# THE NORTHERN NORTHERN BORDER: HOMELAND SECURITY PRIORITIES IN THE ARCTIC, PART I

## HEARING

BEFORE THE

## SUBCOMMITTEE ON TRANSPORTATION AND MARITIME SECURITY

OF THE

## COMMITTEE ON HOMELAND SECURITY HOUSE OF REPRESENTATIVES

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# THE NORTHERN NORTHERN BORDER: HOMELAND SECURITY PRIORITIES IN THE ARCTIC, PART I

**Thursday, September 19, 2019**

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOMELAND SECURITY,
SUBCOMMITTEE ON TRANSPORTATION
AND MARITIME SECURITY,
*Washington, DC.*

The subcommittee met, pursuant to notice, at 2:21 p.m., in room 310, Cannon House Office Building, Hon. J. Luis Correa (Chairman of the subcommittee) presiding.

Present: Representatives Correa, Demings, Lesko, Katko, and Rogers.

Mr. CORREA. Good afternoon, everyone.

The Subcommittee on Transportation and Maritime Security will come to order.

The subcommittee is meeting today—the subcommittee is meeting here today to receive testimony on the "Northern Northern Border, Homeland Security Priorities in the Arctic, Part 1."

Without objection, the Chair is authorized to declare the subcommittee in recess at any time. I want to thank you, Ranking Member Lesko, and our panel of witnesses for joining us here today. Welcome.

Today's hearing will discuss a changing Arctic and U.S. strategic interests in that region, specifically, priorities for securing the homeland. A change in climate has already led to diminishing sea ice, opening up parts of the Arctic for increased economic and maritime activity. Sadly, our Government is ill-prepared for this new reality.

I am concerned that the aggressive actions of other nations, mainly Russia and China, threaten to undermine the international order. Russia has expended its military installations and footprint in the Arctic, investing heavily in a large icebreaker fleet of more than 50 icebreakers, reviving Cold War bases and deepwater ports and, of course, solidifying infrastructure in the region as well.

China has also made its Arctic ambitions very clear, declaring itself a near-Arctic state and, despite being located a thousand miles away, in investing strategically in economic activity in key geographic areas in the region. China is investing in what it calls a Polar Silk Road.

Russia and China both stand to profit significantly from trade routes that will become increasingly passable as ice shelves con-

tinue to recede. The image on the screens, the images there, show the potential benefit of a Northern Sea route through the Arctic.

According to *The Washington Post,* the Northern Sea route shown in orange traverses 8,000 miles from East Asia to Western Europe, and that is about 5,000 miles shorter than the current route shown in blue. The Northern Sea route will enable China to ship goods to Europe in about 2 weeks faster than it can now, and it will provide Russia the opportunity to charge ships a fee to travel through waters over which it can claim jurisdiction.

Along with the new shipping routes, melted ice in the Arctic will allow for increased tourism, fisheries, energy exploration, and infrastructure development.

With these new opportunities come major challenges for us. First, we must ensure that the Arctic development is sustainable with minimal impact to the environment and supportive of local communities, including the indigenous people.

Next, we must ensure that the U.S. Coast Guard is prepared to execute its multifaceted missions in this changing region. The Coast Guard's mission in the Arctic includes port security, search and rescue, regulation of shipping and fishing, law enforcement, and support of scientific research. The Coast Guard is also responsible for maintaining a U.S. presence in our territory of waters and defending our security in economic interests in the region.

The Coast Guard, however, is constantly being asked to do more with less. For example, the Coast Guard has a major icebreaking capability gap, and currently, the Coast Guard has only two polar icebreakers, one which is a heavy-duty icebreaker, and the only other which is dedicated to the Arctic operations.

The Coast Guard has stated that 6 polar security cutters will be necessary to successfully execute its mission in the Arctic. Congress has made significant investments modernizing Coast Guard assets, including fiscal year 2019 funds to begin construction of its first new polar security cutter. It will not be until the delivery of a second polar security cutter in 2025 or later, however, that the Coast Guard will have a heavy-duty icebreaking capability in the Arctic.

