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“Expanding Opportunities, Challenges, and Threats in the Arctic:
A Focus on the USCG Arctic Strategic Outlook”

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Introduction

Good morning Chairman Sullivan, Ranking Member Markey, and distinguished members of the Subcommittee, my name is Mike Sfraga. I am the Director of the Polar Institute and the Director of the Global Risk and Resilience Program at the Woodrow Wilson Center, the nation’s think tank. I am honored to testify on the subject “Expanding Opportunities, Challenges, and Threats in the Arctic: A Focus on the USCG Strategic Outlook.” My role today is to provide a contextual overview of the key Arctic issues facing the US, and other Arctic and non-Arctic nations.

Mr. Chairman, we are witnessing the opening of a new ocean: a fourth accessible, maritime border for the United States. The Arctic Ocean joins the Atlantic Ocean, Gulf of Mexico, and the Pacific Ocean as a critical geographic component of our country’s maritime ring of security and opportunity. Spanning nearly five and one half million square miles, the Arctic Ocean covers an area roughly 1.5 times the size of the United States and nearly half the size of the Continent of Africa. It is a region that the US Coast Guard (USCG) has operated in for over 150 years, and the importance of these operations will only increase in the coming months, years, and decades. **Viable and visible US presence in the Arctic is critical to the nation’s interests: presence is important; presence is mandatory, and presence is influence.**

As the primary surface presence of the United States in the Arctic, and the first responder to any incident that falls under their 11 statutory missions, the USCG must be empowered to fulfill the needs of this country. As the US Coast Guard’s **2019 Arctic Strategic Outlook** states, “The Arctic maritime domain will continue to open and increased activity will create more demand for Coast Guard services. Near-term variability will result in a dynamic operating environment that exposes mariners and Arctic communities to unpredictable levels of risk.”

The United States Coast Guard **2019 Arctic Strategic Outlook** is a perfect filter through which my testimony should be considered, as is the Department of Homeland Security’s Strategic Plan for Fiscal Years 2020-2024. The DHS Strategic Plan champions “‘Relentless Resilience’ for **all threats and hazards,**” which requires a whole of government approach. The USCG **2019 Arctic Strategic Outlook** targets three lines of effort to further the Department’s goals: **1) enhancing**

their capability to operate effectively in a dynamic Arctic domain, 2) strengthen the rules-based order, and 3) innovate and adapt to promote resilience and prosperity in the Arctic.

The Arctic, including Alaska, the state by which the United States is an Arctic nation, is experiencing rapidly evolving threats—and opportunities—that we must recognize and address. To re-conceptualize the realities, risks, and opportunities in the Arctic, I designed a framework called *Navigating the Arctic's 7Cs*.

The **7Cs** are: 1) Climate, 2) Commodities, 3) Commerce, 4) Connectivity, 5) Communities, 6) Cooperation, and 7) Competition. To effectively protect the homeland by addressing the challenges and opportunities of a transformed Arctic, the USCG must thoroughly consider how it *Navigates the Arctic's 7Cs*; their **2019 Arctic Strategic Outlook** provides a good roadmap to do so.

1. Climate

Global Warming is real, rapid, and palpable. According to NASA, September Arctic Ocean ice extent has decreased from about 3 million square miles in 1980 to less than 2 million square miles as of September of this year. Arctic sea ice extent in September (when it is at its lowest) has declined almost 13% per decade since 1979.¹ The Arctic is warming more than twice as fast as the global average. The UN's World Meteorological Organization recently noted a surge in carbon emissions and stated the gap between global targets and true emissions is "glaring and growing," and must be halved by 2030 to have a chance of limiting global warming to 1.5 degrees C. "In order to have a 66% probability of avoiding global warming beyond 1.5 degrees C, the IPCC says we can release no more than 113 billion additional tons of carbon. That's only about ten years of emissions at the current rate."²

The recent IPCC Special Report on Oceans and Cryosphere in a Changing Climate documented the melting of high mountain glaciers and polar ice sheets significantly jeopardize the planet's freshwater supply. Another recent study declares 9 major climate tipping points have been triggered, 5 of which are directly related to Arctic change: 1. the destabilization of the Greenland ice shelf, 2. reduction in Arctic sea ice, 3. thawing of permafrost, 4. slowdown of Atlantic circulation, 5. fire and pest outbreaks in boreal forests.³

