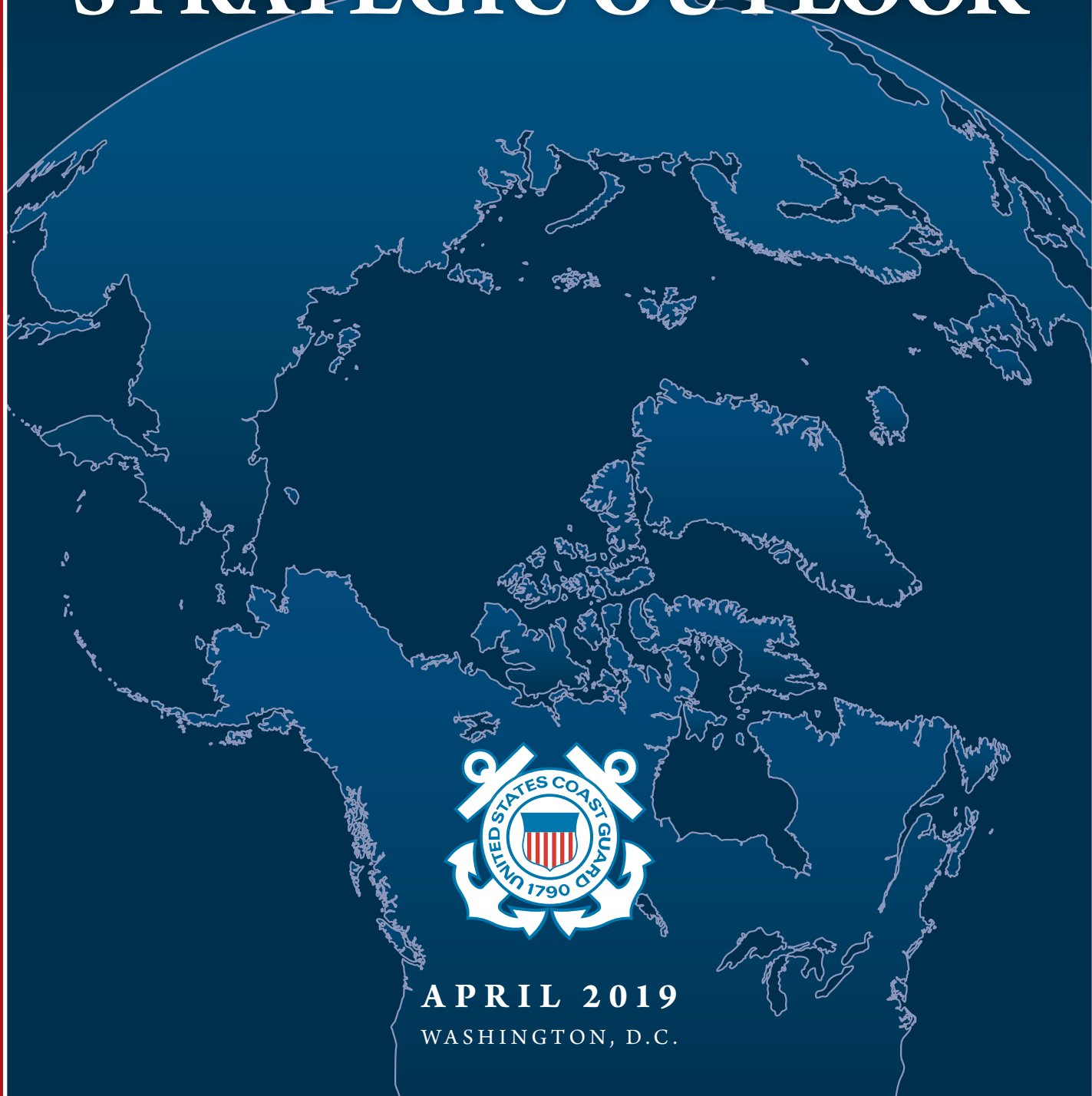


UNITED STATES COAST GUARD



# ARCTIC STRATEGIC OUTLOOK



APRIL 2019  
WASHINGTON, D.C.

★ ★ ★ ★

THE UNITED STATES  
COAST GUARD'S  
**VISION**  
FOR THE ARCTIC REGION

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# THE COMMANDANT

## OF THE UNITED STATES COAST GUARD



For over 150 years, Americans have counted on the U.S. Coast Guard to proudly uphold American sovereignty, provide national security, and promote economic prosperity in the Arctic. Our important work is even more relevant as the northern approach to North America gains geo-strategic prominence. Access to the Arctic's vast energy, mineral, fisheries, and other commercial resources is growing at precisely the same time that global interests in these assets intensifies. The Nation's security demands in the region are both pressing and enduring. What was previously a region of energy interest and challenge is now an increasingly competitive domain.

As the Nation's primary maritime presence in the polar regions, the Coast Guard advances our national interests through a unique blend of polar operational capability, regulatory authority, and international leadership across the full spectrum of maritime governance. The Coast Guard will continue to work with our allies and partners on the mutual goal of ensuring a safe, secure, and cooperative Arctic, even as our aspiring near-peer competitors maneuver for strategic advantage in the area. However, competition need not lead to conflict. The Coast Guard thrives in situations that require nuanced responses to complex issues. Our persistent presence—on the water, in communities, or in international forums—absolutely equals influence.

This Arctic Strategic Outlook reaffirms our commitment to American leadership in the region through partnership, unity of effort, and continuous innovation. This document establishes three lines of effort crucial to achieving long-term success: (1) Enhance 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.

We understand the significant investment required to secure the Arctic, and we appreciate and embrace the trust the American people have placed in the U.S. Coast Guard. We will remain vigilant in protecting our national interests in the polar regions to forestall the unchecked influence of competitors.

A handwritten signature in blue ink, reading "Karl L. Schultz". The signature is fluid and cursive, with a long horizontal stroke at the end.

*Semper Paratus.*

**Admiral Karl L. Schultz**

# ARCTIC REGION STATISTICS

**T**HE UNITED STATES is an Arctic Nation, and as America's maritime presence the Coast Guard maintains an enduring responsibility for the national security and economic prosperity of the Arctic.

## ECONOMIC VALUE OF THE AMERICAN ARCTIC



**1,000,000**

Square miles of U.S. Territorial Waters and Exclusive Economic Zone in the Arctic.



**\$3 Billion**

Economic impact of Alaska's Arctic seafood industry.



**90 Billion**

Barrels of undiscovered oil reserves in the Arctic and an estimated 30 percent of the world's undiscovered natural gas.



**\$1 Trillion**

Value of the Arctic's rare earth minerals, such as zinc, nickel, and lead.

## WHAT HAS CHANGED SINCE THE 2013 ARCTIC STRATEGY?



**6**

Number of Chinese Arctic expeditions. While not an Arctic nation, China has made the Arctic a strategic priority, declaring themselves a "Near-Arctic State."



**14**

Number of Russian icebreakers built. Russia continues to invest heavily in military facilities, with 6 bases built since 2013.



**8**

Member states of the Arctic Coast Guard Forum, which the U.S. formed in 2015 alongside Canada, Denmark (Greenland), Finland, Iceland, Norway, Russia, and Sweden.



**10 million**

Tons of goods including gas, oil, grain, and coal, which transited the Northern Sea Route in 2017. 40 percent of vessels carrying these goods originated from or were going to a Chinese port.



**1,700**

People onboard CRYSTAL SERENITY in 2016, the first large capacity cruise ship to transit the Northwest Passage.

# I.

## Executive Summary


The United States is an Arctic Nation, and the United States Coast Guard has served as the lead federal agency for homeland security, safety, and environmental stewardship in the Arctic region for over 150 years. Since Revenue Cutters first sailed to Alaska in 1867 to establish U.S. sovereignty, the Service's role has expanded, including representing American interests as a leader in the international bodies governing navigation, search and rescue, vessel safety, fisheries enforcement, and pollution response across the entire Arctic. As the region continues to open and strategic competition drives more actors to look to the Arctic for economic and geopolitical advantages, the demand for Coast Guard leadership and presence will continue to grow.

Since the release of the Coast Guard Arctic Strategy in 2013, the resurgence of nation-state competition has coincided with dramatic changes in the physical environment of the Arctic, which has elevated the region's prominence as a strategically competitive space. America's two nearest-peer powers, Russia and China, have both declared the region a national priority and made corresponding investments in capability and capacity to expand their influence in the region. Russia and China's persistent challenges to the rules-based international order around the globe cause concern of similar infringement to the continued peaceful stability of the Arctic region. As the only U.S. Service that combines both military and civil authorities, the Coast Guard is uniquely suited to address the interjurisdictional challenges of today's strategic environment by modeling acceptable behavior, building regional capacity, and strengthening organizations that foster transparency and good governance across the Arctic.

The Arctic's role in geostrategic competition is growing, in large part because reductions in permanent sea ice have exposed coastal borders and facilitated increased human and economic activity. The warming of the Arctic has led to longer and larger windows of reduced ice conditions. From 2006 to 2018, satellite imagery observed the 12 lowest Arctic ice extents on record.<sup>1</sup> This has led to greater access through Arctic shipping routes. While the near-term future of these routes is uncertain, a polar route has the potential to reduce transit times of traditional shipping routes by up to two weeks. Russia's establishment of a Northern Sea Route Administration, along with the use of high ice-class Liquefied Natural Gas (LNG) tankers built specifically to export natural gas from its Yamal LNG facility, have contributed significantly to the increase in commercial shipping traffic in the Arctic. In addition, opportunities for potential resource extraction and expanding Arctic tourism offer new prospects for some of the Nation's most isolated communities and broader benefits to America. However, changing terrain and subsistence food patterns, as well as the impacts of increasingly frequent and intense winter storms, continue to challenge the communities and increase risk in the maritime domain.