In the mean time the Coast Guard will need to use other resources and capabilities to meet its Arctic mission to the best of its ability. This committee works hard to ensure the Coast Guard and its DHS partners have the authority and direction needed to protect the homeland. Sadly, the current administration consistently makes DHS's mission more difficult; and, in fact, the Coast Guard's mission is often overlooked and deemed as a secondary status. The President has repeatedly attempted to raid the DHS budget to pay for a Southern Border wall above all else, and this ignores critical security needs throughout the country, including at our maritime borders.

Additionally, at a time when international cooperation leadership in the Arctic is sorely needed, the administration has failed to prioritize diplomacy in the region, scrapping the State Department's position of a special representative for the Arctic.

We need to invest more in U.S. Government capabilities in the Arctic, not less, in order to assure that the Coast Guard and its partners can secure the homeland at our northernmost border.

I look forward to hearing from our witnesses today about the scope of Homeland Security priorities in the Arctic and recommendations to address them. I look forward to holding a Part II hearing at a future date so we can hear directly from the Coast Guard and other Government partners on this most important topic.

[The statement of Chairman Correa follows:]

STATEMENT OF CHAIRMAN J. LUIS CORREA

SEPTEMBER 19, 2019

Today's hearing will discuss a changing Arctic and U.S. strategic interests in the region, specifically priorities for securing the homeland. A changing climate has already led to diminishing sea ice, opening up parts of the Arctic for increased economic and maritime activity. Sadly, our Government is ill-prepared for this new reality, and I am concerned that the aggressive actions of other nations, namely Russia and China, threaten to undermine international order. Russia has expanded its military installations and footprint in the Arctic, investing heavily in a large icebreaker fleet—consisting of more than 50 icebreakers—reviving Cold War bases and deep water ports, and solidifying infrastructure in the region. China has also made its Arctic ambitions clear, declaring itself a "near-Arctic state" despite being located almost 1,000 miles away and investing strategically in economic activity in key geographic areas in the region. China is investing in a "Polar Silk Road." Russia and China both stand to profit significantly from trade routes that will become increasingly passable as ice shelves continue to recede. According to the *Washington Post,* the Northern Sea Route, shown in orange, traverses 8,000 miles from East Asia to Western Europe—about 5,000 miles shorter than the current route, shown in blue.

The Northern Sea Route would enable China to ship goods to Europe about 2 weeks faster than it can now, and it would provide Russia opportunities to charge ships a fee to travel through waters over which it claims jurisdiction. Along with new shipping routes, melted ice in the Arctic will allow for increased tourism, fisheries, energy exploration, and infrastructure development. With these new opportunities come major challenges. First, we must ensure Arctic development is sustainable, with minimal impact to the environment and supportive of local communities, including indigenous people. Next, we must ensure the U.S. Coast Guard is prepared to execute its multifaceted missions in this changing region. The Coast Guard's missions in the Arctic include port security, search and rescue, regulation of shipping and fishing, law enforcement, and support of scientific research. The Coast Guard is also responsible for maintaining a U.S. presence in our territorial waters and defending our security and economic interests in the region. The Coast Guard, however, has constantly been asked to do more with less. For example, the Coast Guard has a major icebreaking capability gap. Currently, the Coast Guard has two polar icebreakers—only one of which is a heavy-duty icebreaker—and neither of which is dedicated to Arctic operations.

The Coast Guard has stated that 6 polar security cutters will be necessary to successfully execute its missions in the Arctic. Congress has made significant investments in modernizing Coast Guard assets, including fiscal year 2019 funds to begin construction of its first new Polar Security Cutter. It will not be until the delivery of a second Polar Security Cutter in 2025 or later, however, that the Coast Guard will have heavy-duty icebreaking capabilities in the Arctic. In the mean time, the Coast Guard will need to use other resources and capabilities to meet its Arctic mission to the best of its ability. This committee works hard to ensure the Coast Guard and its DHS partners have the authorities and direction needed to protect the homeland. Sadly, the current administration consistently makes DHS's mission more difficult. In fact, the Coast Guard's mission is often overlooked and deemed as a "secondary status".

