation with Russia.

⁶⁹ Agreement Between the Government of the United States of America and the Government of the Union of Soviet Socialist Republics on the Prevention of Incidents On and Over the High Seas (May 25, 1972).

by the United States and to Arctic-based naval operations by Russia beyond the GIUK Gap.

- Take the initiative to enhance and establish similar standards and procedures with respect to air operations.⁷⁰

IV. Other Arctic State Objectives, Developments, and International Relationships in the Arctic

Most U.S. Arctic interests that have a security impact involve Russia rather than other nations. However, in many if not most cases, advancing and protecting U.S. security in the Arctic context requires cooperation and accommodation with most if not all other Arctic nations – and in some instances with states that are not Arctic nations in the geographical sense, but have or assert Arctic interests. Moreover, there are situations in which the United States and countries other than Russia have differences of view that can have security implications.⁷¹

The list of U.S. national interests in the Arctic, as set out in the 2013 *U.S. National Strategy for the Arctic Region*, include, under the general category of “national security,” adequacy of infrastructure and capabilities, “domain awareness,” freedom of air and sea navigation for both commercial and military purposes, and promotion of energy security. Other listed interests also have potential security implications, including pursuing international agreements to enhance security, accession to UNCLOS, and cooperation with non-Arctic countries with interests in the region.⁷²

Like all broad policy documents, the Arctic Strategy’s catalog of interests and means to advance them includes (without explicit acknowledgement) individual interests that are to some degree in tension with each other. This is true in the security context as well as in others. In most cases, these tensions arise from the fact that the United States is both a regional and a global power and so has global perspectives on security issues and a military with global reach – which is not the

⁷⁰ See Section V, below, for discussion of these issues.

⁷¹ “Security” does not mean only military security, but includes dealing with differing strategic and major economic interests and/or ambitions of one or more of the Arctic Council members.

⁷² National Strategy for the Arctic Region, May 2013 at www.whitehouse.gov/sites/default/files/docs/nat_arctic_strategy.pdf. Please also note National Security Presidential Directive (NSPD-66)/Homeland Security Presidential Directive (HSPD-25), January 9, 2009 at https://www.nsf.gov/geo/plr/opp_advisory/briefings/may2009/nspd66_hspd25.pdf

case for other Arctic and Arctic-interested powers. Even where friends and allies share common security interests, they may have views on priorities and means that diverge from those of the United States. For example, some courses of action that would promote regional cooperation and international agreement on Arctic issues would pose (at least) problems for U.S. interests in freedom of navigation.

Freedom of navigation and sovereignty issues can present conflicts with the views of other states, sometimes with allies and friends. There are cases where there are differences in the priority that the United States and another state give to their interests in non-security areas such that, from the U.S. point of view at any rate, accepting their priorities could raise U.S. security-related and non-security-related concerns.

Canada

Canada is one of our closest allies. We cooperate closely with Canada on a bilateral basis on many Arctic security-related issues, including through the North American Aerospace Defense Command (NORAD), which is the joint U.S.-Canadian headquarters with the mission of protecting the North American continent from attack, especially from the north, and that maintains surveillance of military activities in the Arctic. Moreover, our two nations generally have common perspectives on security, for example on Russia's international activism and its invasion of Ukraine. In particular, Canada has been a strong supporter of a robust response to Russia's seizure of Crimea and its sponsorship of separatists in eastern Ukraine. It has suspended military-to-military contacts, although (like the United States) it has a strong interest in cooperation and transparency *vis-à-vis* Russia on Arctic issues.

At the same time, Canada espouses some positions on sovereignty, law-of-the-sea interpretations, and environmental, energy, and regulatory policies that pose freedom-of-navigation (FON) concerns for the United States. In particular, Canada has advanced ambitious – some would say assertive – claims on inland

waters, baselines, extent and attributes of EEZ and continental shelf status, and its regulatory jurisdiction as a littoral power.⁷³

These Canadian claims challenge U.S. positions on, among other things, FON rights, and the United States regards significant elements of these Canadian positions as inconsistent both with our security interests and with U.S. positions on law-of-the-sea questions.⁷⁴ Two of the more important differences arise from the Canadian assertion that most of the openings between islands that are critical to use of the Northwest Passage are internal Canadian waters and are not (as the United States claims) traditional international straits, and Canada's insistence that it has the authority – in order to implement Canadian environmental and other regulatory policies – to require compliance with Canadian notification, inspection, and other regulatory regimes. In a significant number of cases, the United States regards Canada's positions and claims as beyond Canada's rights under international law, e.g. on the standards for determining what is an international strait or the scope of authority derived from EEZ and continental shelf status, and/or international rights of innocent passage and/or with the reach of littoral states' regulatory jurisdiction associated with their EEZs.

In many cases, these differences raise highly-technical and much-controverted issues of the law-of-the-sea and resource allocation. But they have a serious non-technical dimension. For Canada, establishment of sovereignty in the vast northern region is important for both strategic interests and reasons of national pride (and, indeed, assertion of its national independence from its huge southern neighbor). Moreover, Canada understandably believes it has a real and unique interest in the protection of its northern environment, in the priority for Canada in commercial exploitation of resources in the north, in advancing the role and living conditions of indigenous peoples, and in other respects to which its legal claims are relevant. For the United States, by contrast, acceptance of Canada's legal positions would in many cases, quite apart from impact on economic activity, not only restrict U.S. military operations in the region but, perhaps more serious, create precedents that

⁷³ Some of these positions are based on Canada's reading of general LOS doctrines; others derive from Canada's interpretation of the applicability and effect of the special UNCLOS rules (in Article 234) relating to "Ice-Covered Areas."

⁷⁴ There is also an unresolved issue of the appropriate boundary between and the northward extent of respective United States and Canadian continental shelves north of the U.S.-Canada border in the far north.

would impede the United States in resolving similar law-of-the-sea disputes in other bilateral contexts.

This ISAB review has not attempted to examine the merits of these questions or even to suggest appropriate courses of action. It is sufficient to say that both Canada and the United States have very strong interests in not letting these differences interfere with the strong relationships between them in a wide range of fields and particularly in regard to security. It is equally important to acknowledge that, while many of the Arctic-related issues are detailed and technical, they do present real problems and involve real interests for both countries and have the potential to affect both overall relations and cooperation on specific areas, including security. For that reason, U.S. policy for the Arctic with respect to Canada (and of course for other bilateral situations where we have differences with generally friendly nations) needs to strike a careful balance between compromising important United States interests, on the one hand, and creating tensions with Canada that could threaten the overall relationship, on the other.

In the future, striking the correct balance may become even more important as climate, technological, and political changes increase the saliency of Arctic issues both generally and in the security area specifically. In an important sense, these sorts of questions can only be dealt with on their own terms as they arise, and cannot be resolved definitively short of a major – and for both nations a difficult and unlikely – decision to compromise. In practice, the United States and Canada have over the years had a good deal of success in handling these issues.

Comprehensive resolution is in any case difficult if only because the two nations have in some respects starkly different perspectives on their significance. For Canada, the status of its claims in the North presents not only practical issues, but also involves questions of national identity and dignity. For the United States, in many instances – particularly with respect to law-of-the-sea issues – compromise with Canada, even on terms that would meet most practical U.S. needs in strictly bilateral terms, would entail accepting as precedential legal standards that could jeopardize critical U.S. FON interests in other, non-Canadian contexts where the depth of common interests, good will, and security links that might make a

particular resolution operationally and otherwise acceptable in the bilateral U.S.-Canada case are entirely lacking.⁷⁵

Broadly speaking, managing these issues requires each country to avoid elevating them to a level of intensity and the invocation of prestige and pride, where they become major symbolic conflicts instead of real, but limited, differences between friends. One means to that end is to avoid overstating the criticality of the issues – and that in turn requires restraint in both statements and actions. Often it has been possible to work out measures that deal with the problems in ways that work satisfactorily in practice but at the same time side-step definitive declarations of legal positions.⁷⁶

Some seemingly attractive and simple approaches to managing the disputes - notably the United States offering (and Canada accepting) *de facto* compliance without legal concession and both sides “agreeing to disagree” – can have serious drawbacks from the point of view of one party or the other. The former approach may risk, for the United States, establishment of harmful precedents, U.S. claims of “no precedent” notwithstanding, while the latter may risk, for Canada, abandonment of its position on its legal right not merely to seek compliance as a matter of comity, but to require compliance as a matter of law.