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<sup>1</sup> 2018 Arctic Report Card, National Oceanographic and Atmospheric Administration, <https://arctic.noaa.gov/Report-Card/Report-Card-2018>

An aerial photograph showing several USCGC ships on a large body of water. In the foreground, a white cutter with the hull number 'F 359' is visible. Behind it, a red and white icebreaker is seen. Further back, another white cutter and a larger blue and white ship are visible. The water is a deep blue, and the sky is a pale, hazy blue.

The Coast Guard will adhere to the following principles as it manages these risks and seizes the opportunities created by these changes:

**Partnership.** The Arctic is an exceptional place that demands collaboration across national boundaries. The Coast Guard will partner with the Arctic Nations, as well as partners and allies with Arctic interests, to contribute to keeping the Arctic a conflict-free region. The Service will continue to dedicate resources to forums, such as the Arctic Council, and to combined operations and exercises to safeguard and secure the Arctic domain.

The unique and valuable relationship the Coast Guard has established with tribal entities builds mutual trust and improves mission capacity and readiness. We will continue to incorporate lessons-learned from engagements with Alaska Native communities, as well as industry and other Arctic residents, in the development and implementation of policy and strategy.

**Unity of Effort.** The Coast Guard will advance the Nation's strategic goals and priorities in the Arctic and exercise leadership across the Arctic community of federal, state, and local agencies. As a military Service, the Coast Guard will strengthen interoperability with the Department of Defense and complement the capabilities of the other military services to support the National Security Strategy and the National Military Strategy.

***A Culture of Continuous Innovation.*** The Coast Guard cannot meet the challenges of tomorrow's Arctic with today's paradigms. Rapid technological advancements within the maritime industry, combined with robust investments by strategic competitors, have raised the stakes. The Service must take this opportunity to leverage transformative technology and lead the employment of innovative policies to solve complex problems.

While the strategic context has changed, Coast Guard missions in the Arctic are enduring. The Coast Guard will protect the Nation's vital interests by upholding the rules-based order in the maritime domain while cooperating to reduce conflict and risk. We will help safeguard the Nation's Arctic communities, environment, and economy. The Service will pursue these ends through three complementary lines of effort:

### **Line of Effort 1: Enhance Capability to Operate Effectively in a Dynamic Arctic**

In order to prosecute its missions in the Arctic, the Coast Guard must fully understand and operate freely in this vast and unforgiving environment. Effective capability requires sufficient heavy icebreaking vessels, reliable high-latitude communications, and comprehensive Maritime Domain Awareness. In order to respond to crises in the Arctic, our Nation must also muster adequate personnel, aviation, and logistics resources in the region. The Coast Guard is the sole provider and operator of the U.S. polar capable fleet but currently does not have the capability or capacity to assure access in the high latitudes. Closing the gap requires persistent investment in capabilities and capacity for polar operations, including the Polar Security Cutter. The Coast Guard will pursue this line of effort through three sub-objectives.

- Fill Gaps in the Coast Guard's Arctic Operational Capability and Capacity
- Establish Persistent Awareness and Understanding of the Arctic Domain
- Close the Critical Communications Gap in the Arctic

### **Line of Effort 2: Strengthen the Rules-Based Order**

Actions by strategic competitors will challenge the long-standing norms that have made the Arctic an area of peace and low tension. The institutions contributing to a conflict-free Arctic will face new challenges requiring active and committed American leadership. The Coast Guard is uniquely positioned to provide this leadership in the maritime domain. The Coast Guard is dedicated to strengthening institutions—such as the Arctic Council, the Arctic Coast Guard Forum (ACGF), and the International Maritime Organization (IMO)—and partnerships which reinforce the rules-based order and foster transparency.

Rules and norms endure when nations demonstrate a commitment to upholding them. Working closely with allies and partners, the Coast Guard will deter threats to international maritime norms and America's national interests by conducting operations and exercises along the full spectrum of competition. Working in partnership with the Department of Defense, the Coast Guard will continue to support to the Nation's defense priorities in the Arctic. The Coast Guard will work closely with joint and international partners to build capability and demonstrate resolve in the Arctic. The Coast Guard will pursue this line of effort through two sub-objectives.

- Strengthen Partnerships and Lead International Forums
- Counter Challenges to the International Rules-Based Order in the Maritime Domain

### **Line of Effort 3: Innovate and Adapt to Promote Resilience and Prosperity**

The tyranny of distance and the harsh Arctic climate pose significant challenges to agencies charged with providing maritime safety and security to all Americans, including the hundreds of villages and thousands of seasonal workers in the U.S. Arctic. Search and rescue, law enforcement, marine safety, waterways management, and other Coast Guard missions are complicated by the Arctic's dynamic and remote operating environment. The Coast Guard will collaborate with stakeholders to develop new practices and technology to serve the maritime community and manage risk in the region.





As the Nation's maritime first responder, the Coast Guard will lead and participate in planning and exercises that include federal, state, tribal, local, international, non-governmental and industry partners to test preparedness and adaptability. During a crisis in the Arctic's maritime domain, the Service will lead an effective, unified response. The Coast Guard will pursue this line of effort through three sub-objectives.

- Support Regional Resilience and Lead in Crisis Response
- Address Emerging Demands in the Maritime Law Enforcement Mission
- Advance and Modernize the Arctic Marine Transportation System

**Conclusion.** Increased accessibility and activity will create more demand for Coast Guard services in the Arctic maritime domain. While long-term trends point to a more consistently navigable and competitive region, other environmental and economic factors make it difficult to predict the scope and pace of change. Near-term variability in the physical environment exposes mariners and communities to unpredictable levels of risk. As the region attracts increasing attention from both partner and competitor states, America's economic and security interests will become even more closely tied to the Arctic. Each development is significant on its own, but in combination, these trends create a new risk landscape for the Nation and the Coast Guard. This updated strategic outlook reflects a recognition of these realities and outlines the Service's lines of effort to succeed in the new Arctic.



# II.

## Today's Realities

Since the release of the Coast Guard Arctic Strategy in 2013, the renewal of global strategic competition has coincided with dramatic changes in the physical environment of the Arctic. The interaction of these drivers has made the Arctic a strategically competitive space for the first time since the end of the Cold War. Competition does not preclude cooperation, and the Coast Guard will always look for opportunities to collaborate to solve complex issues. However, the Service must do so within the context of the Nation's national security interests.

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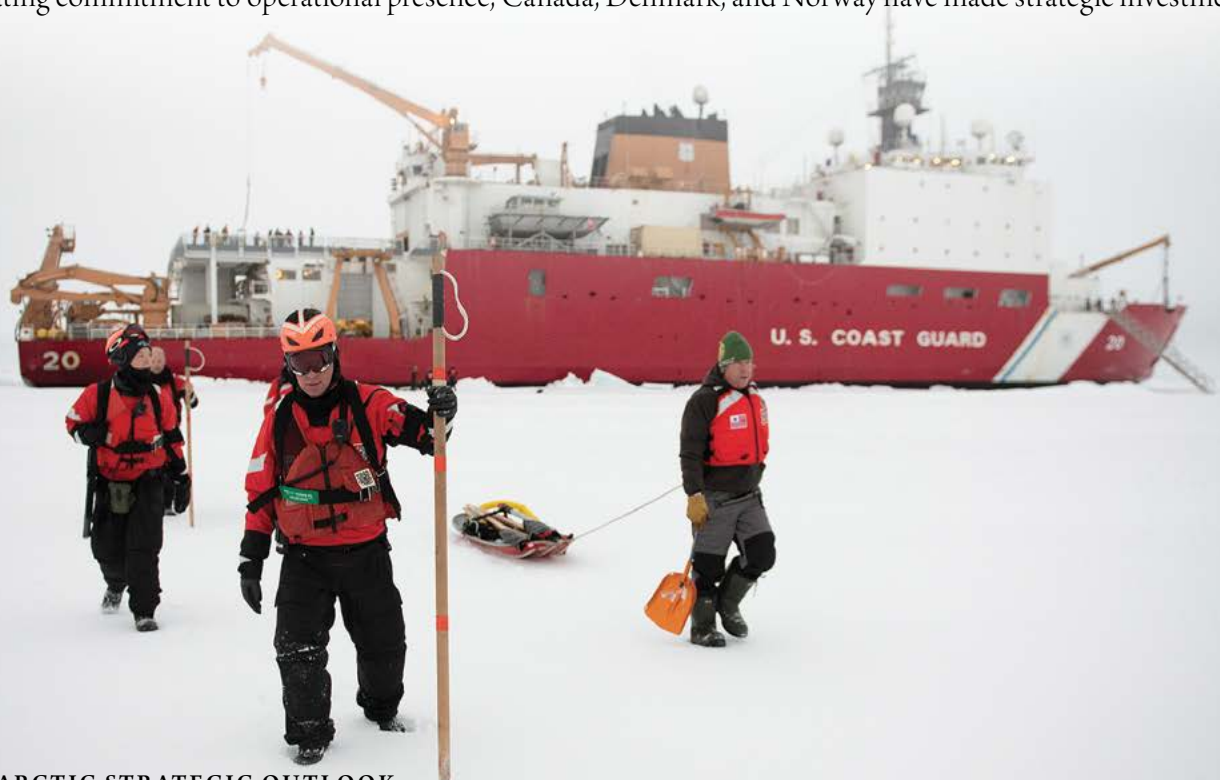
*The resurgence of nation-state competition has coincided with dramatic changes in the physical environment of the Arctic, which has elevated the Arctic's prominence as a strategically competitive space.*

## Geostrategic Change

America's competitors have shown a willingness to work within established frameworks when advantageous to them, but they are just as willing to work outside these frameworks to further their ambitions or spoil the interests of others. China, a non-Arctic state, continues to expand its influence and seeks to gain strategic advantage around the world. China has challenged international law in the East and South China Seas, built islands, and claimed territorial status to suit its national interests. China's pattern of behavior in the Indo-Pacific region and its disregard for international law are cause for concern as its economic and scientific presence in the Arctic grows. In 2013, China gained observer status on the Arctic Council. In recent years, China has declared itself a "near-Arctic" state and is pursuing a Polar Silk Road plan with a range of Arctic infrastructure activities to include ports, undersea cables, and airports. These plans are supported by the construction of a second multi-mission ice-capable ship, the announcement that it will construct a nuclear-powered icebreaker, annual deployments of research vessels into the Arctic, and investments in vulnerable communities. China's attempts to expand its influence could impede U.S. access and freedom of navigation in the Arctic as similar attempts have been made to impede U.S. access to the South China Sea.