Associated sea ice decline has many implications for the United States, including: a more accessible border along Alaska's coastline; increased risk to mariners; stronger and more frequent storms; threats to coastal communities due to coastline and permafrost degradation, and; shifting subsistence patterns. For the first time in history, warming water temperatures have led to such a precipitous decline in Pacific cod stock that the North Pacific Fisheries Management Council announced they will close the Gulf of Alaska cod fishery for the 2020 season.⁴ Sea ice decline also

¹ "Arctic Sea Ice Minimum." NASA: Global Climate Change. <https://climate.nasa.gov/vital-signs/arctic-sea-ice/>

² "Special Report: Global Warming of 1.5" IPCC. <https://www.ipcc.ch/sr15/>

³ "Climate tipping points — too risky to bet against." Nature. <https://www.nature.com/articles/d41586-019-03595-0>

⁴ George, Kavitha. "Extremely low cod numbers lead feds to close the Gulf of Alaska fishery for the first time." Alaska Public Media. December 6, 2019. https://www.alaskapublic.org/2019/12/06/extremely-low-cod-numbers-linked-to-the-marine-heatwave-lead-feds-to-close-the-gulf-of-alaska-fishery-for-the-first-time/?fbclid=IwAR0NP-Z6BydPZ3Uo2LgO1lciKixtZp5duLJGf4_tvGtMqKYojFRnQgbcDZw

opens new and expanded opportunities: a more accessible resource base; increased shipping and commerce; and increases in tourism and recreational activities.

Global warming is the preeminent driver of change in the Arctic and requires a rapid yet responsible evolution of the USCG's posture, strategy, and operations. It also requires the US government to provide necessary resources to the USCG so they can execute their mission, and for applicable federal agencies to shoulder a share of the responsibility. Indeed, a "whole of government" strategy and approach is required. But in order to more effectively meet their mission in the Arctic, the USCG must have accurate, reliable, and sustained information about the Arctic environment in which they are to operate. The need for additional, sustained, and appropriately funded research and observation systems cannot be over emphasized.

Recommendation: Support the **Arctic Strategic Outlook's** call for additional Arctic research and associated funding. A perfect starting place is adoption and resourcing of the United States Arctic Research Commission's Report on the Goals and Objectives for Arctic Research 2019-2020. Nine recommendations that enhance the nation's ability to "Observe, Understand, and Forecast Arctic Environmental Change" are identified in the document.

2. Commodities

The rapidly changing climate is opening resource development opportunities throughout the Arctic, including Alaska. With a coastline of nearly 34,000 miles, 2,500 of which are in the Arctic,⁵ Alaska has significant potential for economic development at the community, state, and federal levels. The subsequent 1,000,000 square miles of the US Arctic Exclusive Economic Zone⁶, currently extending 200 nautical miles out from the Alaskan coastline, provides a vast landscape full of opportunities to satisfy global commodity markets, ensure our nation's energy security, while simultaneously presenting a significant challenge to the Coast Guard's mandate to uphold American sovereignty. The US Coast Guard is responsible for managing and regulating the nation's maritime borders and all actions within them—including those actions that promote economic prosperity and threaten US sovereignty and its economic independence.

As an Alaskan, I am well aware of the importance of the Alaskan seafood industry to the state; averaging \$3 billion a year in critical revenue. As the Arctic continues to warm, fish stocks may move farther north, which may enhance the industry's profits while presenting challenges as well. The possible migration north of fish stocks will further stretch fisheries enforcement assets. The Coast Guard conducts patrols in the Bering Sea to counter illegal, unregulated, and unreported (IUU) fishing; however, the northern migration of these living resources may require the Coast Guard to patrol more extensive swathes of territory and increase the frequencies of such patrols. Protecting these resources and preventing international IUU fishing in the region will become more important in the coming years and decades.