For all the difficulties however, the United States and Canada can successfully work on these issues from a common set of values and overlapping interests. Methods include adopting parallel environmental and other regulatory regimes, so that compliance with one nation’s laws will automatically mean compliance with the other’s; entering into international agreements that establish acceptable mandatory standards based on case-specific agreements, not universally applicable international law. Enhanced cooperation on such Arctic matters as surveillance, disaster response, and SAR will not only advance common interests, but can also

⁷⁵ For example, a compromise that could fairly be seen as accepting that the NW passages at issue are not international straits or as accepting regulatory jurisdiction over vessels in the course of exercising innocent passage rights would undermine the U.S. position in a number of cases where other states made demands similar to Canada’s but without the context of close cooperation and mutual understanding and restraint that normally exist in the U.S.-Canada case.

⁷⁶ For example, the United States has in some cases met Canadian demands as a “matter of courtesy” while in others, Canada has been willing to turn a blind eye to certain U.S. military operations that do not comply with stated Canadian requirements.

promote a climate of relations in the Arctic that will be conducive to managing disputes.

Other Bilateral Issues

The United States has some, but relatively few, bilateral issues with other Arctic nations other than Canada (and of course Russia).

Denmark and Canada dispute ownership of tiny Hans Island between Greenland and Ellesmere Island a subject on which the United States has no reason to be involved. Denmark has long agreed, in the exercise of its retained authority over Greenland's defense and foreign policy, to U.S. operation of a military base at Thule in northern Greenland.⁷⁷ The base is joint: the Danish and Greenland flags fly over the facility and Denmark maintains a rotational military presence at the base. A large phased-array radar there is an important part of the U.S. early warning network and BMD system, and revived concern (by both countries and by NATO) regarding security problems with Russia have updated Thule's role in the overall U.S. presence in the far north. Periodically, issues arise about the Thule base in the complex trilateral relationship among the United States, Denmark (as the residual colonial metropolitan with continuing responsibility for defense and foreign affairs), and a local Greenland government and population increasingly assertive in regard to autonomy – and, for some Greenlanders, independence.

Norway. For Norway, security in the Far North has long been a high priority concern, and recent Russian actions, both in the region and more generally, have made the Arctic Norway's leading security concern. At the same time, Oslo recognizes its need to cooperate with Russia on many Arctic issues from SAR to maritime pollution control and more generally to avoid any actions that would unnecessarily add to tensions between small Norway and its massive eastern neighbor.

Engaging NATO more actively on Arctic security issues is an important element in Norway's policy of effective and yet non-provocative deterrence of possible Russian actions. Accordingly, Norway has pressed for a more active NATO role

⁷⁷ The United States fully accepts that Thule is on the territory of a foreign sovereign and that (like all other foreign U.S. bases except for Guantanamo) its continued operation depends on Danish (and increasingly on Greenlander) consent.

in the region. Canada by contrast has opposed heavily “NATO-izing” Arctic security. For the moment, the issue is quiescent, but the United States may, in the reasonably near future, need to address this issue in a way that accommodates both Norway’s desire for a strong NATO role in addressing Russian military modernization and activity generally and in Arctic security specifically while doing so in a way that also recognizes the sensitivity of Arctic issues for Canada.

Non-Arctic Nations. Many states that are not members of the Arctic Council, including many that are not in any sense Arctic geographically, have interests in the region. In most cases these interests are economic and reflect the region’s current and potential importance for ship and air transportation, fisheries, energy and other resources, and climate change. However, in at least one case, that of China, there is a security dimension to both the non-Arctic nation’s interests and U.S. attitudes toward its Arctic actions. Nominally, China’s Arctic efforts are entirely commercial – seeking to protect access by non-Arctic states to the region’s growing potential as a route between Asia and other regions and the prospect of significant exploitation of the Arctic for energy. Of course, nominally commercial and resource interests often have long-term security aspects, but in the case of China, more immediate and direct security concerns arise. As in other regions, in the Arctic China appears to be using commercial efforts to advance not only its economic interests but also to secure it an established presence and a role in security affairs for the region. China’s recent free trade agreement with Iceland, a NATO member, has, along with Chinese initiatives for participation in efforts on shipping through the Arctic, been seen as efforts to build strategic relations in the region – or even harbingers of seeking a direct security role. The challenges posed by these Chinese efforts – if they are accurately portrayed as having a security aspect – are of concern not only to the United States (or NATO). For example, despite its general efforts to align with China on strategic issues, Russia has opposed Chinese requests for membership in the Arctic Council.

V. Arms Control and Transparency and Confidence-Building Measures (TCBMs) that Could Enhance Arctic Security and Relationships

Over the course of the late-Cold War and post-Cold War periods, the United States/NATO and the USSR/Russia signed a number of agreements, some legally-binding and others only politically-binding, containing inspection, transparency,

and confidence-building measures. Most significant from the point of view of transparency in the Arctic are the Open Skies Treaty (1994) and the Vienna Document 2011, as well as the 1972 Incidents at Sea Agreement (INCSEA) and the 1989 Agreement on Prevention of Dangerous Military Activities (DMA Agreement).⁷⁸

The United States and Russia are parties to all four agreements, while other Arctic states are parties only to the first two agreements. The first two were concluded and are being implemented within the framework of the Organization for Security and Cooperation in Europe (OSCE). The latter two are bilateral agreements between the United States and Russia (as successor to the USSR).

The Open Skies Treaty (OST) applies to the territories of parties defined to include their internal and territorial waters, and so includes all Arctic territories (including the United States and Canada and all of Russia). The Vienna Document 2011 applies to the Arctic territories of European states (defined to include Russia west of the Ural Mountains). The Incidents at Sea Agreement applies worldwide, as does the Dangerous Military Activities Agreement.

There are other important international arms control agreements, including the various START and other strategic arms control treaties, such as INF, LTBT, CFE, and CWC, which include transparency and observation provisions. However, for

⁷⁸ The Vienna Document 2011, a politically binding agreement, establishes a system for exchange of information on military activities ranging from defense budgets to location and strength of deployed forces, notification of exercises and consultation of “unusual military activities, as well as limits on the size and frequency of exercises, and observation of certain military activities. It applies to ground, land-based air, and certain amphibious vessels, and to Europe including “ocean areas adjoining Europe.” It does not (with minor exceptions) apply to naval forces or activities. However, Russia recently sent observers to a British naval exercise (*Joint Warrior*) on the basis of exercising its Vienna Document 2011 right to observe unusual militarily significant activity of concern to a party.

The Open Skies Treaty, which, as a treaty, is legally binding, provides for a limited number of aerial observations of military facilities, and prescribes rules for how those observations are to be conducted. It applies to the territory of parties, including their internal and territorial waters.

The Incidents at Sea Agreement and DMA Agreements oblige the United States and Russia to take measures such as pre-notification and consultation, and to generally act with caution when their military forces are operating in close proximity to each other. These agreements seek to enhance mutual knowledge and understanding of military activities; to reduce the possibility of conflict by accident, miscalculation, or the failure of communication; and to increase stability in times of both calm and crisis.

the most part, those provisions are linked to verification of the substantive and usually quantitative limits that are the main subject matter of the agreements, not transparency as such. In the view of the Board, however, the intrusive and legally-binding inspection regimes contained in such agreements are not the appropriate models for an enhanced TCBM regime for the Arctic. In the evolving security postures we are seeing and are likely to see in the Arctic over the coming decade, *the limits of possibilities are far more likely to be transparency rather than substantive arms control restrictions, so that enhancing confidence and reducing the risk of misperception would be the basic purpose of any new agreements.* It is also the Board's judgment that it is likely to be easier to gain domestic political support (especially in the United States) for a politically-binding agreement on enhanced, but minimally intrusive, TCBMs in the Arctic that focus on observation of military activities in the Arctic, not substantive limits on them.