The President has repeatedly attempted to raid the DHS budget to pay for a Southern Border wall above all else—ignoring critical security needs throughout the country, including at our maritime borders. Additionally, at a time when international cooperation and leadership in the Arctic is sorely needed, the administration has failed to prioritize diplomacy in the region, scrapping the State Department position of Special Representative for the Arctic. We need to invest more in U.S. Government capabilities in the Arctic—not less—in order to ensure that the Coast Guard and its partners can secure the homeland at our northernmost border. I look forward to hearing from our witnesses about the scope of homeland security prior-

ities in the Arctic and recommendations to address them. I also look forward to holding a "Part 2" hearing at a future date so we can hear directly from the Coast Guard and other Government partners on this topic.

Mr. CORREA. Now I would like to recognize the Ranking Member of the subcommittee, the gentlewoman from the State of Arizona, Ms. Lesko, for an opening statement.

Ms. LESKO. Well, thank you, Mr. Chairman, and thank you to the witnesses here, and welcome to the audience.

I was the same. We were going to agree on just about everything until you got to the part where you said the Trump administration isn't doing anything, because they are.

Mr. CORREA. I didn't say Trump.

Ms. LESKO. Oh, oh, oh, the current administration isn't doing anything, but that I disagree with you on, and I will actually reference it in my statement.

So, again, thank you, Mr. Chairman. I appreciate our shared interest in this topic, and I appreciate you convening today's hearing to learn more about what the Department of Homeland Security can contribute to our position in the Arctic.

As 1 of 8 countries with a geographic footprint within the Arctic Circle, the region is one of great National importance to the United States, and I think we agree on that.

The area is abundant with natural resources, has immense value for scientific research, is a strategic position for National security purposes, and offers significant benefit to commerce and maritime shipping.

Considerable changes are also taking place in the Arctic that will allow these potential benefits to be realized to a greater extent, while also making U.S. action more urgent. Changes in the levels of seasonal sea ice in the Arctic Ocean have allowed for increased transit through the area, while also increasing interest from other Arctic countries like Russia, and even non-Arctic countries, like China.

In a renewed era of great power competition, one thing we can all agree on is the need to ensure the United States' National security is in the face of growing influence in the Arctic from Russia and China. As commerce grows in the region, U.S. interests in freedom of navigation must be protected if we are to fully realize the potential opportunities in a changing Arctic.

The United States Coast Guard has a diverse range of missions as a component of the Department of Homeland Security, and recently, I was able to tour with them and it was a great experience. Drug interdiction, environmental enforcement, search and rescue, as well as port security are all responsibilities of the United States Coast Guard. The Coast Guard is also the sole owner and operator of the United States polar-capable fleet and thus best placed to facilitate the United States' sovereign presence in the Arctic.

Yet, as the Chairman has noted, the United States Coast Guard relies on a single, aging, heavy icebreaker, the Polar Star, to conduct polar operations. As with any aging platform, the Solar Star suffers from frequent mechanical issues that can result in the need for maintenance at sea.

In an attempt to remedy this situation, Congress, with the support of President Trump, enacted funding for the first new polar

icebreaker in last year's appropriations. While funding a new heavy icebreaker is an important first step, it is imperative that this action is only the beginning of our Nation's Arctic conversation.

The Coast Guard stated a need for 3 new heavy polar security cutters, and 3 medium polar security cutters in 2013. Since then, we have funded the first heavy polar security cutter, as well as the Trump administration has financed long lead-time terms for the second cutter.

To maintain the United States' position in the Arctic during this dynamic period, we must consider the benefits of our Arctic activity beyond just the military. We must recognize the importance of this mission and continue to direct our attention and investment to the Arctic region if we want to continue our sovereign presence.

With renewed Coast Guard capability and continued National focus in the Arctic region, our usage and presence will continue to grow through increased commerce, research, and even tourism, as we are able to transit more of the Arctic ocean for longer periods of time. That is what we will need in order to truly bolster our presence in the Arctic region, as other great powers, like Russia and China seek to project their own.