Arctic tourism will further complicate the Coast Guard's mission in the North. From mobile "hotel" tents positioned at the North Pole, to a boom in Arctic cruise adventures, thousands of people traveling a once inaccessible landscape pose myriad challenges for all Arctic nations. In 2016, the

⁵ <https://coast.noaa.gov/data/docs/states/shorelines.pdf>

⁶ 2019 USCG Arctic Strategic Outlook

Crystal Serenity carried 1,700 people through the Northwest Passage, making it the first large scale cruise ship to do so.⁷

Considering the USCG's Search and Rescue (SAR) mission and operations, an austere scenario should be considered. If a cruise ship accident occurred along the North Slope of Alaska, the first city with any capacity to assist in the disaster would be Utqiagvik, formerly known as Barrow. The city has a population less than 4,500, and its one hospital, the Samuel Simmonds Memorial Hospital, is a state-of-the-art institution with a **20-bed general medical facility**⁸. This number of beds could not handle a large-scale disaster in the Arctic and would require the Coast Guard to transfer victims to Fairbanks or Anchorage – a distance of 502 and 720 miles, respectively. However, the Coast Guard has neither the air nor sea assets to address a disaster on this scale; the tyranny of distance is amplified in the Arctic.

According to Cruise Industry News' 2019 Expedition Market Report, "expedition' cruising is the fastest growing market in the entire shipping industry.⁹ A cruise crisis, which becomes more of a concern grows with the predicted growth of special, Arctic designed expedition ships [the number currently in operation is predicted to increase from 80 to 108 vessels by 2022¹⁰] requires an increase in all phases of search and rescue operations. As noted by the USCG **2019 Arctic Strategic Outlook**: "as cruise ship and transpolar aviation traffic grows, so does the potential need for mass rescue operations in remote and icy waters. The current state of response capabilities makes this one of the most challenging of all possible scenarios." Proper prevention and management measures could mitigate the risk of these accidents and their environmental and economic impacts.

Response capabilities regarding non-living resource emergencies must also be expanded and enhanced. The Arctic is estimated to hold 13% of the world's undiscovered oil, 30% of the world's undiscovered natural gas, and 20% of the undiscovered natural gas liquids. The increased availability of these resources caused by continued and rapid Arctic Ocean sea ice decline has reenergized the global commodity market's interest in the Arctic. This interest is predicted to endure—particularly as geopolitical tensions continue to multiply in resource heavy areas around the world.

Recommendation: Support and address the US Coast Guard's SAR requirements as noted in USCG 2019 **Arctic Strategic Outlook**, with particular attention given to robust asset allocation along the Bering Strait and North Slope of Alaska.

3. Commerce

Increased access to a wide array of natural resource commodities has led directly to an increase in shipping and related activities in the Arctic, most notably in the Russian Arctic. There has been a five-fold increase in commercial activity along Russia's Northern Sea Route (NSR) since 2014, primarily driven by its regional resource extraction and subsequent transport systems to domestic

⁷ <https://thinkprogress.org/arctic-biggest-cruise-ship-ever-ea7b71e9844f/>

⁸ https://www.ihs.gov/sites/alaska/themes/responsive2017/display_objects/documents/hf/Barrow.pdf

⁹ <https://www.cruiseindustrynews.com/flip/expedition19/mobile/index.html#p=2>

¹⁰ <https://thebarentsobserver.com/en/travel/2018/05/arctic-cruise-ship-boom>

and international markets. According to Business Index North, 22,022 voyages with 20.1 million tons of freight transited the NSR in 2018—twice the tonnage of 2017. The number jumped again to 30 million tons in 2019¹¹. In the month of September this year, there were 50 voyages that originated from, or traveled to, international destinations using the Northern Sea Route.¹²

Russia derives an estimated 20% of its GDP and 30% of its exports from the Arctic—and aims to quadruple the cargo to 80 million tons per year by 2024 by enhancing and expanding their Arctic infrastructure. Russia's Yamal Peninsula, an epicenter of this commerce, is now emblematic of globally integrated Arctic. China owns an approximate 40% stake in the Yamal 1 LNG project. Arctic-specific LNG tankers built in the shipyards of South Korea transport LNG along the NSR, down the Bering Strait to Asian – Chinese markets. This is the new Arctic; an expanding global economic system that stands in stark contrast to the lack of activity in America's Arctic.