Whether Russia will have a similar view (assuming it is interested in TCBMs in the region at all) is a different question. Russia has normally been wary of agreements that are not in legally-binding form and that permit transparency into a system that is far more closed on the Russian side than on the American. Moreover, Russia has proved willing to ignore undertakings under transparency agreements into which it has entered, notably in the case of the invasion of Crimea, which involved activities presumptively subject to notification and observation under the Vienna Document 2011.⁷⁹

For several years, and more notably from 2014 onward, deterioration of relations with Russia and Russia's questioning of the value of the OSCE as an international forum useful to it have led to fears that the Vienna Document and other transparency agreements will become defunct in all but name.

In any event, from the point of view of the Arctic, the inadequacy of the Open Skies Treaty and the Vienna Document 2011 is that they do not significantly address the maritime domain in terms either of geographic reach or of application to air and naval operations on or over the sea. The Vienna Document 2011 does not apply either to most areas of the Arctic (unless "adjoining Europe" is given an

⁷⁹ Russian conduct in that case also involved non-compliance with other international obligations, notably those under the Helsinki Final Act of 1975 and the 1994 Budapest Memorandum on Security Assurances, which required respect for the territorial integrity of Ukraine.

extraordinarily expansive definition) nor to maritime operations generally, nor to Russia east of the Urals (or any part of the United States or Canada). The OST applies to all parties, but only over land and within territorial waters. Nor are the provisions of either – being as they are strongly focused on ground operations and especially avoidance of surprise – particularly well-suited to the Arctic context.

The United States would have to determine to what extent we would want to re-orient U.S. OST resources and activities toward the Arctic and away from current activities in non-Arctic Europe.

VI. Recommendations

The Arctic is the “canary in the coal mine” for climate change and what happens there is already having global geostrategic and environmental consequences.

As we observed earlier, Russia’s primary interests in the Arctic in 2016 and for the foreseeable future are both economic and geostrategic. Nevertheless, climate change is increasingly affecting Kremlin policy in the Arctic, but not necessarily because Russia wants to reduce the adverse global impact of warming temperatures and rising seas. In the near term, northern Russia overall could be a “winner” from climate change to the extent that its agricultural areas in the north could increase, and its fish stocks, minerals and energy in northern waters become more accessible. In the longer term, however, Russia could also be adversely impacted by drought and disease and it is already experiencing more wildfires and extreme heat in its southern regions. Further, Russian coastal areas would be affected by rising seas to the same degree as any other coastal nation.

Monitoring, observing, adapting, and responding to climate change in the Arctic are becoming increasingly important to all Arctic nations. These requirements are in addition to other factors arguing for the broadest possible international cooperation in the Arctic, including from Russia. Even during a time of increased tension with Russia in other regions, U.S. interests are better served with some level of continuing cooperation that enhances U.S. and allied nations’ abilities to operate safely in the Arctic, reduces risk of accidents and oil spills, and increases domain awareness.

Further, the Arctic presents some unique problems of domain awareness, given that it is a region with limited telecommunications capability, unique geography, and remote and indigenous populations. Overall, the national interests of Arctic nations have led to continued cooperation with Russia, especially in the scientific and SAR domains, even after Russia's aggression in Crimea and other parts of Ukraine, although U.S. and Russian scientists report increasing difficulty in obtaining visas, permits, travel orders, and other elements essential to continuing scientific cooperation in the interests of both nations.

We provide six recommendations:

- **First, the United States must continue to lead on Arctic safety, security and stewardship.**
- **Second, the United States should promptly ratify the United Nations Convention on the Law of the Sea (UNCLOS).**
- **Third, the United States should increase its presence and domain awareness in the Arctic.**
- **Fourth, we need to continue to strengthen our alliances and partnerships, including with Arctic Council nations, observers, and other partners.**
- **Fifth, the United States should adopt policies and practices to deal with the Russian dimension of Arctic developments.**
- **Sixth, Transparency and Confidence Building Measures should be strengthened to reduce the risk of miscalculation or accident.⁸⁰**

First, U.S. leadership in the Arctic is essential for safety, security, and stewardship of the region. U.S. leadership includes its chairmanship of the Arctic Council in 2015-2017, defined by the following four pillars.

⁸⁰ In addition, our report makes recommendations regarding aspects of relationships with Russia (pp. 26-28) and Canada (pp. 29-33) that are not repeated here. Although not listed in this section these are recommendations that the Board believes should inform U.S. Government policy.

- The United States has substantially elevated the extent of cooperation and engagement on key Arctic matters, including climate change, indigenous peoples, and sustainable economic development.
- The United States has significantly improved its ability to coordinate Arctic activities across the U.S. government with the creation of the Arctic Executive Steering Committee (AESC) and the position of the U.S. Special Representative for the Arctic, lodged at the Department of State.
- Due to its value and importance, the United States should continue to utilize and maintain the AESC beyond its chairmanship of the Arctic Council in 2015-2017.
- The United States has advanced a number of key initiatives for the region in the last year, which this Board salutes as positive developments.

Second, the United States should make ratification of UNCLOS an urgent national priority.

For the many reasons that have been cogently expressed over the years, but most important, ratification will promote American stability, security and presence in all oceanic contexts – particularly in the Arctic region – and it will enable the United States to have a voice at UNCLOS tribunals on claims asserted in the Arctic by Russia and others and in the future development of UNCLOS as an institution. The United States will be in a stronger position *vis-à-vis* both Russian claims in the Arctic and China’s claims in the South China Sea when the United States has a seat at the table with other nations and a voice in the primary tribunals adjudicating these territorial claims.

Third, the United States needs to increase its presence and domain awareness in the Arctic region both on its own and in collaboration with public, private, and international partners. It needs to plan now for a region that is changing ever more rapidly.

The United States needs to *increase its ability to operate* in the Arctic: 1) to conduct search-and-rescue and oil-spill response missions, where demand is likely to increase as the Arctic continues to lose its ice cover and as human

presence and activity in the region grow; and 2) to signal the U.S.'s enduring presence in the region. Enhancing the U.S. presence in the Arctic requires both increased observation and monitoring and acquisition of additional icebreaking capability.

The United States should increase its observation and monitoring capabilities in the region. It needs additional *domain awareness* (both maritime and other) in the Arctic, both to reassure our allies and to create additional indicators and warning signals that could be needed to prevent a deliberate act or accidents from escalating to a miscalculation by either the United States or Russia.⁸¹ Domain awareness is more than developing and sharing information; it is the ability to understand the environment well enough to enable timely and effective decision-making. Adequate domain awareness is a key enabler for carrying out any national security missions, from protection of commerce to defeating adversaries. No single federal department or agency has the resources and capabilities needed to develop and maintain comprehensive situational awareness in the Arctic. As part of its efforts to advance a 'whole of government' approach to U.S. activities in the Arctic, the AESC should identify gaps in presence and domain awareness and develop plans and budget needs to fill gaps for required capability.

One Coast Guard Arctic priority is for satellite communication (SATCOM) capabilities to improve communications. This is increasingly imperative as human and commercial activities in the Arctic increase. Russia's growing activities and interests in the Arctic also argue for enhanced intelligence, surveillance and reconnaissance (ISR) in the Arctic. The United States should examine options rapidly to address domain awareness needs in the Arctic, to include civil, commercial, and federal options related to communications and ISR.

