Testimony

ABBIE TINGSTAD

Enhancing Security in a Changing Arctic

CT-A3097-1
Testimony submitted to the U.S. House Committee on Homeland Security on November 29, 2023

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Published by the RAND Corporation, Santa Monica, Calif.

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Enhancing Security in a Changing Arctic

Testimony of Abbie Tingstad[1]
The RAND Corporation[2]

Submitted to the Committee on Homeland Security
United States House of Representatives

November 29, 2023

Chairman Green, Ranking Member Thompson, and distinguished members of the committee, thank you for the opportunity to submit this testimony. As is increasingly customary when discussing matters related to the Arctic, I begin by acknowledging the diverse Indigenous peoples of the region, including the many Alaska Native groups. This statement also serves to center my testimony on the idea that Arctic security—in all of its connotations—is fundamentally about people. A rapidly changing climate is triggering important shifts, generating new risks and opportunities, and bringing forward various weaknesses and strengths. In this testimony, I summarize the series of key transitions underway and revisit the question of whether the United States faces an Arctic security gap and why. I will finish with findings and recommendations based on a recently published RAND Corporation report,[3] mandated by the National Defense Authorization Act for Fiscal Year 2021,[4] that pertains to the

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[3] Abbie Tingstad, Scott Savitz, Benjamin J. Sacks, Yuliya Shokh, Irina A. Chindea, Scott R. Stephenson, Michael T. Wilson, James G. Kallimani, Kristin Van Abel, Stephanie Pezard, Isabelle Winston, Inez Khan, Dan Abel, Clay Mckinney, Yvonne K. Crane, Katheryn Giglio, Sherrill Lingel, and Lyle J. Morris, *Report on the Arctic Capabilities of the U.S. Armed Forces*, Homeland Security Operational Analysis Center operated by the RAND Corporation, RR-A1638-1, 2023, https://www.rand.org/pubs/research_reports/RRA1638-1.html.

[4] Public Law 116-283, William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, January 1, 2021.

Arctic capabilities of the U.S. armed forces, which are central to U.S. security in the Arctic and globally. This report examines potential issues related to U.S. access in the Arctic region, particularly in comparison with Russian and Chinese access, and was sponsored by the U.S. Coast Guard (USCG). We find in general that additional investments in capacity for presence in the Arctic region will enhance homeland security in the Far North.

The Arctic Region Faces Security Transitions Along Many Fronts

Outside interest in the Arctic is growing for many reasons. Increasing temperatures, which the Arctic is experiencing at nearly four times the global average, create new concerns related to several types of security. In the past, the Far North was often described as "high north, low tension," and even appeared to some extent during the Cold War as a notable exception to chilly geopolitical relationships. Yet a warming climate, now with increasingly demonstrable effects, has raised the question of whether a historical ability to cooperate regionally under the auspices of the Arctic Council, among other regional organizations, can be maintained as the Arctic attracts more international attention. And most concerning is the fact that Russia and China are cooperating in the Arctic—that is, at the doorstep of the U.S. homeland.

Furthermore, the migration northward of certain fish and other marine species, as well as the presence of freshwater reserves in the Arctic, make the region increasingly attractive to many countries concerned about food and water security. The Arctic's well-known undersea oil and natural gas reserves will become easier to extract and bring to global markets over time as thick multi-year sea ice continues to diminish in many areas of the Arctic Ocean. Meanwhile, the current land-based extraction sites will become more difficult to exploit as permafrost melts and ice roads become muddier and unnavigable. Sea routes across the Arctic, once the domain of only the most adventurous, could continue becoming somewhat more accessible for part of the year, particularly along Russia's coast. Renewable energy—wind, geothermal, hydroelectric, and solar (for part of the year)—can also be generated in the Arctic, which holds reserves of the minerals needed to support new battery and other green energy technologies. The technology and tourism industries are also growing in parts of the Arctic.

Arctic environmental change also creates new challenges for human security, including for local and Indigenous communities. There are concerns about access to traditional and other food sources, contamination of water, respiratory and heat stress problems, and the collapse of coastal communities, as well as seasonal and permanent infrastructure stability, among others. These changes are occurring as permafrost and glaciers melt, sea level rises, summer heat waves and wildfires intensify, and large storms become more frequent.