Russia dominates the Arctic geography and possesses the corresponding dominant surface capability and infrastructure. As an Arctic state, Russia has legitimate sovereign interests in the region, including navigation safety, search and rescue, and environmental protection. However, Russia has demonstrated a willingness to use its power globally to coerce other nations around the world in an effort to expand its sphere of influence. Additionally, the Russian government continues to expand its icebreaker fleet, which is already the world's largest. They are also rebuilding and expanding other Arctic capabilities and infrastructure, including air bases, ports, weapons systems, troop deployments, domain awareness tools, search and rescue resources, commercial hubs, and floating nuclear power plants. As a strategic competitor, the United States must take heed of Russia's actions and potential dual-use of its capabilities. The U.S. Coast Guard and the Russian Border Guard have a history of practical cooperation and should endeavor to maintain that collaboration within a framework of mutual respect for established international rules and national sovereignty.

U.S. allies and partners have demonstrated growing concern over the security implications of an open Arctic. In October 2018, the North Atlantic Treaty Organization (NATO) held its largest Arctic military exercise since the Cold War. Designated TRIDENT JUNCTURE, this exercise involved more than 50,000 service members from 31 countries. Demonstrating commitment to operational presence, Canada, Denmark, and Norway have made strategic investments



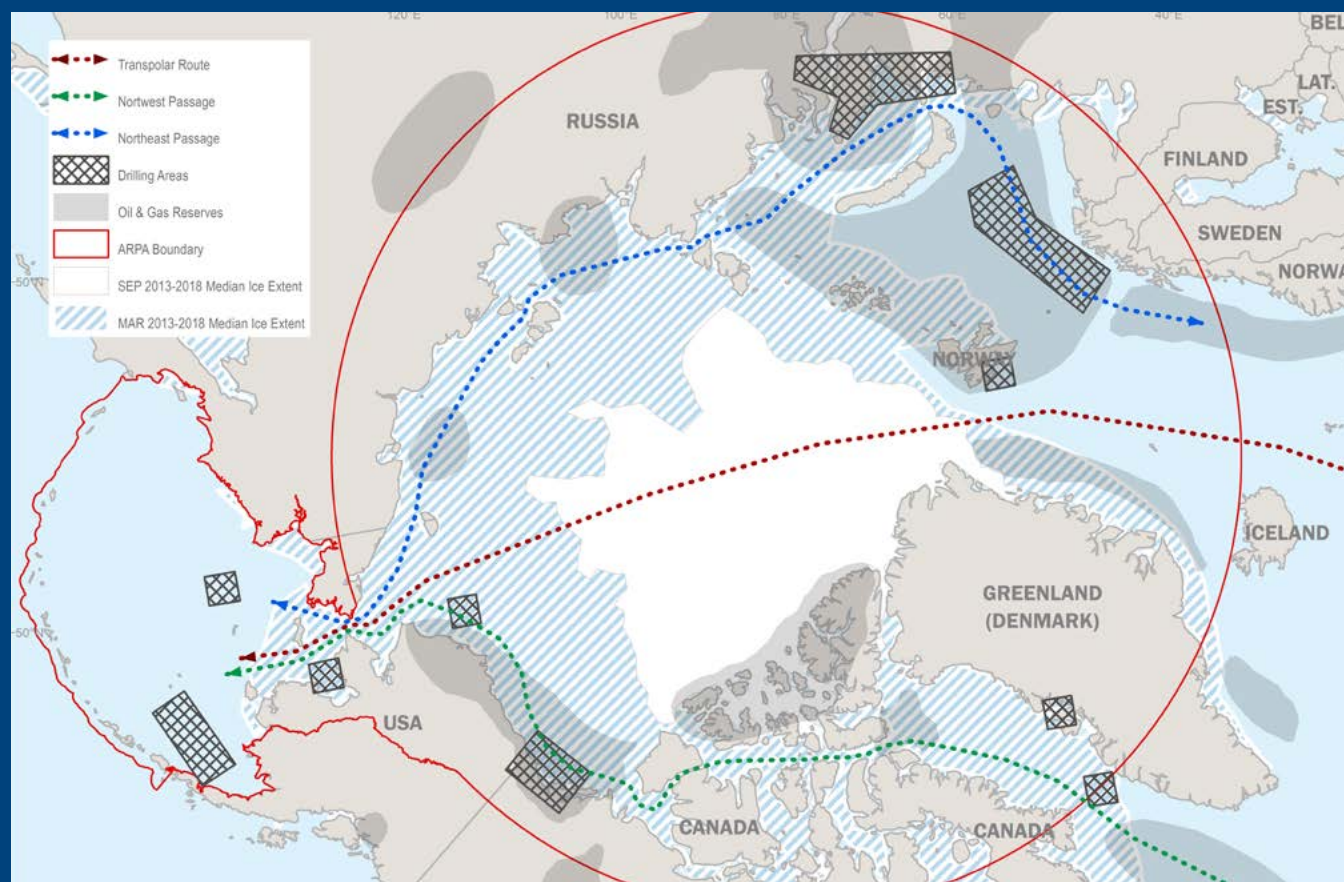
in ice-capable patrol ships charged with national or homeland security missions. While the United States is committed to engagement across a wide array of Arctic organizations, it is the only Arctic State that has not made similar investments in ice-capable surface maritime security assets. This limits 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.

## THE ARCTIC DEFINED

There are many definitions of the Arctic. Most international bodies and their members define the Arctic as the region north of the Arctic Circle (66.34' North), which marks the southern limit of the zone in which there is at least one annual period of 24 hours during which the sun does not set and one during which it does not rise. The term "high Arctic" is broadly used to refer to the coldest portions of the region, generally that reside near the North Pole.

The official definition adopted by the United States government is described in Section 112 of the Arctic Research and Policy Act of 1984 as "all United States foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering, and Chukchi Seas; and the Aleutian chain."

The U.S. Arctic encompasses some 2,521 miles of shoreline, an international strait adjacent to the Russian Federation, and 647 miles of land border with Canada above the Arctic Circle. The U.S. Exclusive Economic Zone (EEZ) in the Arctic contains approximately 889,000 square miles of ocean. The closest Coast Guard Air Station to the Arctic is located in Kodiak, AK, approximately 820 nautical miles south of Utqiagvik, AK, which is nearly the same distance as from Boston, MA to Miami, FL.



## Environmental and Economic Change

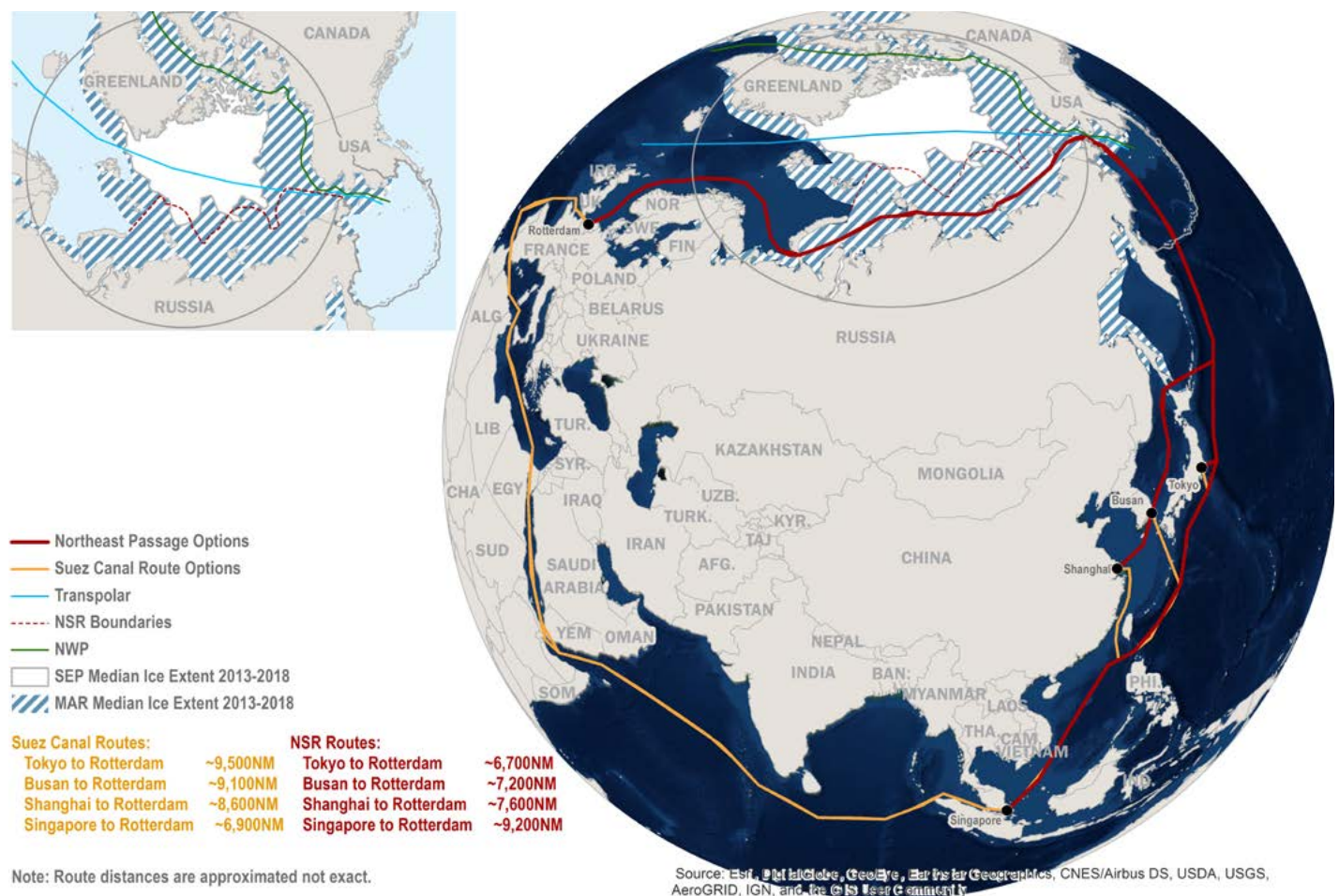
The Arctic's role in geostrategic competition is growing, in large part, because it is no longer “self-secured” by permanent sea ice. The warming of the Arctic has led to longer and larger windows of reduced ice conditions. In 2018, Arctic sea ice remained younger and thinner, and it covered less area than in the past. The twelve lowest summer minimums in Arctic ice extents in the satellite record have occurred in the last 12 years.<sup>2</sup>