The United States will need additional satellites in geostationary orbit to provide adequate domain awareness of high latitudes. In addition, the United States should expand its infrastructure in Iceland to support future

⁸¹ If not already established, U.S. Maritime Domain Awareness should formally include the Arctic as a region to be covered.

capabilities, to include surveillance by unmanned aerial vehicles (UAVs). This U.S. action would also buttress Iceland's engagement in NATO. Finally, the United States should increase its engagement with all Nordic nations on addressing future capability needs for and presence in the Arctic region.

To address the need for increased "domain awareness" in the Arctic, the United States should ensure that all of the administration's stakeholders and providers for such capabilities continue to coordinate their requirements and programs. NASA, NOAA, DoD, and the Intelligence Community all have programs and capabilities that can impact and improve situational awareness in the Arctic. The Administration should convene an "Arctic Situational Awareness Forum" involving all of these agencies, to review and coordinate their activities with an objective of harmonizing this mission in the Arctic.

The United States should make acquisition of a modern heavy icebreaker an urgent national priority. The United States needs assured access to the Arctic, which can only be provided by a heavy icebreaker. Paradoxically, retreating ice in the Arctic increases the need for heavy ice-breaking capability, because of increased human and vessel traffic in the region.

The United States has only one aging heavy icebreaker in its current fleet (the *Polar Star*, commissioned in 1976). Funding requested in the FY17 President's Budget of \$150 million to begin design is the minimum investment for a capability that, even with these funds immediately available, will not have an initial operational capability (IOC) until at least 2022, according to current plans. Should the *Polar Star* break down, the U.S. presence in both the Arctic and Antarctica would be put at risk.⁸²

The Administration should immediately examine acquisition options and develop a more tailored acquisition strategy to replace and expand the U.S. icebreaker force. The current acquisition strategy for a new icebreaker does not take advantage of the latest acquisition approaches being used by the

⁸² The Board recognizes the context for Russia's large icebreaker fleet, i.e., the extensive Russian coastal areas in the Arctic along the NSR. Therefore, the U.S. need to expand its icebreaker force is not dictated by a pure numerical comparison with regard to Russia or other states with long Arctic coastlines, nor should its adequacy for U.S. purposes be judged by its size relative to Russia's icebreaker fleet.

military services for major programs. These strategies could include: public-private partnerships for development of a new icebreaker, and leasing of an icebreaker from an allied country as an interim capability until a new ship is available.

In addition, the Administration should consider an enterprise strategy that not only could produce a new icebreaker sooner than currently planned, but also address options for sustainment of the two existing icebreakers to fill the gap until completion of the new icebreaker.

The United States will need additional *infrastructure* in the Arctic to operate in changing conditions. As stated in the recent report of the U.S. Committee on Marine Transportation: “As sea ice retreats, the lack of U.S. Arctic infrastructure to support increased maritime activity grows more apparent. Limited nautical charts, aids to navigation, communication, emergency response, and rescue capabilities make operations difficult and potentially dangerous.” Other elements contributing to accident risks in the Arctic include inadequate maritime infrastructure and environmental and economic uncertainties, all major challenges identified in the Committee on the Marine Transportation System (CMTS) 2013 Arctic Report.⁸³

The United States will need to address shortfalls in key capabilities, including observation, remote sensing capabilities, ice prediction, weather forecasting, lack of navigational aids, challenges in high-latitude electronic communications, and a limited inventory of ice-capable vessels and ground transportation. Recapitalization or modernization of existing platforms for air and ground mobility in the Arctic will be critical for reaching remote areas not accessible by other means.

As part of developing additional capabilities for Arctic operations, the United States should conduct *planning for a variety of Arctic contingencies*, both political and operational, such as an oil-spill or an accident involving a tourist vessel requiring search-and-rescue operations. With a large cruise vessel, the *Crystal Serenity*, transiting the NWP in Summer 2016 with more than 1,000 passengers and a crew of 650, it is becoming clear that Arctic

⁸³ The CMTS is a U.S. Federal cabinet-level, interdepartmental committee chaired by the Secretary of Transportation.

nations need to ensure their Coast Guard and equivalent forces are prepared for future incidents. Expanding the scope and complexity of Arctic exercises with allies and partners is also increasingly important.

Fourth, the United States needs to strengthen alliances and partnerships, including cooperation among Arctic nations and partners. This is essential for the safety, security and stewardship of the region. This cooperation is also vital to understanding and adapting to changing climatic conditions of the Arctic. Extensive cooperation is the daily practice within the Arctic Council and through other multilateral and bilateral forums. It will be increasingly important to maintain robust cooperative mechanisms.

- *The United States should undertake to extend to Russia and others the opportunity to cooperate in the May 2016 agreement among the United States and Nordic nations to apply strict environmental standards and climate goals to commercial activities in the Arctic, a pledge that could have major implications for everything from future energy exploration to fishing and shipping in the region.*⁸⁴
- *The United States should promote search-and-rescue cooperation. Along with cooperation on oil-spill prevention, it has advanced substantially in recent years, with the signing of agreements among the Arctic Council nations and the creation of the Arctic Coast Guard Forum as a means to exercise the implementation of the agreements. Arctic Council members have conducted several such exercises, although Russia has not attended the recent exercises and related meetings. Future activities of the Arctic Coast Guard Forum could include joint contingency planning, with the goal of being able to conduct combined operations for search-and-rescue, oil-spill response, and other missions as needed.*

⁸⁴ U.S.-Nordic Leaders' Summit Joint Statement, May 13, 2016
Fact Sheet on U.S.-Nordic Collaboration on Climate Change, the Arctic, and Clean Energy, May 13, 2016.
www.whitehouse.gov/the-press-office/2016/05/13/us-nordic-leaders-summit-joint-statement

- *The United States should promote Arctic science cooperation (which of course, it pursues for value in its own right).* Recognizing that Arctic nations have a long history of productive science and technology cooperation, the United States should continue expanding existing mechanisms for *scientific and technology cooperation* even during this period of increased tension with Russia. The United States is convening the White House Arctic Science Ministerial in September 2016 to maintain constructive engagement on Arctic science with Russia, China, the other Arctic nations, France, Germany, Italy, India, Japan, the United Kingdom (25 nations in total) and the European Union. The ministerial is designed to “bring together ministers of science, chief science advisors, and other high-level officials from countries around the world, as well as representatives from indigenous groups, to expand joint collaboration focused on Arctic science, research, observations, monitoring, and data-sharing. The goals of the event are to advance promising, near-term science initiatives and create a context for increased international scientific collaboration on the Arctic over the longer term.”⁸⁵ This is the first-ever meeting of science ministers from around the world to engage in a cooperative setting of priorities in Arctic science. The commitments being made at this ministerial demonstrate the common interests of 25 nations in advancing Arctic science for the benefit of the Arctic’s inhabitants and beyond, since what happens in the Arctic does not stay in the Arctic.

The United States should develop additional capacity for *pan-Arctic observation and monitoring* through the scientific, maritime safety and naval communities of key Arctic nations. One of the key objectives for the White House Arctic Science Ministerial is “Strengthening and Integrating Arctic Observations and Data Sharing.” The United States observes that “Current monitoring

⁸⁵ White House Arctic Science Ministerial: September 28, 2016. Briefing on May 13, 2016
On September 28, 2016, science ministers from across the globe will gather in Washington, DC, for the first-ever White House Arctic Science Ministerial. www.whitehouse.gov/blog/2016/05/13/white-house-arctic-science-ministerial-september-28-2016

capabilities in the Arctic, while impressive, fall short of what is needed in areas such as integrating global observing programs, expanding community-based observing efforts, and increasing integration of indigenous peoples' knowledge.”⁸⁶ Among the efforts needed is a hydrographic cooperation agreement among Arctic nations, including Russia, to conduct surveys in areas of the Western Arctic that are proximate to the Northern Sea Route, including the Bering Strait. Arctic nations would also benefit from increased cooperation on weather and ice forecasting.