Three Issues Related to Arctic Change Are Often Misunderstood

Recognizing the security issues laid out above is imperative. However, to enhance U.S. security in the Arctic, it is also imperative for U.S. policymakers to be aware of what is *not* happening in the region. In this vein, I next highlight three factors related to changes underway in the Arctic that are often misunderstood, misrepresented, and/or misinterpreted: (1) how climate change is affecting physical accessibility, (2) the imminence of conflict for contested

resources, and (3) the ability of global geopolitical issues to spill over to regional security matters.

First, regarding physical accessibility, physical changes are not uniformly easing mobility challenges for those living in the Arctic and for people coming in from lower latitudes. In many cases, the opposite is actually true: The rapid diminishment of multi-year sea ice in most areas is increasing the ability of non-icebreaking vessels to operate in the Arctic Ocean during some times of the year. However, this ice loss is uneven across the region; some areas near Russia and Alaska are more accessible than others. Loss of multi-year ice also does not imply safe conditions for transit and other economic activities (e.g., resource extraction, fishing); in fact, the unpredictability of sea ice could make some journeys more hazardous, especially to vessels without the appropriate fortifications and experienced crews. Furthermore, the same drivers of more ocean accessibility are also causing many coastal and inland areas to become less accessible due to permafrost melt, the shortening of ice road seasons, and erosion, among other factors.

Second, no evidence yet exists of a resource race or of impending resource wars. All Arctic land falls clearly under the jurisdiction of one of the eight Arctic states, and there are increasingly fewer land-based territorial disputes. Claims for extended continental shelf rights, which the United States cannot submit due to the fact that it did not ratify the United Nations Convention on the Law of the Sea, follow internationally agreed on processes. Although the legal status of both the Northwest Passage along the Canadian coast and the Northern Sea Route (NSR) or Northeast Passage along the Russian coast are certainly disputed in a legal sense, the volume of any international shipping through such routes over the coming years is likely to be at a degree much, much smaller than elsewhere in the world—if it exists—leaving the legal status of these routes as important in principle but not practically relevant from an economic standpoint for decades to come. This being said, the NSR will remain critical for the shipping of Russian resources to global markets, especially to Asia, which is a different matter economically (though not legally) than using the route as a shortcut from Europe to Asia and vice versa.

Moving from international to regional focus, there are continuing important discussions about the early integration of rights-holders such as Alaska Native groups into the decisionmaking process, along with such concepts as shared benefits and risks and free, prior, and informed consent regarding resource-extraction projects. Although the U.S. government took an important and high-impact step with the Alaska Native Claims Settlement Act,[5] for example, work on inclusion and securing futures for local communities continues to be important across the Arctic region. The work is not yet done.

Third, with respect to the possibility of global geopolitical issues spilling over to regional security matters, it is true that dialogue between Russia, China, the United States, and other Western countries has deteriorated as a result of the war in Ukraine and tensions in the South China Sea and over Taiwan. Yet my experience suggests that these tensions have not directly affected Arctic security, other than the associated difficulties in maintaining dialogue across the

[5] Public Law 92-203, An Act to Provide for the Settlement of Certain Land Claims of Alaska Natives, and for Other Purposes, December 18, 1971.

board. Overall, the Arctic region has remained relatively stable in this uncertain global security environment. Regarding Arctic dialogue and cooperation between Russia and the other seven Arctic states, I do not foresee a return to the "business as usual" model that pre-dated the 2022 full-scale invasion of Ukraine. However, among other things, with the restarting of Arctic Council activities and in the context of the day-to-day stewardship of border areas, I observe evidence that there has not been a systemic breakdown in regional security. This makes me cautiously optimistic that Arctic stakeholders can continue to seek opportunities for constructive, collective dialogue about the region's future.

Does the United States Face an Arctic Security Gap?