The near-term future of Arctic shipping routes is uncertain, but in optimal conditions they are significantly shorter compared to transits via the Straits of Malacca and the Suez Canal. For example, the Northern Sea Route (NSR) offers a 35-day mean transit time from Shanghai to Rotterdam, shaving 2 weeks off the Suez/Malacca transit route. Commercial shipping through the Arctic is growing, including a doubling of cargo tonnage transported on the NSR with significant shipments of natural gas and oil products from the Yamal LNG terminal in Russia. The number of cruise ships, ranging in capacity from 150 to 1,700 passengers, transiting the Arctic continues to rise dramatically, from 120 per year in 2008 to 290 in 2016. Commercial vessel traffic through the region will continue to grow.<sup>3</sup> These routes require access through the relatively narrow and shallow Bering Strait, increasing the risk of a grounding or collision during peacetime and of the strait becoming a strategic choke point during times of conflict.

Greater access to the Arctic is also enabling expanded economic activity, including resource extraction, commercial fishing, and tourism. Resource extraction of all kinds, ranging from mining rare-earth minerals to drilling for natural gas and oil, will

2 2018 Arctic Report Card, National Oceanographic and Atmospheric Administration, <https://arctic.noaa.gov/Report-Card/Report-Card-2018>

3 United States Coast Guard, “Preliminary Findings—Port Access Route Study: In the Chukchi Sea, Bering Strait, and Bering Sea” (2016), <https://www.regulations.gov/document?D=USCG-2014-0941-0040>







become more commercially viable as the Arctic opens.<sup>4</sup> The Arctic is also likely to be home to a wealth of undiscovered resources, which will become more accessible as environmental conditions change. As sea water temperatures rise, fish stocks are expected to continue to shift northward, creating potential new enforcement challenges to the current international prohibition on commercial fishing in the central Arctic Ocean.

Arctic communities, including the Alaska Native and indigenous populations, will be on the front lines of adapting to changes in the Arctic. Coastal and river erosion due to loss of sea ice, the movement of terrestrial and marine subsistence food sources, and the impacts of increasingly frequent and intense winter storms continue to erode the physical and social fabric of many communities. Local leaders have also reported that the influx of illegal drugs into Arctic villages is overwhelming the limited healthcare and social services infrastructure in many communities. As the Arctic becomes more accessible, increased activity from industry, tourism, and research will create complex challenges to community resilience and health.

## Uncertainty and Risk

While long-term trends point to a more consistently navigable Arctic, other environmental factors make it difficult to predict what the near-term conditions will be. Though the Arctic continues to lose increasing amounts of multiyear sea ice, the remaining ice is becoming less predictable. For example, heavy pack ice conditions rendered the Northwest Passage impassible for cruise ships in 2018, despite it being one of the warmest years on record. Interest in extracting natural resources in the Arctic will also wax and wane with highly variable global supply and demand signals. While the exact nature of the activity may not be predictable, the general trend of increased traffic will drive up demand for Coast Guard resources to manage risks to maritime safety and security.

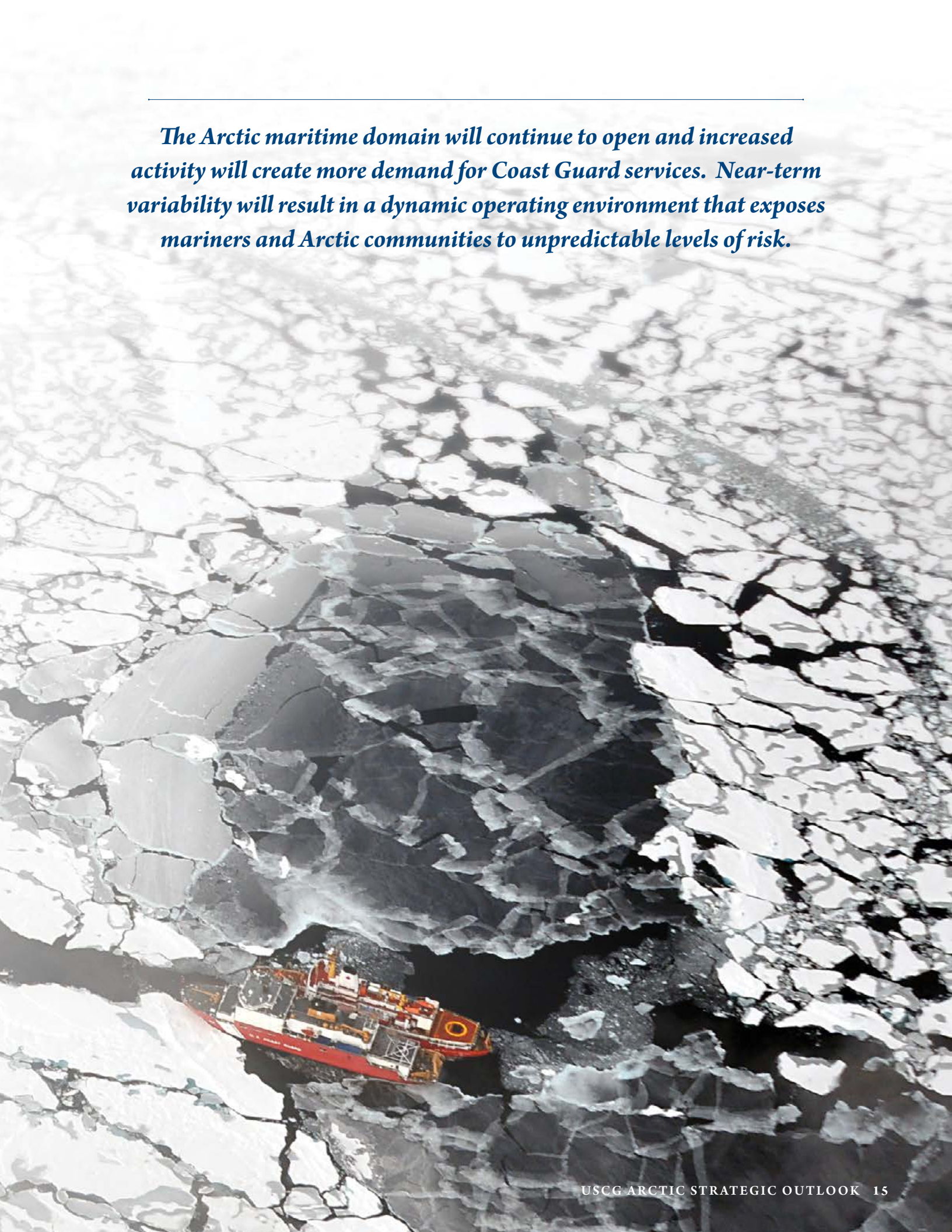
Each such development is significant on its own. But, in combination, these trends create a new risk landscape for the Nation and the Coast Guard. The Arctic maritime domain will continue to open and increased activity will create more demand for Coast Guard services. Near-term variability will result in a dynamic operating environment that exposes mariners and Arctic communities to unpredictable levels of risk. Arctic security requires leadership and cooperation across multiple national security areas of interest, including border security, economic security, environmental security, food security, freedom of navigation, geopolitical stability, human safety, national defense, natural resource protection, and assertion and protection of U.S. sovereign rights. As the region attracts increasing attention from both partner and competitor states, the Arctic will become even more closely tied to the America's economic and security interests. This updated strategic outlook reflects recognition of these realities and outlines the Service's lines of effort to succeed in the new Arctic.