As part of increased science and technology cooperation in the Arctic, the United States and Russia should establish policy-level links between science and policy agencies of their respective governments, in order to resolve issues, like permits and travel, that have prevented prior science visits/cruises from occurring during the fiscal year for which they have been planned, programmed, and budgeted.

- The United States should advance cooperation among Arctic Council nations, in order to reduce sources of *black carbon and methane* in the Arctic. Both are short-lived carbon pollutants that pose health risks to the Arctic peoples. Black carbon sources are primarily: 1) diesel generation; and 2) flaring of oil and gas. Diesel generation is still used to power remote Arctic villages, primarily in the United States, Canada, and Russia. Promoting clean energy/microgrid alternatives to powering these remote villages, which is already a U.S. initiative with Alaska, could expand opportunities for cooperation on local energy and health issues that are important to the United States, Russia, and Canada. Cooperative activities should include Arctic populations in developing and implementing clean energy solutions. The United States should also work to create low-impact Arctic shipping corridors in order to safeguard important ecological and cultural areas and to reduce the risks of heavy fuel oil (HFO), use and black carbon emissions from Arctic shipping.

⁸⁶ *Ibid.*

- The United States should work to increase the role of *indigenous communities* in Arctic decision-making. Inuit and other indigenous communities that share a common culture live in Alaska, Canada, and Russia. The United States should continue to promote communication and exchanges among these Arctic peoples and to enable them to have an important voice at the Arctic Council, even if the current Russian leadership does not fully support the engagement of Russian indigenous groups.
- The United States should promote increased *telecommunications* capability in the Arctic, both for transparency and to support and engage Arctic peoples. Remote villages need broadband and other telecom infrastructure. Among the possibilities is expanding collaboration among Arctic peoples on areas of common concern (telecom, energy, health) as a means for deepening overall transparency of activities. In addition, the Arctic Council nations should conduct a circumpolar telecommunications assessment as part of the Arctic Council Telecommunications Working Group, in order to better understand the overall needs and gaps for telecommunications in the Arctic.
- The United States should continue to advance the *Declaration on the Prevention of Unregulated Fishing in the Central Arctic Ocean*, signed by the five Arctic nations bordering the Arctic Ocean and which limits unregulated fishing on the high seas and in the central part of the Arctic Ocean. This measure is important both because it will promote sustainable practices in the Arctic and because it will promote cooperative engagement among key Arctic nations on governing a key resource of the region.

Fifth, the United States should adopt policies and practices to deal with the Russian dimension of Arctic developments. As we noted in Section III, it is clear that Russia has strong and unique Arctic interests and that the United States and NATO have their own important strategic and military interests in the region.

To protect their interests, the United States (and NATO) need to continue to conduct appropriate military and intelligence operations in the Arctic and to avoid agreements or practices that would compromise that ability. More specifically:

- From the perspective of both immediate Arctic interests and global precedent, the United States should not accept claims by Russia (or anyone else) of sovereignty or littoral state jurisdiction beyond those established in international law. (This means, for example, rejecting excessive Russian “internal waters” claims.)
- The United States has an interest in maintaining its rights under international law to freedom of navigation, including for the conduct of legal military operations in the waters north of Russia. (This means exercising recognized rights to freedom of navigation operations by naval units.)
- While direct United States- (or NATO-) Russia conflict remains highly unlikely, in the event of such a conflict, the Arctic could be an important theater of operations. (This means that the U.S. military needs to be prepared in terms of planning and training for such operations – which will continue to require training and other preparations for operations in Arctic conditions.)
- For the same reason, the United States has a requirement for collection of intelligence relevant to the region. (This means both conducting necessary intelligence efforts and rejecting Russian political and legal efforts to constrain them.)

At the same time, *the United States has a very strong interest in seeking to ensure that Russian and U.S. military activities in the region do not increase tensions and the risk of unintended conflict*, including risks arising from collisions, buzzing of aircraft/ships, or other incidents that would add to tensions and could even result in unintended conflict. Accordingly, the United States should:

- Make clear that although Russia has been increasing its military presence in the Arctic – and holding exercises – we do not view this as a direct threat to the United States, at least not at this time.
- Continue to abide by the 1972 Incidents at Sea Agreement and recognize (and insist) that it applies fully to both Arctic naval operations by the United States and to Arctic-based naval operations by Russia beyond the GIUK Gap.
- Take the initiative to enhance and establish similar standards and procedures with respect to air operations.

Sixth, the United States should strengthen Transparency and Confidence Building Measures (TCBMs) in the region to reduce the risk of miscalculation or accident.

At a time when Russia under President Putin has become more aggressive in its foreign policy and insecure as its domestic economy falters and its demographic future weakens, the United States will need to make key decisions regarding the extent to which relations with Russia in the Arctic can continue to be pursued, recognizing that the Arctic is one of the regions where cooperation continues to serve the national interests of both nations as well as many others. *While being mindful not to condone unacceptable Russian behavior elsewhere, the United States should nonetheless pursue confidence-building measures that further U.S. objectives of safety, security and stewardship.*

The United States should continue to pursue engagement with Russia through the Arctic Council, itself a form of confidence building. Although it does not have a mandate to address military security, it has evolved into a forum for constructive engagement on a wide range of critical Arctic matters from search-and-rescue to indigenous community issues, discussed above.

Prior to Russia's aggression in Ukraine and Crimea, the United States had constructive military-to-military (mil-to-mil) engagement with Russia in the Arctic that often served to amplify work principally carried out by non-

military agencies of both governments. The United States has important strategic interests in continuing to engage the Russian military in the Arctic. The *Arctic Security Forces Roundtable* has been a constructive forum for engagement of Arctic security forces to include coast guard and other entities that will be needed to respond to many contingencies, such as search-and-rescue. Russia participated in this roundtable prior to its occupation of Crimea.

*The Board judges that U.S. interests would be served by resuming military-to-military engagement with Russia in the Arctic on the basis of a determination that the advantages of doing so would outweigh the impact (if any) on U.S. policy with respect to maintaining, along with other nations, pressure on Russia to resolve Ukraine/Crimea issues on satisfactory terms. The ISAB has not in this study undertaken the analysis of the Ukraine situation necessary to make that determination, but we recommend, if it can be made, that the United States should decouple military-to-military engagement in the Arctic from other limitations that have been imposed since the incursions in Crimea and elsewhere in Ukraine, recognizing that this exception to the general ban on mil-to-mil engagement is in the United States' interest and outweighs any negative impact on the execution of U.S.–Ukraine policy. When the United States restores U.S.–Russian mil-to-mil engagement in the Arctic that engagement should focus primarily on environmental and energy science and technology issues of mutual benefit to Arctic people. The United States should also consider restarting the *Arctic CHOD (Chiefs of Defense)* gathering last held in 2013 in Whitehorse, Canada, as an additional means for constructive engagement and leadership.*

The *Arctic Coast Guard Forum*, launched in 2015 in New London, CT, has focused on search-and-rescue capabilities and oil-spill response and prevention and has continued to operate in the post-Crimea context. This forum is a key confidence-building measure, as it is a multilateral gathering to maintain contact with Russian forces and the FSB, which includes the Russian “Coast Guard” and border guards, at a time when bilateral military contacts are suspended.

In order to ensure the continued smooth functioning of the Arctic Council structure and to prevent potential negative spillover from dealing with hard security issues, any new Arctic governance structure dealing with hard security matters should be kept separate from the Arctic Council structure.

The Board concludes that it is in U.S. security interests to seek a TCBM arrangement for the entire Arctic. Such an agreement would focus on transparency and observation and prevention of incidents that could produce pressures for mutual escalation rather than substantive limits on forces or activities of military and other security elements. To that end, the Board recommends negotiation of a separate Arctic agreement, rather than attempting to modify other agreements, including the Open Skies Treaty, the Vienna Document 2011, the INCSEA agreement, or the DMA agreement. However, the proposed measure(s) should build on the principal embodied in all those (and indeed other arms control and CBM) agreements to reduce the risks of conflict arising from misunderstanding, failure of communication, and lack of mutual transparency.