These security transitions, among others, are all good reasons to revisit the question of whether the United States faces an Arctic security gap. Research on Arctic security that my RAND colleagues and I have conducted over recent years suggests that there is no immediate, imminent security threat to the United States stemming from the Arctic. However, we have identified several risks that could ultimately lead to a future gap in security if U.S. access to and presence in the region do not improve to account for some of the key transitions that I have outlined above. The main risks that we identified are as follows:[6]

1. declining populations across much of the Arctic region
2. limited readiness by the United States to fulfill responsibilities across all plausible contingency scenarios in the Arctic (e.g., for search and rescue [SAR] missions)
3. loss of life, property, economic potential, and environmental integrity due to a lack of readiness
4. limited U.S. ability to operate with (and rely on) partners
5. loss of opportunities to counter and diplomatically engage (when tenable) with Russia
6. possibility of the accidental escalation of tensions between Russia and the North Atlantic Treaty Organization (NATO)
7. perception of U.S. absence and a security void, inviting more Chinese or another country's presence
8. possible growth in Chinese influence and ability to conduct covert activities.

I discuss these risks in detail below.

I first raise the key issue of declining populations across much of the Arctic, including in Alaska. Generally speaking, Arctic citizens have been moving in recent decades from smaller northern villages to larger towns and cities in the region, or out of the region altogether. There are many factors that are driving this shift in demographics, including the limited or lack of access to education and livelihoods and to basic services, such as utilities and transportation. It is difficult to imagine preserving the security of the U.S. Arctic without a robust contingent of local partners that often serves as the eyes and ears of the broader U.S. government and as first responders in many instances. It is equally difficult to accept the often-degraded access to basic necessities that local Alaskan and many Arctic communities face, which do and could inhibit

[6] See Tingstad et al., 2023.

outside homeland security representatives from conducting their presence and response roles in the region as well.

The second risk is related to the United States' limited ability to fulfill responsibilities in the Arctic. Due to limited and primarily seasonal presence in Arctic areas of Alaska, the USCG and other U.S. federal entities lack the typical infrastructure, capabilities, and capacity found in other areas of the United States that permit the regular and extensive execution of such missions as search and rescue, law enforcement, environmental response, and disaster response. From an international perspective, the United States and other Arctic countries have signed key agreements, including the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (2011),[7] the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (2013),[8] and the Agreement on Enhancing International Arctic Scientific Cooperation (2017).[9] Yet it is not clear whether the United States and the other Arctic signatory countries have the capabilities and capacities to fulfill the responsibilities and needs that are outlined in these agreements under varying scenarios. However, many of the other Arctic countries, including Russia, yield more-extensive Arctic-based and -focused capabilities, such as in icebreaking and transportation logistics, for response compared with the United States.

From a U.S. perspective, this disparity in capabilities is an important risk to heed because there is a substantial difference between conducting SAR missions immediately off the coast of a location such as the North Slope Borough in Alaska, where local responders may be able to quickly carry out an active response, and in an area such as eastern Greenland, where the *Ocean Explorer* ran aground in September 2023. During this incident—in which there were fortunately no casualties—it took multiple days for a vessel navigating relatively nearby to pull the cruise ship free.

Additional consideration must also be given to the ability of the United States and other Arctic countries to enforce existing agreements. A recent milestone in Arctic governance was the development of the International Code for Ships Operating in Polar Waters (Polar Code),[10] through the auspices of the International Maritime Organization (IMO) and which entered into force in 2017. This code lays out important guidelines and needs for ships operating in specified areas at high northern and southern latitudes. Still, in September 2023, Russia permitted oil tankers without the required hull engineering to transit the NSR for the first time. It has not been immediately clear what, if anything, can be done about such code violations in the near term.

A third risk is that the lack of the United States' and other Arctic states' ability to respond to various possible contingencies in the Arctic can result in loss of life, property, economic potential, and environmental integrity. These tragedies can occur anywhere in the world, but the

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[7] Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, signed at Nuuk, Greenland, May 12, 2011.

[8] Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, signed at Kiruna, Sweden, May 15, 2013.

[9] Agreement on Enhancing International Arctic Scientific Cooperation, signed at Fairbanks, Alaska, May 11, 2017.

[10] See International Maritime Organization, "International Code for Ships Operating in Polar Waters (Polar Code)," webpage, undated, https://www.imo.org/en/ourwork/safety/pages/polar-code.aspx.