<sup>4</sup> The U.S. Geological Survey estimates the Arctic may contain approximately thirteen percent of the world's undiscovered oil and almost a third of its undiscovered natural gas. The Arctic is also thought to be home to a large amount of undiscovered resources which will become more accessible as environmental conditions change. Fact Sheet 2008-3049, United States Geologic Survey, <https://pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf>



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*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.*



# III.

## The United States Coast Guard in the Arctic

The United States is an Arctic Nation, and the Coast Guard has served as the lead Federal agency for homeland security, safety, and environmental stewardship in the Arctic region for over 150 years. This responsibility has taken many forms, from treating epidemics on remote Alaskan islands to enforcing fishing and whaling laws to capturing Nazi spies on the shores of Greenland. Since Revenue Cutters first sailed to Alaska in 1867 to establish U.S. sovereignty, the Coast Guard's role has expanded, including representing American interests as a leader in the international bodies governing navigation, search and rescue, vessel safety, fisheries enforcement, and pollution response across the entire Arctic. As the region continues to open and strategic competition drives more actors to look to the Arctic for economic and geopolitical advantages, the demand for Coast Guard leadership and presence will continue to grow.





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*The United States is an Arctic Nation, and the United States Coast Guard has served as the lead Federal agency for homeland security, safety, and environmental stewardship in the Arctic region for over 150 years.*

The U.S. Coast Guard is uniquely suited to address the ambiguous challenges of today's competitive world. In and around the maritime domain, the Service is a valuable counterweight to tactics aimed to undermine the rules-based order. As the only U.S. Service that combines both military and civil authorities, the Coast Guard counters coercion and disinformation by modeling acceptable behavior, building regional capacity, and strengthening organizations that foster transparency and good governance across the Arctic.

In the region, growing commercial traffic, resource extraction, and Arctic tourism promise new opportunities for some of the Nation's most isolated communities and broader benefits to all of America. This uptick in activity also leads to increased risk, and the Coast Guard must manage such activity in close cooperation with federal, state, local, tribal, academic, and industry partners. To respond to increased demand across the entire suite of Service missions, from rescues to regulatory functions, the Coast Guard must build capacity and capabilities to access the most remote parts of the Arctic domain.

The changing nature of the region poses particular risk to America's Arctic residents. Communities are at risk from increasingly severe storms, the loss of traditional livelihoods, substance abuse, and crumbling physical and social



infrastructure, which translate to increased risk in the maritime domain. 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. This is a proud part of the Service's Arctic heritage that we will continue to foster through ongoing engagement with Native communities.

While the operations may change, the missions are enduring. In accordance with the National Security Strategy, the Department of Homeland Security's Goals and Priorities, the National Defense Strategy, and the National Strategy for the Arctic Region, the Coast Guard will protect the Nation's vital interests by upholding the rules-based order in the maritime domain while cooperating to reduce conflict and risk. We will help safeguard the Nation's Arctic communities, environment, and economy. The Service will pursue these ends through three complementary lines of effort:

1. Enhance Capability to Operate Effectively in a Dynamic Arctic;
2. Strengthen the Rules-Based Order; and,
3. Innovate and Adapt to Promote Resilience and Prosperity.




# IV.

## Ensuring Long Term Success

Three underlying principals are vital to each line of effort and are preconditions for long-term success. They will be incorporated into planning and decision-making at every level of the Service.

**Partnership.** The Arctic is an exceptional place. Its harsh terrain, encompassing the territory of eight different countries, creates an environment that demands collaboration across national boundaries. U.S. interests are best served by working with the eight Arctic Nations to ensure common interests, such as maritime safety, environmental stewardship, and sovereignty. The Coast Guard will partner with the Arctic nations, as well as partners and allies with Arctic interests, to keep the Arctic a conflict-free region where international law and respect for sovereignty are upheld. The Coast Guard will actively support and play a leadership role in multilateral organizations focused on Arctic governance, such as the IMO, as well as the operationally-focused ACGF. The Service will also continue to dedicate resources to cooperate with Arctic allies and partners, conducting combined operations and exercises to safeguard and secure the Arctic domain.

The U.S. Coast Guard relies on close working relationships with its Canadian counterparts in the Royal Canadian Navy, Royal Canadian Mounted Police, Transport Canada, and the



Canadian Coast Guard along a shared maritime and land border. These deep ties—ranging from daily operational coordination to cooperating on polar icebreaker design—are vital to the safety and security of the Arctic.

The Coast Guard’s unique and valuable relationship with tribal entities builds mutual trust and improves mission capacity and readiness. We will continue to incorporate lessons-learned from engagements with Alaska Native communities, as well as industry and other Arctic residents, in the development and implementation of policy and strategy. Alaska Natives, in particular, have unique knowledge of the region that is of critical importance to those who work and operate there. The Coast Guard will work closely with the Alaska Native community to better understand and serve the region.

***Unity of Effort.*** As the Coast Guard Strategic Plan 2018-2022 makes clear, unified effort is the principle of Coast Guard operations that guides the Service to partner closely across the joint and interagency community, as well as with state and local governments, industry, and other nonprofit and academic organizations. The State of Alaska is a particularly vital partner in the U.S. Arctic, and the Service will continue to partner closely with Alaska to manage risk in the maritime domain. At the federal level, the Coast Guard will continue to advocate for



and lead a unified approach to develop and execute national Arctic policy. The Coast Guard will advance the Department of Homeland Security's strategic goals and priorities as they apply to the Arctic, leading or supporting partner components, as appropriate, to protect the U.S. maritime border and citizens living in Arctic communities. The Coast Guard will continue exercising leadership across the Arctic community of federal, state, and local agencies.

As a military Service, the Coast Guard will strengthen interoperability with the Department of Defense to support the National Security Strategy and National Military Strategy and to complement the capacity and capabilities of the other military services. The Service collaborates closely with U.S. Northern Command, U.S. European Command, and U.S. Indo-Pacific Command to adapt to the Arctic's evolving security environment.

***A Culture of Continuous Innovation.*** The Service has an opportunity to develop innovative and transformative technology and policy solutions to complex and emerging problems. With little legacy





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*The Coast Guard will continue exercising leadership across the Arctic community of federal, state, and local agencies.*

infrastructure, the Arctic is an ideal place for new ideas, policies, and technologies that will allow the Nation to better measure, manage, and mitigate risk. Rapid technological advancements within the global maritime industry, combined with robust investments by strategic competitors, make the need for innovation more urgent than ever.

The Coast Guard has always been a creative, problem-solving organization. The Service must harness that energy in a deliberate and focused way to create solutions to the many complex challenges the Arctic poses. The Service will pursue domestic and international opportunities to engage in shared or joint research efforts that maximize the Nation's return on its investments. This includes partnerships across the public and private sectors that serve to strengthen the national security innovation base. Innovation includes continued operational research by the Service's own Research and Development Program as well as with the Department of Homeland Security Science and Technology Directorate's network of Centers of Excellence and support for academic institutions, such as the Center for Arctic Study and Policy (CASP) at the U.S. Coast Guard Academy, to promote education, research, and policy innovation in the Arctic region.

# V.

## Line of Effort 1: Enhance Capability to Operate Effectively in a Dynamic Arctic

In order to protect the Nation's sovereign interests, fulfill obligations to the maritime community, and uphold the rule of law in the Arctic, the Coast Guard must be able to fully understand and operate freely in this vast and unforgiving environment. Over the past 15 years, the Nation's strategic competitors have invested heavily in Arctic-capable assets, infrastructure, and relationships, some of which are targeted at eroding the influence of America and the rule of law. U.S. investments over that same period of time have been comparatively modest. This has resulted in a strategic resource gap that threatens the Nation's ability to effectively uphold sovereignty and the Coast Guard's ability to manage maritime risks inherent in increased human activity in the Arctic. Closing this gap requires persistent investment in capabilities and capacity for polar operations.

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*The Coast Guard must be able to provide physical presence, at will, to uphold sovereignty, carry out operational missions, promote freedom of navigation, and fulfill other national and international obligations.*



## Fill Gaps in the Coast Guard's Arctic Operational Capability and Capacity

The Coast Guard must be able to provide physical presence, at will, to uphold sovereignty, carry out operational missions, promote freedom of navigation, and fulfill other national and international obligations. The Coast Guard is the sole provider and operator of the U.S. polar capable fleet. This national fleet does not currently have the capability or capacity necessary to assure access in the high latitudes. This shortfall limits the Coast Guard's ability to proactively manage risks in the Arctic maritime domain. It also threatens the Nation's ability to respond to crises in the Arctic, ranging from oil spills to contingency operations.

To fill this strategic gap, the Coast Guard will invest in ice-breaking ships, such as the Polar Security Cutter, aviation assets, unmanned and/or autonomous systems, and personnel, all capable of operating in the austere and remote Arctic environment. Assets must be upgradable and interoperable, capable of prosecuting an evolving portfolio of mission activities ranging from search and rescue to defense operations to marine scientific research support.

The Coast Guard will enable those assets and people with robust operational mission support. Arctic operations pose formidable logistical and technical challenges which will require innovation and effective partnerships to overcome. Any solution will be a whole-of-government effort that includes a blend of permanent, seasonal, and expeditionary capability.

The Coast Guard must retool existing concepts of operation to maximize the impact of more capable assets and the Service's mission support enterprise during both surge and steady-state Arctic operations, including the growing role of cyber and information operations. The Service will make integrated operations with joint service, interagency, and allied partners a critical element of current and future strategic and operational plans.



## Establish Persistent Awareness and Understanding of the Arctic Domain

To operate successfully in the Arctic, the Coast Guard must establish and maintain situational awareness and understanding across the region. In addition to fulfilling the Maritime Domain Awareness (MDA) responsibilities outlined in the 2013 National Strategy for the Arctic Region, the Service will apply improved knowledge and analysis to plan, anticipate, and address operational risk, and to improve safety and security in the region.