This is a complex problem that requires complex solutions to achieve our Nation's desired result. Many scholarly organizations are focused on this issue. We will hear from some today.

I look forward to hearing from you guys today.

Whether that solution is continued investment, interagency efforts, existing international initiatives, or new international initiatives, Congress must set a new course for U.S. focus on the Arctic.

So, again, thank you for being here today. I look forward to hearing more about this. I wish more people were here because I guess we are going to have the secret and be able to solve it together.

[The statement of Ranking Member Lesko follows:]

STATEMENT OF RANKING MEMBER DEBBIE LESKO

SEPTEMBER 19, 2019

Thank you, Mr. Chairman. I appreciate our shared interest in this topic, and I appreciate you convening today's hearing to learn more about what the Department of Homeland Security can contribute to our position in the Arctic.

As 1 of 8 countries with a geographic footprint within the Arctic circle, the region is of great National importance to the United States. The area is abundant with natural resources, has immense value for scientific research, is a strategic position for National security purposes, and offers significant benefit to commerce and maritime shipping. Considerable changes are also taking place in the Arctic that will allow these potential benefits to be realized to a greater extent while also making U.S. action more urgent. Changes in the levels of seasonal sea ice in the Arctic Ocean have allowed for increased transit through the area while also increasing interest from other Arctic countries like Russia and even non-Arctic countries like China.

In a renewed era of great power competition, one thing we can all agree on is the need to ensure U.S. National security in the face of growing influence in the Arctic from Russia and China. As commerce grows in the region, U.S. interests and freedom of navigation must be protected if we are to fully realize the potential opportunities in a changing Arctic.

The United States Coast Guard has a diverse range of missions as a component of the Department of Homeland Security. Drug interdiction, environmental enforcement, search and rescue, as well as port security are all responsibilities of the United States Coast Guard. The Coast Guard is also the sole owner and operator of the United States polar capable fleet and thus best placed to facilitate the United States' sovereign presence in the Arctic. And yet, the United States Coast Guard

relies on a single, aging heavy ice breaker, the Polar Star, to conduct polar operations. As with any aging platform, the Polar Star suffers from frequent mechanical issues that can result in the need for maintenance at sea. In an attempt to remedy this situation, Congress enacted funding for the first new polar ice breaker in last year's appropriations. While funding a new heavy ice breaker is an important first step, it is imperative that this action is only the beginning of our Nation's Arctic conversation.

The Coast Guard stated a need for 3 new heavy polar security cutters and 3 medium polar security cutters in 2013. Since then we have funded the first heavy polar security cutter as well as long lead time materials for a second. To maintain the United States' position in the Arctic during this dynamic period, we must consider the benefits of Arctic activity beyond just the military. We must recognize the importance of this mission and continue to direct our attention and investment to the Arctic region if we want to continue our sovereign presence. With renewed Coast Guard capability and continued National focus in the Arctic region, our usage and presence will continue to grow through increased commerce, research, and even tourism as we are able to transit more of the Arctic Ocean for longer periods of time. This is what we will need in order to truly bolster our presence in the Arctic region as other great powers like Russia and China seek to project their own.

This is a complex problem that requires complex solutions to achieve our Nation's desired result. Many scholarly organizations are focused on this issue and I look forward to hearing from a few today. Whether that solution is continued investment, interagency efforts, existing international initiatives, or new international initiatives, Congress must set a new course for U.S. focus on the Arctic. Thank you, Mr. Chairman, and I yield back the balance of my time.

Mr. Correa, thank you.

Mr. CORREA. Ms. Lesko, I think you might have just come up with a solution, the less the better to fix this problem but, with that being said, I would like to also welcome our Ranking Member of the Homeland Security full committee, and that is Representative Rogers from the good State of Alabama. I would like to recognize him for an opening statement.

Welcome sir.

Mr. ROGERS. Thank you, Chairman Correa, and I appreciate you holding this important hearing and I appreciate the leadership of Ranking Member Lesko in this important issue.