The success of the Yamal 1 project has spurred the construction of a second Russian LNG facility. Novatek is Russia's largest LNG producer – and majority owner of the Yamal 1 complex. They recently reached a final investment decision (FID) of \$21.3 billion for their Arctic LNG Yamal 2 facility.¹³ Novatek is partnering with French, Chinese, and Japanese companies on this project, with continued interest from Saudi Aramco. The facility is expected to be complete within the next five years.¹⁴

An integrated commercial system linking the Yamal facilities and other oil and gas developments along Russia's Arctic Coast will enhance Russia's position as a source for much needed energy resources. The recently proposed Sakhalin Energy Transfer Facility, located on Sakhalin Island, could make delivery of Russian LNG to Asian markets more viable and cost effective. Russia's *Power of Siberia* pipeline, the first pipeline to send Russian gas directly to China, launched operations on December 2nd of this year, ushering in greater connections between the two countries' markets.¹⁵

The United States should take note of this growing Russian Arctic infrastructure network and its ever-growing relationship with Asian markets. Renewed interest in America's Arctic as a source of energy security has spurred conversation about the need for, and feasibility of, a year-round or seasonal energy and transit complex along Alaska's North Slope. Although much work would need to be done, a Public Private Partnership may be of interest as the US looks to secure its own energy sources and take advantage of vast LNG assets along Alaska's coast and the ever-increasing LNG markets throughout Asia. Yet, for LNG development and shipping to occur in and around Alaska, it must be economically feasible, safe, reliable, regulated, and have a significant US Coast Guard presence.

The United States has a well-functioning Marine Transportation System (MTS), and it is at the core of the nation's economic prosperity. The US Coast Guard maintains the safety, security, and efficiency of the MTS, providing stable regulations that enables \$5.4 trillion in economic activity

¹¹ <https://www.arctictoday.com/rosatom-looks-to-make-7-billion-investment-in-arctic-shipping-service/>

¹² <https://arctic-lio.com/nsr-shipping-traffic-activities-in-september-2019/>

¹³ <https://www.lngworldnews.com/arctic-lng-2-partners-make-fid/>

¹⁴ <https://www.bloomberg.com/news/articles/2019-09-05/russia-s-novatek-gives-green-light-to-arctic-lng-2-project>

¹⁵ <https://www.gazprom.com/projects/power-of-siberia/>

per year. While challenging, an extension and variation of the MTS could be established in America's Arctic. The USCG **Arctic Strategic Outlook** describes such an expansion that would require an adaptation of MTS management tools, as well as innovative policies and technologies that are Arctic-appropriate. This can only be accomplished with the support and partnership of public and private sector entities and would be a tangible, actionable step the US can take to prepare for future opportunities.

In preparation for greater US commercial presence in the Arctic, the US Coast Guard has taken steps toward improving navigational safety and environmental protection. A rare partnership with Russia has led to an agreement, entered into force one year ago, that establishes two-way shipping routes, promotes safe commerce, and takes into account subsistence patterns in the Bering Strait and Bering Sea. Additionally, the *Memorandum on Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska*¹⁶, issued on November 19 of this year, provides encouraging steps towards expediting shoreline and nearshore mapping capabilities for Alaska and its Arctic region. This is a critical component of any future, integrated, US Arctic strategy that considers our homeland security, national security, economic security, as well as social and political security in a dynamically changing landscape.

The timing of the memorandum highlights how modern aids to navigation will be crucial in integrating the Arctic into the broader US MTS and enhancing economic development. Less than 5% of the US maritime Arctic is charted to modern international standards; we lack the basic information crucial to understanding our Arctic domain. Without robust maritime domain awareness (MDA), conducting safe and secure shipping for economic development remains a daunting challenge. As noted by the USCG **Arctic Strategic Outlook**, "MDA favorable to supporting economic growth and resource management requires information on vessels, crews, passengers and cargo carried (if applicable); pollution detection and tracking capabilities; weather and environmental observations, including ice reconnaissance; an assessment of living marine resources activity; and an assessment of human activity and infrastructure".

As noted, the US Coast Guard's capabilities for MDA are stretched thin in the Arctic because there does not exist sufficient access to reliable, redundant, robust internet connectivity. The result of which inhibits data gathering, information sharing between local, state, and federal agencies and all facets of observational capabilities. This reality stifles commerce, SAR, national and homeland defense requirements, and limits Alaska communities to engage in state, national and international opportunities. Moreover, without reliable data gathering and dissemination, expansive and reliable infrastructure development and maintenance would be nearly impossible to realize.

Recommendation: A comprehensive and appropriately funded ocean mapping strategy should be developed and executed to advance all facets of US interests and include the development of an Arctic MTS.