MDA is the effective understanding of anything associated with the global maritime domain that could impact safety, security, prosperity, or the environment. Such awareness is especially critical in the Arctic region where harsh operating conditions, coupled with severely limited resources, hamper the Coast Guard's mission effectiveness. MDA is not a mission or a program, but the product of a diverse set of capabilities that support all levels of decision making (strategic, operational, and tactical).

The National Strategy for the Arctic Region Implementation Framework assigns responsibility for the Nation's Arctic awareness to the Coast Guard, with support from numerous other departments and agencies.<sup>5</sup> The Service's national awareness requirements include:

- Information regarding national defense and security;
- Information on vessel crew, passengers, and cargo carried (if applicable);
- Pollution detection and tracking capabilities;
- Weather and environmental observations, including ice reconnaissance;
- Assessment of living marine resources activity; and,
- Assessment of human activity and infrastructure.

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<sup>5</sup> Implementation Framework for the National Strategy for the Arctic Region, National Security Council, March 2016, Appendix A.





The Coast Guard will continue to build Arctic awareness through both partnerships and organic investments in technology. It will also continue to support scientific exploration, monitoring, and research to increase understanding of the changing Arctic environment, associated impacts, and emergent maritime threats. Partnerships will range from regular exchanges with the Alaskan Native communities, which bring generations of experience and insight, to digital information sharing agreements with international partners. Likewise, the Coast Guard will continue investing in its robust partnerships with the National Oceanic and Atmospheric Administration (NOAA), U.S. Navy, National Science Foundation, U.S. National Ice Center, and other organizations to collect Arctic data, analyze environmental conditions, and disseminate information through effective channels.

As a member of the National Intelligence Community (IC), the Coast Guard both contributes to and benefits from the capabilities of IC partners. The Coast Guard must continue to improve data collection in the Arctic, including support for the development of collection requirements for Arctic marine conditions, climate, maritime activity, and threats. Ultimately, the Coast Guard must lead in converting this information into actionable and reliable knowledge that can be distributed to all appropriate stakeholders. Increased availability of all-source intelligence collection and enhanced understanding of maritime trends, threats, and challenges in the region will enable the Coast Guard to operate more effectively, make more informed resource allocations, and enhance national security.



## Close the Critical Communications Gap in the Arctic

In order to operate effectively, maintain MDA, and share information across the maritime community, the Coast Guard must overcome critical communications gaps in the Arctic. The high latitudes suffer from poor propagation of radio signals, geomagnetic interference, scant landside infrastructure, and limited satellite coverage and bandwidth. Some Arctic communities have cellular phone networks, but these are often constrained by limited coverage, capacity, and reliability.

Closing the communications gap is a whole-of-government challenge and will require intensive partnerships across the interagency, industry, and the international community, as well as the State of Alaska and Alaska Native communities. As commercial, recreational, and subsistence-based activities increase, the Coast Guard must also work cooperatively to enhance communications with and between stakeholders.

North American Aerospace Defense Command and U.S. Northern Command, as well as its subordinate Alaskan Command, are vital Coast Guard partners for current expeditionary operations and will be even more critical in improving national communication infrastructure in the Arctic. The Coast Guard will consistently look for ways to support interagency and joint efforts to field more reliable communications solutions.



# VI.

## Line of Effort 2: Strengthen the Rules-Based Order

As sea ice recedes and Arctic activity increases, actions by strategic competitors will challenge the long-standing norms that have kept the Arctic as an area of peace and low tension. The institutions contributing to a conflict-free Arctic will face new challenges requiring active and committed American leadership. The U.S. Coast Guard is uniquely positioned to provide this leadership in the maritime domain. The Service's operations around the globe—ranging from marine inspectors enforcing international safety standards in Singapore to cutters enforcing international sanctions in the Arabian Gulf—represent the Nation's larger commitment to the rule of law. By upholding and complying with the rules-based order in the maritime domain across the globe, the U.S. Coast Guard reinforces its commitment to those principles in the Arctic.

### MODELING ACCEPTABLE MARITIME BEHAVIOR

The iconic angled racing stripes that mark the bow of every U.S. Coast Guard vessel, first adopted in 1967, are now recognized around the world. These stripes represent a global maritime security regime, which relies upon the rule of law, good governance, and respect for international laws and norms on the high seas. For more than 50 years, coast guards have maintained this regime, and any inconsistent behavior undermines it. The U.S. Coast Guard is proudly a role model for professional maritime behavior worldwide, alongside partner coast guards who uphold these peaceful and humanitarian values.







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*The U.S. Coast Guard is dedicated to strengthening partners and institutions that foster transparency and uphold a global order respectful of sovereignty and independence.*

## **Strengthen Partnerships and Lead International Forums**

A key element of the strategies of our competitors is to engage in activities that weaken the international order that underpins a free and open maritime domain. They do so under a cloud of ambiguity that makes it difficult to mount an effective or timely response to such activities. Clear and universally held norms, coupled with transparency, can dissipate that cloud. The U.S. Coast Guard is dedicated to strengthening partners and institutions that foster transparency and uphold a global order respectful of sovereignty and independence.

The U.S. Coast Guard will continue to be a proactive leader in intergovernmental forums such as the Arctic Council. The Council; comprised of the eight Arctic States, thirteen observer States, six Indigenous People's organizations serving as Permanent Participants, and twenty-six other governmental and non-governmental organizations, reflects an enduring commitment to multilateral engagement on a wide range of Arctic issues. The Council has built practical collaborative agreements that include: the 2011 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, the 2013 Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, the 2015 Framework Plan for Cooperation on Prevention of Oil Pollution from Petroleum and Maritime Activities in the Marine Areas of the Arctic, and the 2017 Agreement on Enhancing International Arctic Scientific Cooperation.

The Service will also continue to work through global bodies, such as the IMO, to represent U.S. interests and reduce risk in the Arctic. For example, the Coast Guard was instrumental in the IMO's development and adoption of the Polar Code, which established design, construction, equipment, operation, training, and environmental protection safety standards for ships operating in the polar regions. The Service will observe customary international law, including key principles reflected in the 1982 Law of the Sea Convention (Convention) relating to navigation and other traditional uses of the oceans. While the United States has not yet joined that Convention, the Coast Guard will continue to rely on its legal framework to support mission execution.

In addition to international policy making bodies, the Coast Guard will continue to conduct combined operations with its Arctic partners and invest in multilateral operational forums such as the ACGF. As a bridge between diplomacy and operations, the ACGF strengthens important working relationships through sharing best practices, conducting exercises and combined operations, and coordinating emergency response. The ACGF conducted its first live search and rescue exercise, Arctic Guardian 2017, which highlighted the value of international cooperation in the Arctic.

Governance bodies not only do the practical work of creating standards, they also lay the groundwork for the trust that is vital to upholding a peaceful rules-based order. Collaboration with these bodies reinforces the relationships and lines of communication needed to inoculate members against revisionist activities by strategic competitors. The Coast Guard is determined to keep these forums vibrant and relevant now and in the years to come.



## Counter Challenges to the International Rules-Based Order in the Maritime Domain

Rules and norms endure when nations demonstrate a commitment to upholding them. Working closely with allies and partners, the Coast Guard will deter threats to international maritime norms and America's national interests by conducting effective maritime operations and exercises along the full spectrum of competition.

Working in close partnership with U.S. Northern Command, U.S. European Command, and U.S. Indo-Pacific Command, the Coast Guard will continue to support to the Nation's defense priorities in the Arctic and build defense readiness through participation in Department of Defense and multilateral exercises in the region. The Coast Guard will work closely with joint, interagency, and international partners to build capability and demonstrate resolve in the Arctic.

The Coast Guard's contributions to upholding the rules-based order are also embedded in even its most routine homeland security missions. For example, the Coast Guard's persistent patrols of the Bering Sea counter illegal, unreported, and unregulated (IUU) fishing. This enforcement activity counters threats to fish stocks vital to the Nation's \$6 billion-a-year industry and to the health of a delicate marine ecosystem. Simultaneously, fisheries enforcement upholds national sovereignty. Operations to counter illegal incursions in U.S. waters take place below the level of armed conflict, but are vital to maintaining a global order respectful of sovereignty and independence.

Benefits to a rules-based order are realized across the full complement of Coast Guard activities. Specifically, the Coast Guard delivers full spectrum maritime governance through its Prevention and Response model. The cadre of professionals who enforce international standards, such as the IMO Polar Code, or bolster community resilience by supporting state, local, and Alaska Native contingency planning and response are doing the daily, foundational work needed to manage risk, uphold sovereignty, and counter coercion across the Arctic maritime domain. Through these efforts, the Coast Guard and its partners are also building essential relationships and expertise that are key to the Service's success as a leader in crisis.

Alaska Natives are a critical layer of security in the Arctic. Based on generations of experience, they help close information and operational gaps, driving down risk. In a variety of ways, secure and resilient local communities will be less vulnerable to coercive tactics demonstrated by strategic competitors. Maintaining and expanding the long-standing relationships with critical stakeholders will contribute to long-term success across the full breadth of regional and national security priorities.