Arctic is one region where U.S. readiness to prevent, mitigate, and respond to life-threatening incidents and other types of threats is very low due to a combination of limited U.S. capacity and capabilities in areas relevant to Arctic emergencies, vast distances, and a harsh environment. Historically low levels of human activity and presence in the region have limited the occurrence of such consequences. Yet, there is much concern surrounding the potential for increased risks to human life (e.g., through increasing cruise ship traffic, slow response to storm damage), the environment (e.g., via fuel spills), and infrastructure (e.g., through storm damage). For instance, in 2022, Typhoon Merbok severely destroyed infrastructure and had impacts on many displaced families and livelihoods in western coastal Alaska, serving as a sobering reminder of the power that one storm can have.

The fourth risk focuses on partnering as a way of reducing a country's risk, especially in a region such as the Arctic where all Arctic states have fairly limited infrastructure and capabilities. However, without having adequate access and presence, as well as sufficient capabilities, to bring to the table, the United States will be able to participate only in a limited fashion in exercises relevant to contingency preparedness, readiness, and response. The United States has tremendous capabilities across air, ground, maritime, space, and other areas, some of which are located in Alaska or in other U.S. states, such as Washington, Maine, and New York, which are geographically proximal to the Arctic. The vast majority of these assets, though not all, are primarily dedicated to such strategic needs as deterrence and global power projection. The United States must also be able to offer more Arctic-specific or at least Arctic-relevant capabilities in order to best position itself to take advantage of what other Arctic partners have to offer. For example, any theoretical plans to formally network fuel and connect logistics points across North American high northern latitudes to enable contingency response would necessitate the inclusion of locations in Alaska and perhaps Maine and New York to provide the best value domestically and for potential partners, such as Canada, Greenland, and Denmark.

The fifth risk concerns the impact that Russia's full-scale war on Ukraine has on preventing the United States and its like-minded allies and partners in the region from engaging in Arctic "business as usual." The reality is that the United States shares a maritime border with Russia, and Russia will continue to be an important player in the Far North for years to come as the region's largest country with great economic aspirations for the Arctic and a substantial military presence there. Thus, managing an Arctic relationship with Russia is a necessity and requires that the United States improve its access to and presence in the Arctic to successfully do so. This will facilitate engagement when needed to conduct responsibilities and improve the United States' ability to balance Russia's presence around strategic areas, such as the Bering Strait. More regional activity runs the risk of escalating tensions or causing accidents, which further emphasizes the importance of a U.S. presence that can facilitate domain awareness and strong communications.

The sixth risk concerns the potential for accidental escalation of NATO-Russia tensions. The United States' limited access to and presence in the Arctic can also prevent the U.S. government from having the appropriate domain awareness, communications, and other capabilities necessary to prevent military accidents and escalation. This escalatory potential is particularly relevant in the context of Sweden's imminent accession to NATO, which would mean that seven

of eight Arctic countries will be NATO members. In this context, Russia may increasingly perceive NATO encroachment in the Arctic, which could potentially result in further increasing tensions in the region.

The last two risks that we identified relate to China's presence in the Arctic. China is not an Arctic state, although it has been involved in regional scientific research and relevant intergovernmental organizations for years, among a group of other countries, such as the United Kingdom, Germany, Japan, and South Korea. China has participated in the existing Arctic governance structures as an observer within the Arctic Council, a participant in Polar Code development through the IMO, and a signatory of the International Agreement to Prevent Unregulated Fishing in the High Seas of the Central Arctic Ocean,[11] for example. At the same time, China has been particularly vocal among non-Arctic states about its presence in the region and in regional decisionmaking—famously calling itself a "near-Arctic state."[12] Its willingness to partner with Russia post full-scale invasion of Ukraine and its status as a U.S. competitor are also cause for watchfulness.

One concern for Arctic state sovereignty is the possibility that China (or another non-Arctic state) would potentially step in to fill a real or potential regional security void, challenging sovereignty or, even more likely, justifying an incremental increase of its own presence. A plausible scenario under which this could occur is if a Chinese maritime vessel were challenged (wrongfully, according to Beijing) on illicit or hybrid activity, or if a SAR response to such a vessel under distress were viewed as ineffective. These situations could, in theory, garner a response that Arctic states are overreaching or conducting ineffective operations, respectively, potentially opening the door for Beijing to justify China's stronger presence to protect its assets and interests. The recently signed maritime law enforcement agreement between Moscow and Beijing,[13] though not Arctic specific, was signed in Murmansk, Russia's largest Arctic city and adjacent to its Northern Fleet headquarters. This agreement could be an early type of indicator that China sees a need for an expanded role for itself in the region.