¹⁶ <https://www.whitehouse.gov/presidential-actions/memorandum-ocean-mapping-united-states-exclusive-economic-zone-shoreline-nearshore-alaska/>

4. Connectivity

There are many ways to describe connectivity in the Arctic context. We tend to think of connectivity as just an internet connection, but we should focus on a broader application of connectivity—addressing both digital and physical infrastructure.

As noted in my past testimonies, we do not have a digital or information divide in America’s Arctic—we have a digital and information abyss. This abyss is not just a US Coast Guard issue, but a real problem that jeopardizes our national and homeland security and one that must be met by the collective and integrated family of federal agencies. To be clear, telecommunications and information infrastructure in the Arctic requires a coordinated and leveraged approach involving governance and operations expertise from local, state, and federal entities.

Closing this **abyss in the Arctic, and specifically for the US Coast Guard** will require innovative solutions that maintain levels of flexibility and scalability, coupled with persistent public-private investment. Joint efforts with local communities, state agencies, and other federal institutions—including scientific and research organizations—would result in more reliable communication solutions.

These solutions should incorporate investments in, and funding for, “ice-breaking ships, such as the Polar Security Cutter, aviation assets, unmanned or autonomous systems, and trained personnel” capable of operating in the harsh and remote arctic environment, as stated in the **2019 Arctic Strategic Outlook**. If these investments are not made, the United States will continually fall behind other arctic nations. To date, the US is the only Arctic State that has not made a comparable investment to these resources - it is also quickly being surpassed in this field by non-arctic states

China’s proclaimed “Polar Silk Road” is designed to “facilitate connectivity and sustainable economic and social development of the Arctic” —by constructing and investing in infrastructure for arctic resource development, transportation hubs, and shipping routes.¹⁷ Already, China has pursued investments in various Arctic nations’ infrastructure. The “near-arctic state” owns approximately 40% stake in the Yamal 1 facility and is considering financing port facilities in Arkhangelsk (Russia)¹⁸ and Kirkenes (Norway).¹⁹ The China Communications Construction Company [CCCC] bid on a contract for the construction of three Greenland commercial airports, located in Nuuk, Ilulissat, and Qaqortoq, at a cost upwards of \$550 million.²⁰

The country’s dynamic investment interests also range from financing research centers like the Northern Lights Research Facility in Iceland, to pursuing investments in undersea fiber-optic cables such as the Arctic Connect cable system.²¹ A CNA report estimates that China’s proposed investments amounted to “over \$1.4 trillion in the economies of the Arctic nations (including Finland and Sweden)” between 2005 and 2017.²²

¹⁷ http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm

¹⁸ <https://www.globaltrademag.com/china-russia-collaborating-arctic-port/>

¹⁹ http://www.xinhuanet.com/english/2018-03/10/c_137029125.htm

²⁰ <https://www.defensenews.com/global/europe/2018/09/07/how-a-potential-chinese-built-airport-in-greenland-could-be-risky-for-a-vital-us-air-force-base/>

²¹ <https://www.capacitymedia.com/articles/3824070/cinia-moves-full-speed-ahead-with-arctic-connect>

²² https://www.cna.org/CNA_files/PDF/COP-2017-U-015944-1Rev.pdf

Russia is also bolstering its dual-use Arctic assets. Their extensive lattice of ports, air bases, commercial hubs, a floating nuclear power plant off the Arctic coast city of Pevek, and SAR resources have been a component of civilian-government, as well as military activities, including recent tests of new weapons systems and increased troop deployments.

Meanwhile, the US does not have a major deep-water port along 1,500 nautical miles of its Arctic coastline: from Dutch Harbor to Alaska's North Slope. As the **Arctic Strategic Outlook states**, "the closest Coast Guard Air Station to the Arctic is located in Kodiak, AK. This is approximately 820 nautical miles south of Utqiagvik, AK—a distance comparable of that from Boston, MA to Miami, FL."

Without a viable deep-water port or string of ports—in the US Arctic—commerce, SAR, and national security interests will not be met. The June 2019 National Defense Authorization Act includes "requirements to locate and designate 'one or more' US strategic ports in the Arctic." The US must recognize and invest in the potential for dual-use facilities and capabilities in Alaska, starting with a multi-use port.