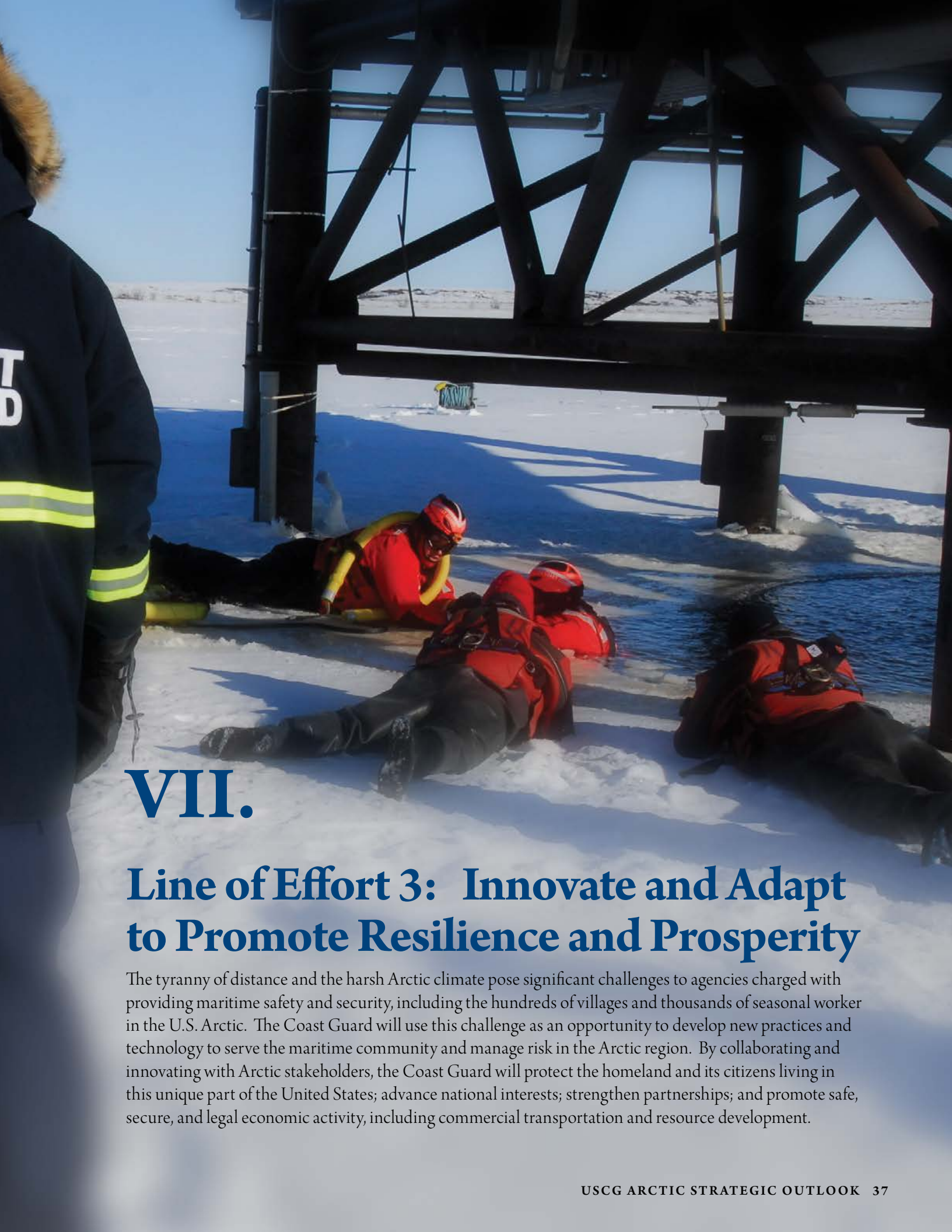
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***Working closely with allies and partners, the U.S. Coast Guard will deter threats to international maritime norms and America’s national interests by conducting effective maritime operations and exercises along the full spectrum of competition.***

## OPERATION ARCTIC SHIELD

Coast Guard District Seventeen (D17) leads Operation ARCTIC SHIELD, a year-round planning and operational endeavor which provides mobile and scalable presence in the Arctic domain in support of the National and Coast Guard Arctic Strategies. Objectives include executing U.S. Coast Guard missions; enhancing maritime domain awareness and understanding; broadening partnerships; and building preparedness, prevention, and response capabilities. By applying a risk-based approach and leveraging tribal, community, and interagency partnerships, ARCTIC SHIELD integrates Coast Guard surface, aviation, and shore-side resources to conduct a broad range of search and rescue, law enforcement, marine safety, and other activities.





## VII.

### **Line of Effort 3: Innovate and Adapt to Promote Resilience and Prosperity**

The tyranny of distance and the harsh Arctic climate pose significant challenges to agencies charged with providing maritime safety and security, including the hundreds of villages and thousands of seasonal workers in the U.S. Arctic. The Coast Guard will use this challenge as an opportunity to develop new practices and technology to serve the maritime community and manage risk in the Arctic region. By collaborating and innovating with Arctic stakeholders, the Coast Guard will protect the homeland and its citizens living in this unique part of the United States; advance national interests; strengthen partnerships; and promote safe, secure, and legal economic activity, including commercial transportation and resource development.

## Support Regional Resilience and Lead in Crisis Response

Arctic communities face increasingly frequent and severe incidents due to changing climate and growing human activity. Increased commercial activity also raises the risk of pollution incidents occurring in remote and environmentally-sensitive locations. This risk is compounded by the logistical and technical difficulties of operating in the Arctic, which challenges the ability of the commercial marine industry to meet the oil spill response planning requirements. As the Nation's maritime first responder, the Coast Guard will lead and participate in national-level planning and exercises that include federal, state, tribal, local, international, and non-governmental partners to test preparedness and adaptability. The Coast Guard also works with industry to address oil spill response shortfalls and evaluate alternatives to the National Planning Criteria. This inclusive approach allows partners to





clearly define organizational roles, responsibilities, authorities, and resources. During a crisis in the Arctic's maritime domain, the Service will lead an effective, unified response.

Increased maritime activity, particularly in the Arctic's unpredictable and harsh environment, increases the risk that mariners will find themselves in distress at sea, often hours or days from the closest response asset. 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 make this one of the most challenging of all possible scenarios. The Coast Guard will continue to intensively work with international partners, the Department of Homeland Security, Department of Defense, State of Alaska, Alaska Native communities, industry, and local resources to close operational and logistical gaps.



## Address Emerging Demands in the Arctic Maritime Law Enforcement Mission

The Coast Guard will continue to enforce applicable law in the Arctic, with an understanding that the character of Maritime Law Enforcement in the region will continue to change over time. As migration patterns of the region's living marine resources and human activities evolve, the Service will adapt operations and activities commensurate with the corresponding national security risks.

In the near-term, protecting living marine resources and preventing international IUU fishing will be the most significant law enforcement missions in the region. Fish stocks are migrating higher into the Arctic, and Alaska Natives there are already harvesting new species that have no name in their native languages. These changes will make enforcement of existing fisheries regulations and international agreements more difficult. The Coast Guard will continue to monitor and assess research and trends of migration patterns for both fish stocks and marine mammals to proactively address IUU fishing incursions.

Security in the Arctic is also threatened by the expansion of other criminal elements into Alaska and the Arctic region. Where appropriate, the Coast Guard will continue to work with international, federal, state, local, and tribal law enforcement partners to counter crime in the Arctic, particularly regarding narcotics smuggling, illegal immigration, and other illicit activity. The Coast Guard will also work closely with other federal agencies as they expand their operational footprint in the Arctic to protect the Nation's northernmost border.

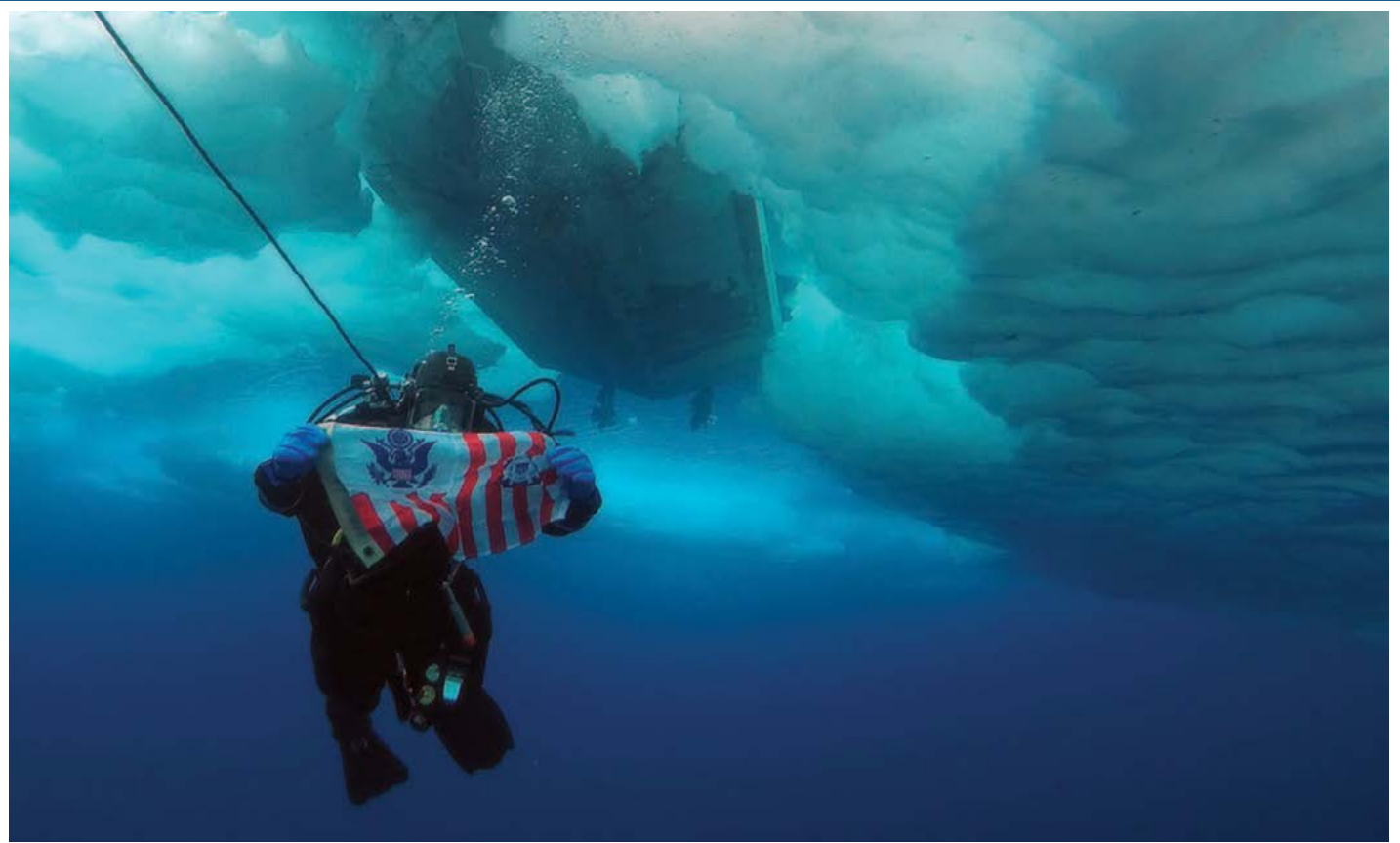
## Advance and Modernize the Arctic Marine Transportation System