The United States should propose agreements – probably of necessity on a politically-binding basis – for cooperation on transparency and incident prevention in the Arctic. Building on the precedents of the Vienna Document and OST for agreement on disclosure and observation and of the INCSEA and DMA agreements for reducing the risks of incidents that could escalate, the proposal should be adapted to the specific needs of the Arctic. This would, for example, entail providing that the agreement covers all of the Arctic region, including North America and Russia east of the Urals and to open ocean areas (to which the Vienna Document and OST do not apply). It should also entail tailoring transparency and observation provisions to the potential dangers arising in the primarily maritime context of the region (the Vienna Document being primarily directed at detecting preparations for a massive armor-led attack in central Europe) and including specific provisions for conduct of air operations (INCSEA and DMA being somewhat general in their application to such activities). The Board again would need to hear from USNORTHCOM (and probably other DOD components) to weigh the benefits of greater observation of Russia's entire Arctic territory against the cost of opening North America to heightened

observation under such an agreement, which like the Vienna Document 2011 would be a non-legally binding set of political commitments. Such discussions would be a future follow-on activity to this report.

Other elements of this initiative should include:

- Creating opportunities to conduct joint inspections of certain activities analogous to U.S./Russia joint inspections under the Antarctica Treaty.
- Adopting an OSCE model of providing notice of large-scale military exercises to reduce miscalculation or surprise (Vienna Document 2011 model).
- Increasing data sharing.
- Negotiating a Declaration of Military Conduct in the Arctic (CSIS study).⁸⁷
- With Russia, reviewing the *1972 U.S.-USSR/Russia Incidents at Sea Agreement* and the *1989 U.S.-USSR/Russia Dangerous Military Activities Agreement* for opportunities to expand conditions under which these agreements could be used to increase confidence among the United States and Russia in their Arctic operations.
- Negotiating a TCBM mechanism to cover the full extent of Arctic waters and to track naval and air activities in the region. Such a TCBM mechanism could be an Arctic Incidents Agreement, modeled on the 1972 U.S.-USSR Agreement and the 1989 DMA.
- Opening the agreement to all states that conduct shipping and air operations in the Arctic.

As part of its review of a path forward, the United States could:

- Expand the Incidents at Sea Agreement to include Coast Guard, as well as naval, cooperation between the United States and Russia.
- Add to the agenda of the annual review meeting under the Incidents at Sea agreement an item on Arctic operations.

⁸⁷ Conley, Heather A. and Rohloff, Caroline. "The New Ice Curtain." Center for Strategic and International Studies, 2015. p. 114. http://csis.org/files/publication/150826_Conley_NewIceCurtain_Web.pdf

- Assess how the functioning of the Dangerous Military Activities Agreement could be more focused on increasing confidence between the United States and Russia in the Arctic.

In addition, the United States and Russia should promote partnerships that increase *transparency and knowledge* of the Arctic environment, its people, and changing conditions.

For purposes of greater transparency and cooperation of foreign partners including Russia, the United States should assess the possibility of *declassifying hydrographic data* gathered in foreign EEZs.

The United States should consider a joint U.S./Russian project on the above – similar to the effort undertaken in the mid-1990s as part of the MEDEA Task Force and the Gore/Chernomyrdin Commission, using previously classified materials.⁸⁸ In the past, the Navy ‘sanitized’ for public use hydrographic data that was previously classified. Under MEDEA and Gore/Chernomyrdin, decades of oceanographic data collected by Canadian, Russian, and U.S. sources were declassified and made available to the international scientific community. Oceanographic data on bathymetric and maritime environmental conditions collected during the Submarine Arctic Science Program Scientific Ice Expeditions (SCICEX) nuclear submarine cruises from the 1990s until the present were also made public.

⁸⁸ The MEDEA program (1994-2000) was the first post-Cold War review of national security systems, data and archives for use in global climate change, environmental research and civil applications by cleared environmental scientists. MEDEA led to the first open cooperation between U.S. and Russian intelligence and defense services for the purpose of working on joint environmental projects and to the first exchange between Russia and the United States of unclassified derived products from our mutual classified satellite systems. This cooperation led to the release of Russian Navy and U.S. Navy formerly restricted oceanographic data from the Arctic Ocean, which tripled the amount of data available to the scientific community.

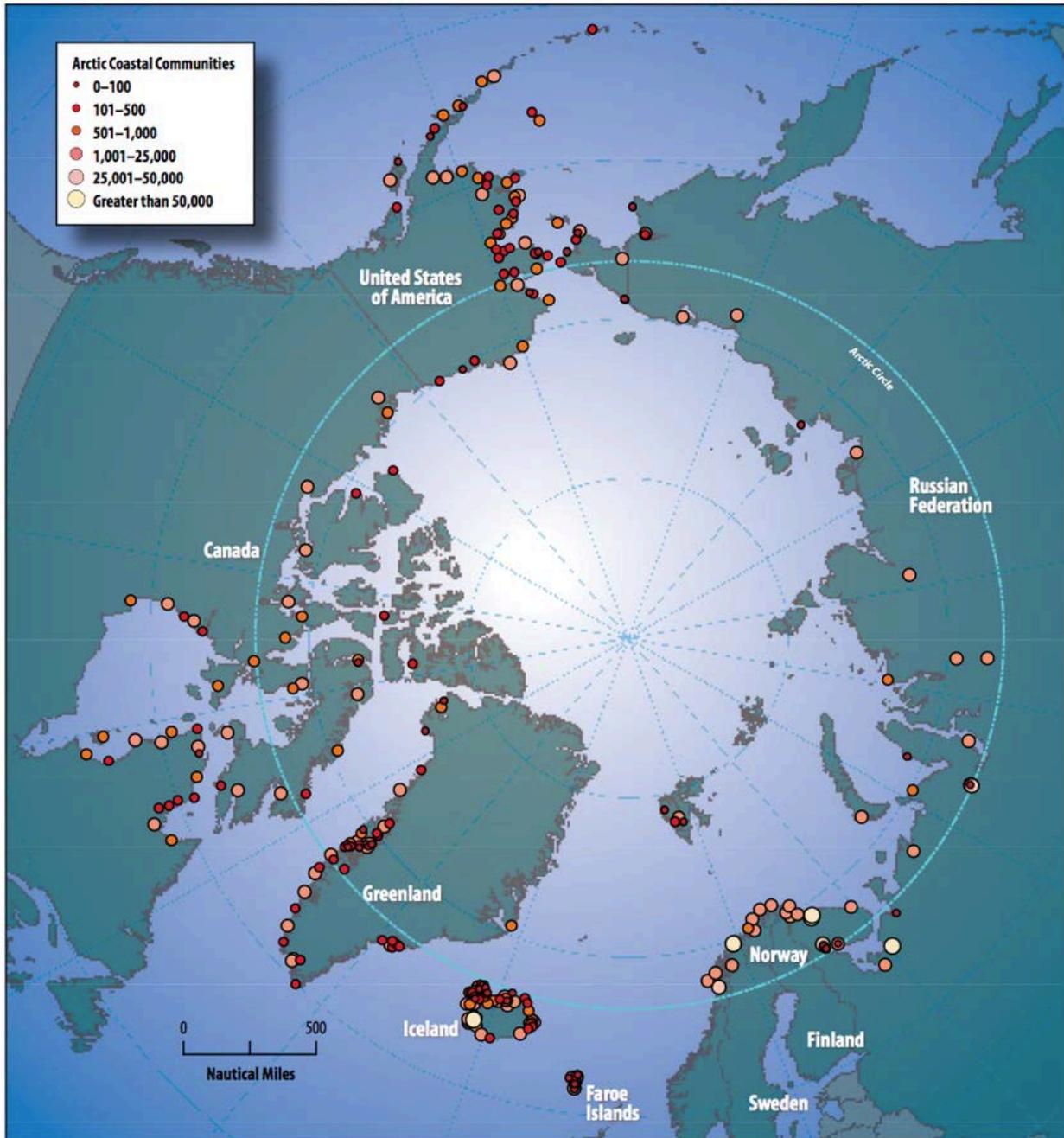
The Gore-Chernomyrdin Commission, or U.S.-Russian Joint Commission on Economic and Technological Cooperation, was a United States and Russian Joint Commission developed to increase cooperation between the two countries in several different areas. The Commission was developed by U.S. President Bill Clinton and Russian President Boris Yeltsin at a summit in Vancouver in April 1993. United States Vice President Al Gore, and Viktor Chernomyrdin, the Russian Prime Minister, were appointed as co-chairmen.