Of particular interest should be the development of a deep-water port along the Bering Strait. There have been numerous reports and recommendations made as to scale, scope, and location of such a port. Nome, Port Clarence, and other location options are all in need of review and final decision sooner rather than later. But in the spirit of leveraging and integrating US national assets for the security of our nation, linking the development, construction, and complementary mission sets of future Arctic-related infrastructure seems the most prudent strategy.

Therefore, the committee should continue to support a Bering Strait, dual-use port as well as an emerging interest in reconstituting and upgrading the former US Naval base in Adak, in the Aleutian Islands. Here, an upgraded Naval installation would serve to secure and protect the nation's maritime, homeland, national, and commercial security requirements, while providing a dual use port for the US Coast Guard. The two port concepts are not mutually exclusive. Rather, I argue it is in the nation's best interest to enhance and develop both.

Combining and leveraging military, national and homeland security, and other federal and state government capabilities and assets will better prepare the US for our new Arctic, while requiring a reconceptualization of how the United States views its Arctic and the critical role the region will play in the nation's future. Developing such a component of a more cohesive US Arctic strategy is not only beneficial, but necessary for US leadership in the region. The 2017 US National Security Strategy mentions the Arctic once, and the country has yet to put forward a document of integrated Arctic strategies, or guidelines for integration between various agencies such as DoD, DHS, DOE, and DOS.. Although there are seams of cooperation, for the most part, each entity carries out its own strategy in the Arctic (if it has one) even though cooperation is a key component in the region.

Recommendation: Advance the development of a port, or preferably a string of ports, along the North Slope of Alaska, Bering Strait, and Aleutian Islands that will provide dual use capabilities to meet the needs of the US Coast Guard, national and homeland security entities, as well as other federal, state, local, and commercial interests. Advance the development and implementation of

enhanced, integrated internet and communications connectivity throughout the region and leverage public-private partnerships where feasible.

5. Communities

The people of Alaska, and more specifically the Indigenous peoples of Alaska are on the vanguard of a changing, dynamic, shifting, melting landscape. For many Alaskan communities the land is their life, their identity, their culture, and the source for most of their food. Nearly three dozen Alaskan communities have been identified by a 2009 Army Corps of Engineers report²³ as being seriously threatened by environmental change and in need of relocation; this number is likely to grow. These communities are stressed on many levels yet they have adapted and thrived in this landscape for thousands of years. But the changes are happening too fast, too dramatically, and too unpredictably to navigate with any certainty.

Alaskan communities live at the forefront of environmental change, and the consequential risks that develop as a result of those changes. For them, an oil spill represents not just an environmental disaster but a threat to the stability of the ecosystems upon which their livelihoods, food security, and cultural identities depend. Continued engagement between the USCG and Alaskan communities should be applauded and expanded through the Marine Safety Task Force initiative. The MSTF conducted safety and environmental protection missions (surveying and checking, for instance, bulk fuel storage facilities – a life sustaining resource throughout remote Alaska) in over 100 Alaskan communities.

The USCG is a leader in the Arctic, and their Coast Guard Cities and Communities program—five of which are in Alaska (though none in the Arctic region)—demonstrate their enduring commitment to cultivating relationships with communities with whom they collaborate. As noted in the **Arctic Strategic Outlook**, “the Coast Guard has been part of life in many Arctic communities for over 150 years as a neighbor, law enforcer, and life saver. Alaskan Natives have been partners and teachers, and we continue to benefit from their traditional wisdom and deep understanding of the Arctic domain.” Traditional Knowledge will play a key role in the future viability of these communities and will be important components of the US Coast Guard’s formulation of strategic, operational, and tactical decision-making.

Recommendation: The US Coast Guard should further utilize Traditional Knowledge and expertise to enhance their missions throughout Alaska. Traditional Knowledge will remain an important component of a larger strategy to understand better a changing landscape and inform both strategies and tactics to address these changes; including the importance of community-based physical monitoring and detection.

6. Cooperation

Continued participation and leadership by the US in the Arctic Council, the Arctic Economic Council, and the Arctic Coast Guard Forum is in our nation’s interest. These entities shape and reinforce a rules-based governance structure for the Arctic Ocean and indeed, the eight Arctic nations. They help to identify and conduct research and policy measures that strive to understand,

23

<https://www.poa.usace.army.mil/Portals/34/docs/civilworks/BEA/AlaskaBaselineErosionAssessmentBEAMainReport.pdf>

mitigate, and address the impacts of a warming Arctic. The Arctic region is the only place, aside from the International Space Station, where the US and Russia have maintained long-term cooperation, even in times of high tension. Because the Arctic Security Forces Roundtable has been on hold since the Russian annexation of Crimea, the Arctic Coast Guard Forum plays a more important role in maintaining open lines of communication between the US and Russia.