Another type of risk is that through increasing access and presence, China might be able to leverage locations, technologies, and other means to secure information and other advantages. Despite the lack of firm evidence of this to date, this risk may be particularly acute in the Arctic, given the difficulties in surveilling many regional activities across vast distances and with a severe lack of infrastructure to do so. Furthermore, these same challenges might provide the conditions under which covert activities can be pursued. U.S. presence in the region could certainly help maintain awareness and provide courses of action to counter questionable activities if necessary.

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[11] International Agreement to Prevent Unregulated Fishing in the High Seas of the Central Arctic Ocean, signed at Reykjavik, Iceland, May 20, 2021.

[12] People's Republic of China, State Council, *China's Arctic Policy*, January 26, 2018.

[13] "China, Russia Sign Memorandum of Understanding on Maritime Law Enforcement," ed. by Himani Sarkar, Reuters, April 26, 2023.

Improving U.S. Arctic Access and Presence Will Enhance the Security of the United States

The *Report on the Arctic Capabilities of the U.S. Armed Forces* contains several findings and recommendations for improving U.S. presence in and access to the Arctic region to maintain security and avoid the risks detailed above. The report's five key findings are as follows:[14]

First, **the USCG, even when working with joint partners, lacks the capacity to meet the nation's strategic aims in the Arctic**. Although the United States has substantial strategic capabilities for operating from or through the Arctic, its capacity and capability for conducting operations to secure its Arctic interests are more limited than those of other Arctic countries, based on scale. This includes key needs in access (surface maritime, land, and air at tactical and operational – rather that strategic – scales), domain awareness (e.g., sensors), communications (satellites, fiber-optic cables, etc.), and logistics (transportation and energy). Generally speaking, other Arctic countries have scaled their capabilities and capacity proportionally to their respective Arctic needs and to reflect the natural hazards and military threats they are facing, as well as the sizes of their populations and economies. Similarly, China's polar investments mirror its scientific and economic ambitions and lack of Arctic territory.

Second, **the U.S. armed services will be challenged in the Arctic by foreign military and commercial activities**. The Arctic has become increasingly visible globally through climate change and expectations of regional economic potential, which may also make the region more vulnerable to the spillover of geopolitical tensions or even armed conflict. U.S. armed forces will likely increasingly contend with strategic competition in this region to promote U.S. interests and support allies and partners. However, we did not assess that the Arctic would see an independent conflict caused by tensions arising over regional economic or other issues.

In addition, U.S. armed forces—especially the USCG, because of its particular statutory missions that include law-enforcement roles—will need to monitor the growth in regional commercial activities, both licit and illicit. The most pressing area will be in continuing to monitor and manage fisheries, especially anticipated growth in illegal, unreported, and unregulated fishing as global demand for protein increases, fisheries respond to a warming climate, and Indigenous groups in some areas gain more political and economic autonomy. Growth in tourism, especially ecotourism, will increase demand for SAR and environmental response, as well as for customs and border protection.

Third, **potential security risks to USCG forces are largely driven by U.S. capacity and capability issues**. Limitations on U.S. capacity and capability to scale up for enduring regional presence contribute to three types of issues:

- First, there are scenarios in which the USCG, more generally, would find it difficult to perform self-protection and self-rescue regardless of the reason (e.g., military threat, law-enforcement problem, natural hazard) for the need.
- Second, these limitations set the conditions for developing a security void in parts of the North American Arctic. Limited domain awareness, the inability to quickly communicate

[14] Tingstad et al., 2023.

relevant information, and a lack of presence to proactively manage problems place USCG forces at a starting disadvantage before a bad actor ever makes a move.
- Third, these same challenges affect the ability of the USCG and other U.S. armed forces to respond to emerging situations (including NATO defense) elsewhere in the Far North.