Appendix A – Maps

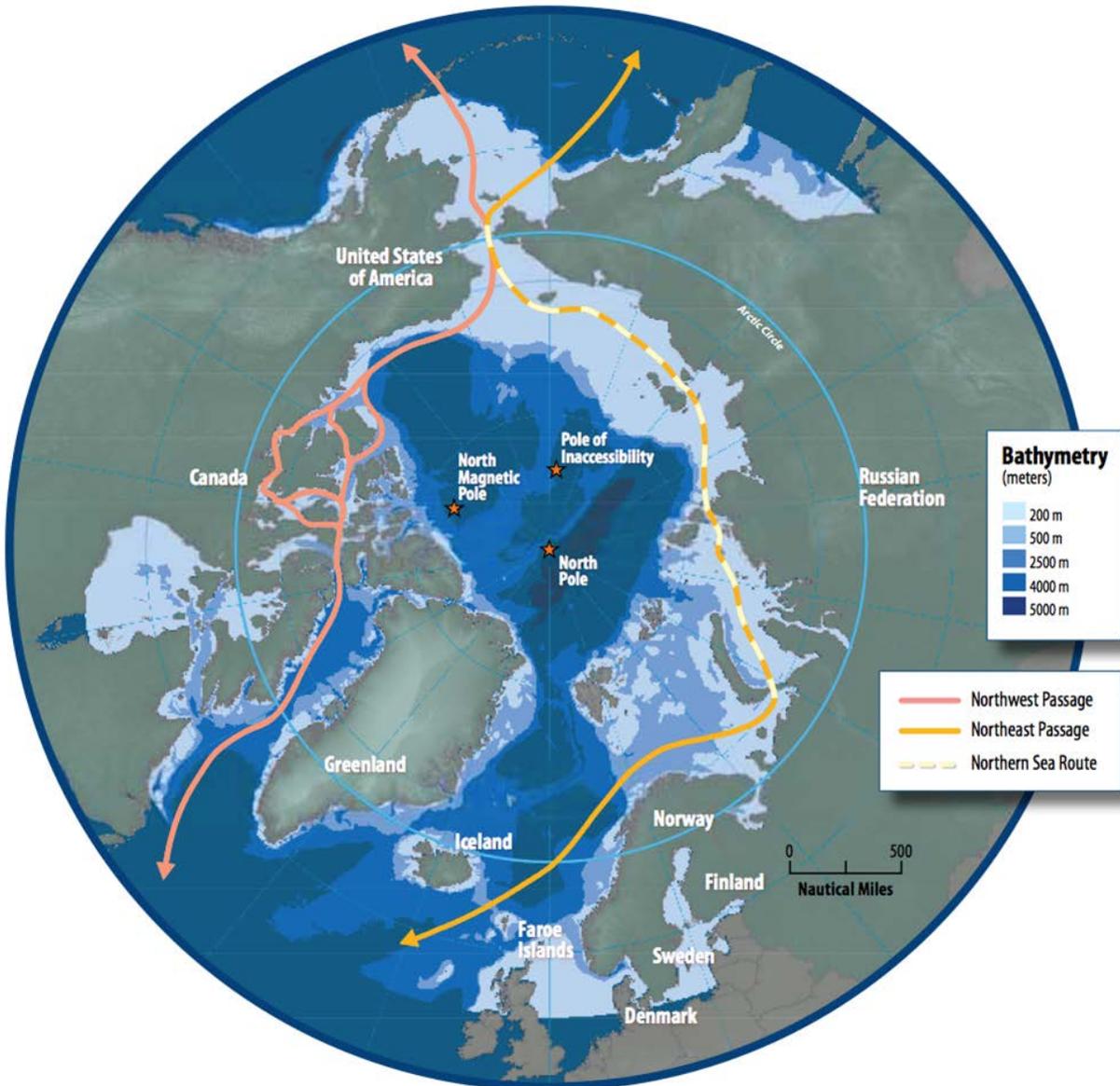


■ ■ ■ Arctic Circle, 66° North Latitude

Map 1 – Arctic Region. Sources: U.S. Department of State; U.S. Central Intelligence Agency, The World Factbook, www.cia.gov/library/publications/resources/the-world-factbook/docs/refmaps.html



Map 2 – Arctic Coastal Communities. Source: Arctic Council, Arctic Marine Shipping Assessment, 2009 Report, http://www.pmel.noaa.gov/arctic-zone/detect/documents/AMSA_2009_Report_2nd_print.pdf



Map 3 – Arctic Passages. Source: Arctic Council, Arctic Marine Shipping Assessment, 2009 Report, http://www.arctic.noaa.gov/detect/documents/AMSA_2009_Report_2nd_print.pdf

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Appendix B – Terms of Reference

UNDER SECRETARY OF STATE FOR
ARMS CONTROL AND INTERNATIONAL SECURITY
WASHINGTON

April 7, 2015

MEMORANDUM FOR THE CHAIRMAN, INTERNATIONAL SECURITY ADVISORY BOARD (ISAB)

SUBJECT: Terms of Reference – ISAB Study on Arctic Policy

The ISAB is requested to undertake a study of Russia's interests, intentions, and capabilities as it has been increasing its presence – both military and civilian – in the Arctic. We continue to cooperate with Russia on Arctic Council issues, despite tension in other areas. However, the United States and other Arctic states oppose Russia's ongoing violations of Ukraine's territorial integrity and other international norms.

Human activities are growing in the Arctic, including shipping, mining, energy exploration, fishing, and tourism. In response to these activities, the eight Arctic States¹ have recently signed agreements on search and rescue and oil pollution preparedness and response. Full implementation of these agreements should lead to greater cooperation at the operational level among the security forces (including coast guards, military, and related forces) of the Arctic States. Various confidence building measures could also enhance cooperation among the Arctic States as they develop and implement their operational plans for such agreements.

The ISAB could provide recommendations by examining confidence building measures drawn from various arms control and related regimes, from the OSCE to START, and assess their potential application to the Arctic. These recommendations could be particularly helpful to U.S. leadership during the period in which the USG chairs the Arctic Council (April 2015-May 2017).

It would be of great assistance if the ISAB could examine and assess:

¹ Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States

- What are Russia's interests, intentions, and capabilities in the Arctic, including the formation of the new Russian Arctic Commission?
- What are the geopolitical, economic, military, and environmental factors, including U.S.-Russia relations, which should be considered when shaping U.S. Arctic policy?
- With regard to Russia's role in the Arctic:
 - o The importance of the Arctic to Russia and the West, and how differing perspectives may cause misunderstanding and potential conflict.
 - o Identification of legitimate and non-provocative actions by Russia and those actions that would be considered illegitimate, offensive, destabilizing, or illegal.
 - o An analysis of the economic potential of Russia's Arctic coast, including the economic impact of the Northern Sea Route, development of oil and gas fields, both offshore and onshore, mining, and fishing activity. Additionally, the effects of Russia's cold-war and modern-era military activities, including environmental damage, as it tries to make its part of the Arctic viable for economic development.
- How will the other Arctic states react to any provocative Russian action in the Arctic? Will some states try to placate Russia while others become more assertive? What importance do other Arctic states place on cooperation with Russia in the Arctic region and how does that differ from U.S. views?
- What factors will guide the Arctic States as they operationalize the agreements on search and rescue and oil pollution preparedness and response?