It is important that on shared security concerns related to oil spill response, protecting marine living resources, shipping, and SAR, the US continues to work collaboratively with Russia and the other Arctic nations. As previously noted, the US and Russia have worked successfully together to create IMO-approved, designated shipping routes through the Bering Strait in order to reduce risk to mariners.

There were two incidents of concern this past summer in the Russian Arctic which underscore the need for the US to work proactively and collaboratively with allies and partners to minimize risk of nuclear contamination, identify knowledge gaps, and develop a greater capacity to minimize harm from any event involving radioactive material. Such incidents also make clear the need for open lines of communication.

Recommendation: The US Coast Guard must continue to shape and lead the efforts of the Arctic Coast Guard Forum, play a key role in the future of the Arctic Economic Council as it encourages continued, sustained, and responsible development of the North, and engage where appropriate with the United States Senior Arctic Official and her Arctic Council team at this consensus driven, Arctic focus organization.

7. Competition

The **Arctic Strategic Outlook** notes US adversaries seek to weaken “the international order that underpins a free and open maritime domain.” It also states that “clear and universally held norms, coupled with transparency, can dissipate” the “cloud of ambiguity” under which they are operating.

When exploring the competition dynamic in the Arctic, specifically between the United States, China, and Russia, we should consider each country’s broader approach and national mindset. In the Arctic, and elsewhere, **China plays the game “Go;”** characterized by a long-term, methodical strategy to exert influence and power in a calculated fashion. Meanwhile, **Russia plays the game “Survivor;”** attempting to sustain an economy crippled by western sanctions and a declining population with an overreliance on natural resource development for both domestic and international markets. Finally, the **United States plays the game “Twister;”** attempting to balance its global leadership roles in the Atlantic Ocean, Pacific Ocean, South China Sea, Mediterranean Sea, Indian Ocean, and elsewhere, against the challenges presented by a new, accessible Arctic Ocean.

Military ties between Russia and China are growing stronger in the Arctic. This is evidenced by an increase in joint military exercises between the two countries including the Russia-based **Tsentr-2019** exercise. The exercise included approximately 128,000 military personnel and helped further develop China, India, and Pakistan’s operational capabilities in the high North

region. The exercise included 1,600 troops under PLA Western Theater Command.²⁴ This reality should be considered in juxtaposition to the 2018 NATO Trident Juncture Exercise that included 50,000 NATO troops and partners; 20,000 of which were American troops.

In October of this year, Russian Federation President Vladimir Putin announced Russia would assist China in developing a **missile defense system** to strengthen China's ability to counter attacks from cruise and ballistic missiles.²⁵ In mid-November of this year, Russia used a MiG-31K interceptor jet to test the Kinzhal (Dagger) **hypersonic missile** for the first time in the Arctic; the Finnish Government along with other Scandinavian countries took particular note of the test.²⁶ And as is well documented, Russia continues to revitalize cold war bases while developing new assets along the NSR from Franz Joseph Land to Wrangell Island; the latter a virtual stone's throw from Alaska.

The **Arctic Strategic Outlook** notes the lack of “investments in ice-capable surface maritime security assets” on the part of the US that “limits the ability of the Coast Guard, and the Nation, to credibly uphold sovereignty or respond to contingencies in the Arctic. It also diminishes America's position as the partner of choice for allies and partner nations.” As a reminder, China, the self-declared “Near-Arctic State” currently has four icebreakers and is developing two new vessels, one of which is planned to be nuclear powered. Russia has 53 operational icebreakers, with six under construction and 12 more planned. One of these will be a weaponized icebreaker with an electronic warfare platform, an anti-aircraft missile system, cruise missiles, and a helicopter launch pad.²⁷

Presence, both operational and strategic, is critical to US power projection in the Arctic region. The USCG is the critical, visible leader in this area as they try to meet their mission to counter new regional competition from both Russia and China. Yet, the US Coast Guard has only one medium icebreaker The *Healy* that services the Arctic region, and one heavy icebreaker, the *Polar Star*, which is already well past its expected service life and serves our nation's Antarctic mission sets.