It is critical that we recognize the growing strategic importance of the Arctic to the U.S. interests. Russia and China are making significant investments in the Arctic. To them, the Arctic is a new battlefield where they are seeking every advantage over the United States. The United States must not be caught flatfooted. To defend our National security, homeland security, and sovereignty, we must make needed investments in Arctic infrastructure. To that end, I am pleased that Congress has funded one new polar security cutter for the Coast Guard and has appropriated funding for long lead materials for a second. These heavy icebreakers are long overdue, and once delivered, will greatly improve the Coast Guard's capability itself and presence in the region.

Now, I thank each of the witnesses for appearing before this committee today to help improve our understanding of the Homeland Security implications of a changing Arctic.

I yield back, Mr. Chairman.

[The statement of Ranking Member Rogers follows:]

STATEMENT OF RANKING MEMBER MIKE ROGERS

SEPTEMBER 19, 2019

Thank you, Chairman Correa for holding this important hearing today, and I thank Ranking Member Lesko for her leadership on this issue.

It is critical that we recognize the growing strategic importance of the Arctic to U.S. interests.

Russia and China are making significant investments in the Arctic. To them, the Arctic is a new battlefield where they are seeking every advantage over the United States.

The United States must not be caught flat-footed. To defend our National security, homeland security, and sovereignty, we must make needed investments in Arctic infrastructure.

To that end, I am pleased that Congress has funded one new Polar Security Cutter for the Coast Guard and has appropriated funding for long-lead materials for a second.

These heavy icebreakers are long overdue, and, once delivered, will greatly improve the Coast Guard's capabilities and presence in the region.

I thank each of the witnesses for appearing before the subcommittee today to help improve our understanding of the homeland security implications of a changing Arctic, and I yield back.

Mr. CORREA. Thank you very much, Mr. Rogers.

Other Members of the committee are reminded that under committee rules, opening statements may be submitted for the record.

[The statement of Chairman Thompson follows:]

STATEMENT OF CHAIRMAN BENNIE G. THOMPSON

SEPTEMBER 19, 2019

Under the current administration, a great deal of attention has been focused on our Southern Border. One thing that I appreciate about this committee, however, is our ability to simultaneously examine the vast range of security matters facing the homeland. Among these matters is the U.S. Coast Guard's mission to secure and protect the maritime domain—which includes U.S. Arctic waters. Many forget that the United States is, after all, an Arctic nation, given the geography of Alaska.

The vastness of U.S. Arctic waters results in National security demands on the Coast Guard that are evolving and pressing. They demand our attention. The Coast Guard has identified its responsibilities in the Arctic as ensuring "the homeland security, safety, and environmental stewardship of U.S. waters." Executing this mission in the region is becoming more difficult, as the Arctic's strategic importance is growing, and maritime activity is increasing. Studies show this increase in maritime activity is linked directly to climate change, as global warming has caused an overall decrease in the duration and thickness of sea ice coverage.

Warmer temperatures are also inviting a rise in recreational activity and offshore exploration of natural resources. In addition to climate change, the Coast Guard has had to contend with the increased presence and aggression of geopolitical actors, like Russia and China, in the region. Both nations have identified increased presence in the Arctic as a strategic priority, motivated in part by the potential economic benefits that Arctic shipping routes could bring. Russia is increasing its military presence in the Arctic, building on what is already the world's largest number of icebreakers. With almost 50 icebreakers, Russia has the capabilities, personnel, and infrastructure needed to operate in the Arctic year-round.

China has likewise shown its Arctic ambitions, directing Chinese companies and government agencies to maintain an increased presence in the region to help create what it calls a "Polar Silk Road." China has also announced its first domestically built icebreaker and plans for a nuclear-powered icebreaker. As we learn about the emerging capabilities of other geopolitical actors in the region, I am concerned about the Coast Guard's capability gaps in the Arctic—including a need for additional icebreakers and long-range patrol vessels. The Coast Guard currently has just 1 heavy polar icebreaker, the "Polar Star," and 1 medium icebreaker, the "Healy." The Polar Star is well past its service life and conducts missions in Antarctica—not the Arctic.