The United States has been fortunate that the overall security risks in the Arctic region have historically been limited. In the future, these risks will be likely to remain less severe than those in other parts of the United States and the world in which the USCG and other armed forces operate. In other words, the so-called pacing threat in the Arctic is not an external set of bad actors like it is elsewhere. The United States itself is placing the USCG and its armed forces in a difficult position in the Arctic by necessitating presence through overarching strategies and plans without providing the appropriate capabilities in sufficient capacities to perform these missions to the same level of success as they would be if performed elsewhere in the United States and in the world.

Fourth, **U.S. presence cannot be scaled up without trained personnel, domain awareness, communications, and logistics**. For many, the concept of armed forces' presence denotes physical and technological capabilities: ships, submarines, aircraft, ground vehicles, and similar platforms. There is no doubt that investment in such platforms would greatly promote U.S. Arctic access and presence. Yet, our study emphasized four other types of essential capabilities without which next-generation or recapitalized platforms would not be effective or even operational: trained personnel, domain awareness, communications, and logistics. Personnel need to be acclimated to operating in the extreme Arctic environment, where even basic operational tasks can be difficult. Domain awareness remains limited owing to the use of a single Arctic-dedicated icebreaker (USCGC *Healy*), few overflights, and relatively few early-warning stations. Polar conditions and poor infrastructure hamper communications, while logistics suffer from few roads and viable airstrips.

Fifth, **the Arctic physical environment will continue to be a formidable adversary**. Protecting the armed forces during their missions to secure the United States' interests in the Arctic region is of utmost importance. Although there are various military threats, such as antiship and antiaircraft missiles, our research suggests that the likeliest and most-consequential threats will come from the Arctic's physical environment and the present lack of capability, capacity, and preparedness for dealing with these challenges. The dangers of navigating through vast, poorly charted areas with extreme weather conditions; operating in a data vacuum with limited communications; and lacking personnel trained and ready to persist in a harsh, logistics-poor environment are—and will continue to be—formidable.

In response to the five findings presented above, our recommendations are as follows:[15]

- **Bolster momentum in implementing national, U.S. Department of Homeland Security, USCG, U.S. Department of Defense, and military service Arctic strategies.** Funding and the need to attend to other priorities can make it challenging to bridge the gap between Arctic strategies and action. It is merely a fact that, if the Arctic is not clearly promoted in priority-setting national strategies, it will continue to be difficult to

[15] Tingstad et al., 2023.

invest in the capabilities, people, partnerships, and training and exercises that Arctic strategies suggest are needed for securing national interests in the region.

- **Continue efforts to expand funding for priority USCG and U.S. Department of Homeland Security needs.** While there are no silver bullets and no single investment will resolve the multitude of problems, some initial priorities include continuing funding for new icebreakers and the deepwater port at Nome, Alaska, and making investments in "low-hanging fruit" for domain awareness and communications.
- **Seek opportunities to benefit from commercial investments**, including efforts to engage in research and development with commercial partners. We recommend considering expanding support for selected fiber communications, maritime and aviation logistics (including for mobile infrastructure), and autonomous-vehicle projects if viable and useful.
- **Strengthen research partnerships**, including those across the interagency and with local, Tribal, and university partners.
- **Strengthen international partnerships**, expanding them when possible, including intelligence- and other information-sharing more widely and sooner when possible.

To conclude, security requires continuous effort to maintain, particularly in periods of transition along the many dimensions that the Arctic is experiencing—from climate change to demographic shifts to economic opportunities and risks to geopolitical dynamics. As an Arctic nation, it is the United States' responsibility to take steps toward enhancing regional security. The recently released Implementation Plan for the United States' National Strategy for the Arctic Region and the USCG's Arctic Strategic Outlook Implementation Plan,[16] and the funding provided for the first new icebreakers, for example, are important initial steps. The United States must now continue this momentum.

I thank the committee for the opportunity to submit this testimony and look forward to addressing any questions.

[16] White House, "Fact Sheet: Implementation Plan for the United States' National Strategy for the Arctic Region," Briefing Room, October 23, 2023; U.S. Coast Guard, *Arctic Strategic Outlook Implementation Plan*, October 2023.