The **Arctic Strategic Outlook** highlights the need for six polar security cutters to more effectively carry out its array of current and future mission sets in Polar Regions. The recommendation from the National Academies of Sciences, Engineering, and Medicine (NASEM) report on acquisition and operation of polar icebreakers noted the “USCG should follow an acquisition strategy that

²⁴“ Chinese troops participate in Tsentri-2019 drills” China Military. http://eng.chinamil.com.cn/view/2019-09/25/content_9635742.htm

²⁵ Guardian staff and agencies. “Russia is helping China build a missile defence system, Putin says.” The Guardian. October 3, 2019. <https://www.theguardian.com/world/2019/oct/04/russia-is-helping-china-build-a-missile-defence-system-putin-says>

²⁶ Devitt, Polina. “Russia tests hypersonic missile in Arctic - TASS cites sources.” Reuters. November 30, 2019. <https://www.reuters.com/article/us-russia-arctic-missiles/russia-tests-hypersonic-missile-in-arctic-tass-cites-sources-idUSKBN1Y40BB>

²⁷ Perisic, Kyle. “Russia reveals weaponized icebreaker it plans to use to control the Arctic.” American Military News. November 1, 2019. <https://americanmilitarynews.com/2019/11/russia-reveals-weaponized-icebreaker-it-plans-to-use-to-control-the-arctic/>

includes block buy contracting with a fixed price incentive fee contract and take other measures to ensure best value for investment of public funds.”²⁸

A block buy would likely make the contracts more competitive and lucrative, while bringing into service quicker these national assets. As noted in the **Arctic Strategic Outlook**, the Coast Guard requires the most advanced information possible on the Arctic environment and plays a critical role in the nation’s scientific effort at both ends of the globe. Therefore, it is imperative that all Polar Security Cutter fleet designs include structural and functional capabilities to support both Arctic and Antarctic research efforts as informed by the scientific community.

Recommendation: Fully fund and commission 6 Polar Security Cutters. In addition, and to further leverage national assets in the Arctic, support the creation and full funding of the proposed Ted Stevens Arctic Center for Security Studies, which would be the first DoD Regional Center in the Arctic. This Center would address specific matters relevant to Arctic security and our nation’s defense, as well as leverage and complement the outstanding work conducted by the existing DHS supported Arctic Domain Awareness Center; a DHS Center of Excellence, in Anchorage, Alaska. The two Arctic-focused entities would be visible, tangible, and valuable steps toward a more “whole of government” approach to the Arctic as well as critical tools to inform and guide a more comprehensive Arctic strategy with necessary policy, training, and presence.

And as a final note on the changing Arctic and our national security, a convergence of the Arctic’s 7 Cs currently unfolding in Greenland. Greenland is experiencing the dramatic effects of global warming (in fact, just this week, a recent study in *Nature* noted the Greenland ice sheet’s total losses nearly doubled each decade to an average of 254 billion tons lost annually—an increase that puts another six million people globally at risk of flooding); the promise of significant stores of strategic minerals and fisheries; foreign interest in developing ports and complementary infrastructure; a desire to be connected to regional and global markets; communities trying to adapt to a rapidly changing landscape; an active and important voice, in partnership with the Kingdom of Denmark, in the Arctic’s future; and is situated in one of the most geographically, geopolitically, and geostrategically important locations in the world. In short, Greenland is emblematic of the emerged Arctic.

Conclusion

Mr. Chairman, I often hear the Arctic referred to as an **emerging issue**. Mr. Chairman, **the Arctic has emerged**. As I have explained, it is no longer an isolated or remote region; rather it is an integrated component of our global political, economic, social, physical, and security landscape. The region is experiencing rapid and dynamic change and these **seven unique drivers**, the **Arctic’s 7Cs**, help frame for this committee, and perhaps others, these pressing global issues in a way that can help to better understand and address our future Arctic.

This testimony was shaped and informed with the input and assistance of my Wilson Center colleagues Mr. Jack Durkee, Ms. Marisol Maddox, and Ms. Bethany Johnson.

²⁸ “Acquisition and Operation of Polar Icebreakers: Fulfilling the Nation’s Needs”
<https://docs.house.gov/meetings/PW/PW07/20170725/106311/HHRG-115-PW07-20170725-SD004.pdf>