Thankfully, Congress has made significant investments in building new Coast Guard assets, including funds to begin construction on a new Polar Security Cutter. This first Polar Security Cutter will replace the Polar Star and its responsibilities in the Antarctic; only a second Polar Security Cutter to be delivered in 2025 or later would finally provide the Coast Guard with icebreaking capabilities in the Arctic. It evident that the Coast Guard, and the U.S. Government as a whole, has some catching up to do to be able to protect U.S. interests in the Arctic. Without increased attention and investment in the strategies, resources, and personnel needed to operate at our northern-most border, the Coast Guard will risk falling further behind.

I look forward to hearing from today's witnesses about homeland security priorities in the Arctic and how Congress can best support the Government's critical missions in the region.

Mr. CORREA. Now I would like to welcome the panel of witnesses. Our first witness, Dr. Michael Sfraga, is a director of the Polar Institute and Global Risk and Resilience program at the Wilson Center. His work is focused on changing geography in the Arctic and the impacts of social and political regimes in the region.

Welcome, sir.

You have 5 minutes for statement.

**STATEMENT OF MICHAEL SFRAGA, DIRECTOR, GLOBAL RISK AND RESILIENCE PROGRAM, AND DIRECTOR OF POLAR INSTITUTE AT THE WILSON CENTER**

Mr. SFRAGA. Thank you, Mr. Chairman. Thank you, Ranking Member Lesko, and Members of the committee.

As the Chairman noted, I am the director of the Woodrow Wilson Center's Polar Institute and Global Risk and Resilience program.

Members, today 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 5½ million square miles, the Arctic Ocean covers an area roughly 1½ times the United States, and half the size of the African continent. It is a region we cannot ignore.

My testimony provides an overview of key issues facing the United States, other Arctic and non-Arctic nations. I'd like to reconceptualize the risks, the realities, and the opportunities in the Arctic. I provide a new framework called Navigating the Arctic's 7C's. The Cs are climate, commodities, commerce, connectivity, communities, cooperation, and competition. To effectively protect the homeland by addressing the challenges and opportunities of a transformed Arctic, the United States must thoroughly consider how it navigates the Arctic's 7Cs.

The first C is climate. You will hear more about that in a moment. The climate change is real, it is rapid, and it is 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 this month. The latest IPCC report found with high confidence that the Arctic is warming 2 to 3 times as fast as the rest of the planet.

The second C is commodities. According to the USGS, the Arctic is estimated to hold 13 percent of the world's undiscovered oil and 30 percent of the world's undiscovered natural gas. The increased availability of these resources due to the rapid thaw in the Arctic has reenergized the global market's interest in the Arctic. This interest is predicted to endure, particularly in the wake of the recent attack on the Saudi Arabian oil facilities.

The third C is commerce. Russia's Yamal Peninsula is now emblematic of the new global Arctic. For example, China owns nearly 30 percent of the initial Yamal LNG project; and Arctic LNG tankers are built in the shipyards of South Korea. Meanwhile, the

United States does not have a major deepwater port along 1,500 nautical miles of its Arctic coastline from Dutch Harbor to Prudhoe Bay along the North Slope. Without a viable deepwater port, or strings of ports in the U.S. Arctic, commerce, search and rescue, and National security interests will not be met. The June, 2019, National Defense Authorization Act includes, "requirements to locate and designate one or more U.S. strategic ports."

The fourth C, connectivity. We tend to think of connectivity just as an internet connection; but we should focus on a broader application of connectivity, addressing both digital and physical infrastructure. We do not have a digital or information divide in America's Arctic. We have a digital and information abyss. Less than 5 percent of the U.S. Maritime Arctic is charted to modern international standards. We lack the basic information about our Arctic domain. Insufficient access to reliable internet connectivity hinders education, commerce, search and rescue, and impedes informed infrastructure development and maintenance.

The fifth C is communities. The transformation of the Arctic most acutely affects community in the region. The U.S. Army Corps of Engineers has identified 31 Alaskan communities and seriously threatened by environmental change and in imminent need for relocation. These threatened communities are similar, perhaps, to those in New Orleans, or even a future Miami.