During its conduct of the study, the ISAB may expand these tasks, as it deems necessary. I request that you complete the study in 270 days. Completed work should be submitted to the ISAB Executive Directorate no later than January 2016.

The Under Secretary of State for Arms Control and International Security will sponsor the study. The Assistant Secretary for Arms Control, Verification and Compliance and the Special Representative for the Arctic (S/AR) will support the study. Steven Rosenkrantz (AVC/ESC) will serve as the Executive Secretary for the study with support from Jennifer Ey (S/AR). Chris Herrick will represent the ISAB Executive Directorate.

The study will be conducted in accordance with the provisions of P.L. 92-463, the "Federal Advisory Board Committee Act." If the ISAB establishes a working group to assist in its study, the working group must present its report or findings to the full ISAB for consideration in a formal meeting, prior to presenting the report or findings to the Department.



Rose E. Gottemoeller

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Appendix C – Members and Project Staff

Board Members

Hon. Gary Hart (Chairman)

Hon. Charles B. Curtis (Vice Chairman)

Hon. Graham Allison

Amb. Brooke Anderson

Hon. Douglas Bereuter

Dr. Bruce G. Blair

Amb. Linton F. Brooks

BGen Stephen Cheney (USMC, Ret.)

Mr. Joseph Cirincione

Mr. Richard W. Fieldhouse

Amb. Robert Gallucci

Hon. Sherri Goodman

Amb. Robert E. Hunter

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Dr. Raymond Jeanloz

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Gen Lester L. Lyles (USAF, Ret.)

GEN Montgomery Meigs (USA, Ret.)

Rep. Harold P. Naughton Jr.

Mr. Robert N. Rose

Dr. Amy Sands

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Mr. Steven Rosenkrantz, Executive Secretary

Ms. Anne Choi, ISAB Action Officer

Ms. Thelma Jenkins-Anthony, ISAB Action Officer

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Appendix D - Individuals Consulted by the Study Group

Individuals who consulted directly with the study group, either in person or via phone

May 18, 2015

ADM Robert J. Papp (USCG, Ret.), Special Representative for the Arctic, U.S. Department of State

June 10, 2015

Arctic Regional Experts, Bureau of Intelligence and Research, U.S. Department of State and Central Intelligence Agency

August 27, 2015

Arctic Regional Experts, U.S. Department of Defense
Ms. Julia Gourley, Senior Arctic Official, Office of Polar Affairs,
Bureau of Oceans and International Environmental and Scientific Affairs,
U.S. Department of State

September 15, 2015

Mr. Brian Israel, Attorney-Adviser, Office of the Legal Advisor (Oceans, Environmental and Scientific Affairs), U.S. Department of State

September 16, 2015

Ms. Diana Marvin, Foreign Affairs Officer, Office of Euro-Atlantic Security Affairs,
Bureau of Arms Control, Verification and Compliance, U.S. Department of State
Amb. Mark Brzezinski, Executive Director of the Arctic Executive Steering Committee
Office of Science and Technology Policy, White House
ADM Robert J. Papp (USCG, Ret.), Special Representative for the Arctic,
U.S. Department of State

November 23, 2015

Dr. Kelly Falkner, Director, Division of Polar Programs National Science Foundation
Ms. Nichola Payne, First Secretary (Political), Embassy of Canada
Dr. John Farrell, Executive Director, U.S. Arctic Research Commission
Hon. Fran Ulmer, Chair, U.S. Arctic Research Commission and former Lt. Gov. of Alaska

November 24, 2015

Dr. Robert H. Rich, Executive Director, Arctic Research Consortium of the United States (ARCUS)

December 14, 2015

Mr. Inuuteq Holm Olsen, Head of Greenland Representation, Embassy of Denmark
Mr. Jonas Parello-Plesner, Minister Counselor (Political), Embassy of Denmark
Mr. Niels Heltberg, Minister Counselor (Economic), Embassy of Denmark

January 11, 2016

Dr. Jeremy Mathis, Director of the Arctic Research Office, National Oceanic and Atmospheric Administration

Dr. David W. Titley, RADM USN (ret.), Professor of Practice in Meteorology & Director, Center for Solutions to Weather and Climate Risk, Adjunct Senior Fellow, Center for New American Security, Penn State Department of Meteorology

January 19, 2016

Mr. Leif Trana, Minister Counselor for Arctic and Economic Affairs, Embassy of Norway

Mr. Alf Hakon Hoel, Counselor for Fisheries and Oceans, Embassy of Norway

Mr. Andreas von Uexküll, Minister Counselor, Head of Trade and Economic Affairs, Embassy of Sweden

Ms. Anna Hammarlund Blixt, Head of the Department for Political Affairs, Embassy of Sweden

Ms. Esther McClure, Office of the Secretary of Defense, U.S. Department of Defense

Dr. Evelyn Farkas, Former Deputy Assistant Secretary of Defense for Russia/Ukraine/Eurasia, U.S. Department of Defense

Ms. Sydney Kaufman, Bureau of Energy Resources, U.S. Department of State

March 14, 2016

Ms. Morgan Cashwell; Ms. Margaret Williams; and Mr. Steve Smith, Office of Senator Angus King (ME), Arctic Caucus Co-Chair

Mr. Isaac Edwards; Ms. Amy McElroy; and Mr. Matt Schroder, Office of Senator Lisa Murkowski (AK), Arctic Caucus Co-Chair

Ms. Kate Wolgemuth; and Mr. Jason Suslavich, Office of Senator Dan Sullivan (AK)

March 15, 2016

Mr. Mark Rosen, Center for Naval Analyses (Arctic Maritime Issues)

April 18, 2016

ADM Robert J. Papp (USCG, Ret.), Special Representative for the Arctic, U.S. Department of State

April 26, 2016

Ms. Kirsti Kauppi, Ambassador of Finland to the United States, Embassy of Finland

Mr. Pasi Tolvanen, Assistant Defense, Military, Naval and Air Attaché, Embassy of Finland

Ms. Reetta Härönoja, Counselor, External Economic Relations, Embassy of Finland

Mr. Mark Shuster, EVP Arctic, Shell Oil Company

Mr. Dale Snyder, VP Alaska Operations, Shell Oil Company

Mr. Mark Guadagnini, VP Arctic Maritime & Logistics, Shell Oil Company

Ms. Sara Glenn, Head of Federal Government Relation, Shell Oil Company

May 13, 2016

Mr. Gregory Zasytkin, Embassy of the Russian Federation

May 16, 2016

Commandant Admiral Paul F. Zukunft, United States Coast Guard

Vice Admiral Charles D. Michel, United States Coast Guard
CAPT David Barata, United States Coast Guard
CAPT Geoffrey Gagnier, United States Coast Guard
Mr. Michael Emerson, United States Coast Guard

May 19, 2016

Mr. Dmitry Gorenburg, Center for Naval Analyses (Russia Arctic Issues)
Ms. Heather A. Conley, Senior Vice President for Europe, Eurasia, and the Arctic; and Director,
Europe Program, Center for Strategic and International Studies

June 20, 2016

Arctic Regional Experts, Bureau of Intelligence and Research, U.S. Department of State and
National Intelligence Council, Office of the Director of National Intelligence

July 5, 2016

Mr. Gary Rasicot, Chief of Operations, Transportation Security Administration,
U.S. Department of Homeland Security

August 8, 2016

Ms. Esther McClure, Office of the Secretary of Defense, U.S. Department of Defense

September 6, 2016

Amb. Mark Brzezinski, Executive Director of the Arctic Executive Steering Committee,
Office of Science and Technology Policy, White House

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