The Marine Transportation System (MTS) is the lifeblood of the Nation's economy. The Coast Guard's ability to maintain a safe, secure, and efficient national MTS facilitates more than \$5.4 trillion per year in economic activity, supporting more than 30.8 million jobs. Increased maritime activity in the Arctic will create increased demand for the full spectrum of Coast Guard authorities and capabilities to manage risk in the Arctic MTS. As geostrategic, environmental, and economic conditions have the potential to make key routes through the Straits of Malacca and the Suez and Panama Canals less predictable or affordable, sea lanes in the Arctic are poised to provide valuable alternatives between North America, Europe, and Asia. This has powerful implications for both commerce and military mobility, and makes ensuring an efficient MTS in the Arctic important to the Nation's security and prosperity.

Increasing commercial shipping combined with emerging technologies and new methods for offshore natural resource exploration, production, and transportation pose challenges and are risk aggravators for the Service. Replicating the MTS that exists in the contiguous United States is not a viable option in the Arctic. The Service must complement its existing MTS management tools with innovative policies and technologies, developed in partnership with both the public and private sectors.



The Coast Guard will combine legacy and next-generation capabilities to understand and manage the evolving risks to the Arctic MTS. By leveraging robust governance models and deploying modern aids to navigation and marine information systems, the Service will support the comprehensive integration of the Arctic into the Nation's critically important MTS. This will enable growth in commerce and contribute directly to the strength, resilience, and prosperity of the Nation.



## IMPROVED NAVIGATION SAFETY AND ENVIRONMENTAL PROTECTION IN AND NEAR THE BERING STRAIT

In 2017, the Coast Guard, led by DI7 in Alaska, completed a Port Access Route Study (PARS) for the Chukchi Sea, Bering Strait, and Bering Sea after working with a variety of stakeholders including the shipping and fishing industries, Alaska Native organizations, environmental groups, and Federal, State, and local government experts. The Coast Guard then used the PARS data to propose an improved navigational safety regime in the region. Submitted jointly by the U.S. and Russia, in 2018 the IMO approved several two-way navigation routes and precautionary areas in the Bering Strait and in the nearby waters off the coasts of eastern Siberia and western Alaska. The six two-way routes and six precautionary areas are the first internationally recognized ship routing measures the IMO has approved for polar waters. These guidelines will improve navigational safety, while protecting breeding areas and nurseries vital to Arctic marine mammals, migratory bird populations, and the traditional way of life for Alaska Natives.

# VIII.

## Conclusion

The Coast Guard's mission in the Arctic is enduring, but the strategic context has changed. In the intervening six years since the promulgation of the 2013 Coast Guard Arctic Strategy, changes in regional geopolitical competition, economic drivers, and the physical environment required the Coast Guard to take a fresh look at our existing missions, activities, and strategic objectives in the Arctic. Similarly, our federal and international partners and competitors are revising their Arctic strategic documents and investments as they react to the region's evolving conditions. In recognition of America's needs in the modern Arctic, this updated strategic outlook updates the Service's vision to ensure safe, secure, and environmentally responsible maritime activity with the following lines of effort:

### **Line of Effort 1: Enhance Capability to Operate Effectively in a Dynamic Arctic**

The Service has ample authorities and a robust network of strong and resilient partnerships, but there are critical gaps in capability and capacity that must be filled in order to uphold American sovereignty and deliver mission excellence.

### **Line of Effort 2: Strengthen the Rules-Based Order**

The Coast Guard will lead institutions and cooperate with partners to promote rule of law and prevent malign influence in the Arctic.

### **Line of Effort 3: Innovate and Adapt to Promote Resilience and Prosperity**

The Service will collaborate with partners and stakeholders to develop innovative ways to deliver mission-critical services, including search and rescue, incident management, law enforcement, and marine safety, to this remote region.

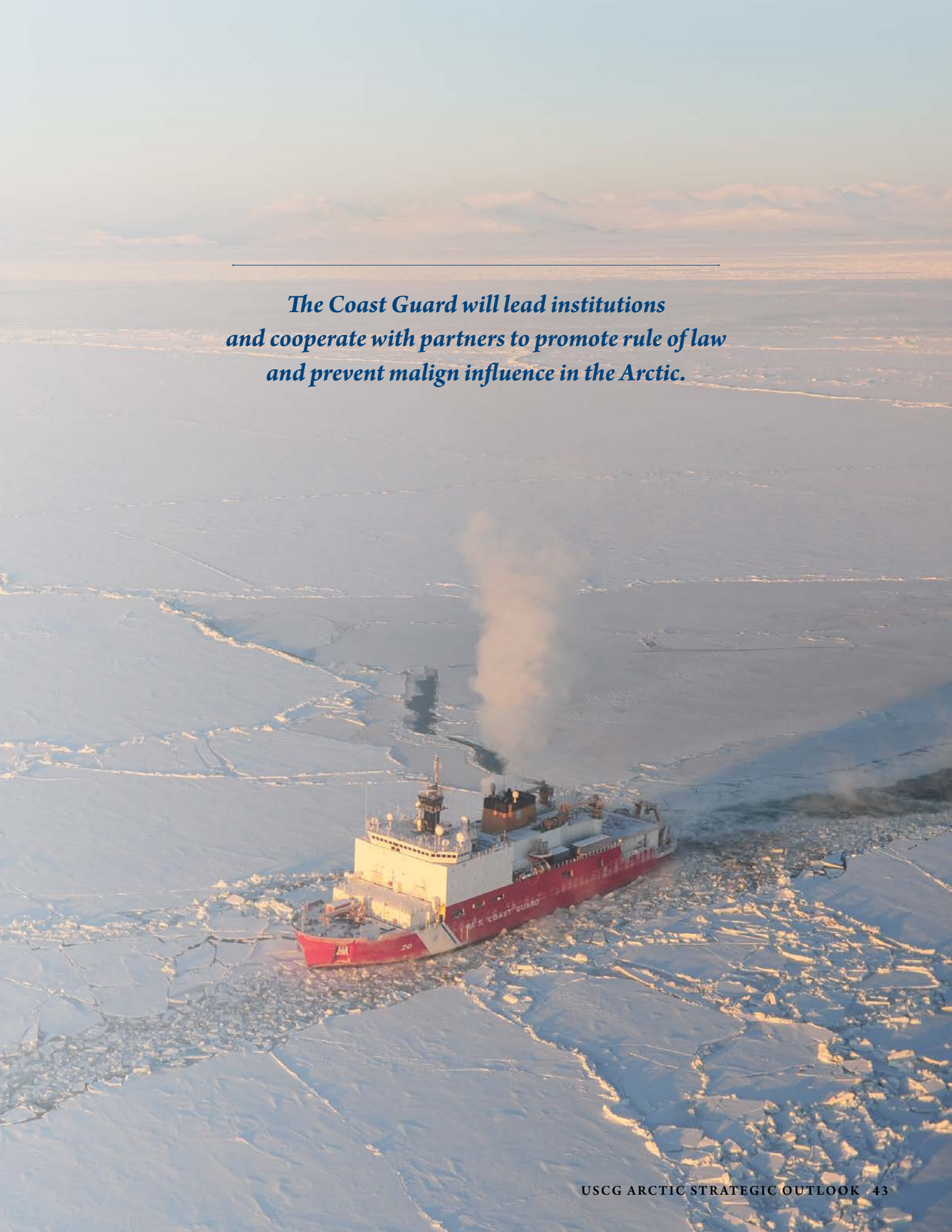
### **Way Ahead**

Each line of effort depends on *Partnership, Unity of Effort, and a Culture of Innovation* to succeed. *Partnership* and *Unity of Effort*, whether it is with NATO allies or with Alaska Native partners, are preconditions for success in the complex, modern Arctic domain. *A Culture of Innovation* will be needed to overcome not just the technical challenges, but also the political and fiscal challenges to operating in the Arctic.

The Nation needs a modern, flexible, and innovative Coast Guard to meet the challenge of providing holistic security in the novel and dynamic Arctic maritime domain. Since 1867, the Coast Guard has played a major role in protecting our Nation's interests in the Arctic and will continue to do so. As the Arctic changes, America's Coast Guard will adapt and innovate to be *Always Ready* for the missions to come.

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