Six, cooperation. For over two decades, the Arctic Council, a consensus-driven body, has fostered and maintained international dialog, research efforts, and binding agreements among the members, including Russia. Cooperation also exists within the Arctic Coast Guard forum with representation from each Arctic nation. The Arctic region is the only place, aside from the International Space Station, where the United States and Russia have maintained long-term cooperation, even in times of high tension.

Finally, Mr. Chairman, my final C is competition. The ability to project power in the Arctic can be measured in a number of ways, including a Nation's ability to operate in the region. China, which in 2019, as you noted, proclaimed itself a near-Arctic State—and, Mr. Chairman, I am a geographer. They are not a near-Arctic State. Currently has 4 icebreakers and is developing 2 new icebreakers—1, nuclear-powered. Russia operates, as you noted, over 50 icebreakers with 6 under construction and 12 more planned. Russia is also revitalizing Soviet-era military installations, and establishing new assets along its Northern Sea route with new military bases from Franz Josef Land to Wrangel Island. This denotes Russia's intent and ability to maintain premier influence in the Arctic. The U.S. Government, by comparison, as you noted, has 2 icebreakers and is cannibalizing parts from the dry-docked Polar Sea to maintain 1 single heavy icebreaker, the Polar Star.

The recent funding for an additional U.S. icebreaker or polar security cutter is a step forward. The U.S. Coast Guard's 2019 Arctic Strategic Outlook describes the need for 6 new polar security cutters, which will help support our homeland security requirements and provide much-needed domain presence.

We should share a sense of urgency to see our polar security cutter fleet fully funded and in service sooner rather than later.

In conclusion, Mr. Chairman, we often hear that the Arctic is an emerging issue. I disagree. The Arctic has emerged. As I have explained, it is no longer an isolated, remote region. Rather, it is a critical component of our global, political, economic, social, physical, and security landscape. The region is experiencing rapid and dynamic change; and these 7 unique drivers, these Arctic 7Cs, help frame these pressing global issues in a way that may help to better understand and address our future Arctic.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Sfraga follows:]

PREPARED STATEMENT OF MICHAEL SFRAGA

SEPTEMBER 19, 2019

INTRODUCTION

Good afternoon Chairman Correa, Ranking Member Lesko, 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. I also serve as co-lead scholar for the Department of State's Fulbright Arctic Initiative. I am honored to testify on the subject "The Northern Northern Border: Homeland Security Priorities in the Arctic, Part I."

As we convene today, 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 Pacific Ocean as a critical geographic component of our country's maritime ring of security and opportunity. Spanning nearly 5½ 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 African Continent. It is a region we cannot ignore.

The Department of Homeland Security's Strategic Plan for fiscal years 2020–2024 is a helpful filter through which my testimony should be considered. The DHS Strategic Plan calls for confronting a "complex threat landscape" by establishing "a clear strategic vision that achieves and advances our Department's essential mission by placing American safety and security first." One of the guiding principles includes championing "'Relentless Resilience' for all threats and hazards." 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.

My testimony provides an overview of key issues facing the United States, and other Arctic and non-Arctic nations. To re-conceptualize the realities, risks, and opportunities in the Arctic, I provide 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 United States must thoroughly consider how it navigates the Arctic's 7Cs.

*1. Climate*

Climate change 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 this month. The latest IPCC report found with high confidence that the Arctic is warming 2 to 3 times faster than the global average. Associated sea ice decline has many implications for the United States, including: A more accessible border along the 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.

I recommend, as one example of cross-walking Federal recommendations and efforts related to the Arctic, a review of the United States Arctic Research Commission's Report on the Goals and Objectives for Arctic Research 2019–2020, where you may find 9 recommendations that enhance the Nation's ability to "Observe, Understand, and Forecast Arctic Environmental Change."

*2. Commodities*

According to USGS, the Arctic is estimated to hold 13 percent of the world's undiscovered oil, 30 percent of the world's undiscovered natural gas, and 20 percent of the undiscovered natural gas liquids. The increased availability of these resources due to the rapid ice thaw has reenergized the global market's interest in the Arctic

for a source of these commodities. This interest is predicted to endure—particularly in the wake of the recent attack on Saudi Arabian oil facilities.

The U.S. Arctic Research Commission's 2019–2020 document notes 5 recommendations to advance our understanding of Arctic natural resources and may help shape the committee's further work in this area.

*3. Commerce*

There has been a 5-fold increase in commercial activity along Russia's Northern Sea Route (NSR) since 2014, primarily driven by resource extraction and subsequent transport. 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. Russia derives an estimated 20 percent of its GDP and 30 percent of its exports from the Arctic—and aims to quadruple the cargo to 80 million tons per year by 2024. Russia is building out their Arctic infrastructure to support such activities—the United States is not.

Russia's Yamal Peninsula, an epicenter of this commerce, is now emblematic of the new, global Arctic—for example China owns a nearly 30 percent stake of the initial Yamal LNG project, and Arctic LNG tankers are built in the shipyards of South Korea. Meanwhile, the United States 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. Without a viable deep-water port or string of ports—in the U.S. Arctic—commerce, search-and-rescue, 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."

*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.

We do not have a digital or information divide in America's Arctic—we have a digital and information abyss. Less than 5 percent of the U.S. maritime Arctic is charted to modern international standards; we lack basic information about our Arctic domain. Insufficient access to reliable internet connectivity hinders education, commerce, search-and-rescue, and impedes informed infrastructure development and maintenance.

*5. Communities*

The transformation of the Arctic most acutely affects communities in the region. The U.S. Army Corps of Engineers has identified 31 Alaskan communities as seriously threatened by environmental change and in imminent need of relocation. In other words, 31 communities need to vacate the land their ancestors lived on for thousands of years. These threatened communities are similar to those in New Orleans and perhaps a future Miami. It is the mission of the Department of Homeland Security to guarantee a safe and secure environment to all American communities, including those in the Arctic.

*6. Cooperation*

There is a high degree of cooperation between the 8 Arctic nations, principally through the Arctic Council. For over 2 decades, this consensus-driven body has fostered and maintained international dialog, research efforts, and binding agreements among the members, including Russia. Cooperation also exists within the Arctic Coast Guard Forum, with representation from each Arctic nation. The Arctic region is the only place, aside from the International Space Station, where the United States and Russia have maintained long-term cooperation, even in times of high tension.

U.S. participation and leadership in the Arctic Council and Arctic Coast Guard Forum is in our Nation's best interest. These entities reinforce a rules-based governance structure for the Arctic Ocean, and help to effectively mitigate and address the impacts of a warming Arctic.

*7. Competition*

The ability to project power in the Arctic can be measured in a number of ways, including a nation's ability to operate in the region. A lens through which we may consider this matter includes the number of icebreakers in service and planned by the United States, Russia, and China.

China, which in 2018 proclaimed itself a "Near-Arctic State," currently has 4 icebreakers and is developing 2 new icebreakers, 1 to be nuclear-powered. This is indicative of China's approach to the Arctic—a long-term, carefully crafted, and purposeful strategy to secure a diverse energy portfolio, presence, and regional influence through economic development.

Russia operates 53 icebreakers, with 6 under construction and 12 more planned. Russia is also revitalizing Soviet-era military installations and establishing new assets along the NSR, with new military bases on Franz Josef Land, Kotelny, and Wrangel Island. This denotes Russia's intent and ability to maintain premier influence in the Arctic.

The U.S. Government by comparison has 2 icebreakers, and is cannibalizing parts from the dry-docked Polar Sea to maintain our single heavy icebreaker—the Polar Star. The recent funding for an additional U.S. icebreaker or "Polar Security Cutter" is a small step forward. The U.S. Coast Guard's 2019 Arctic Strategic Outlook describes the need for 6 new Polar Security Cutters, which will help support our homeland security requirements and provide much-needed domain presence.

We should share a sense of urgency to see our Polar Security Cutter fleet fully funded and in service sooner rather than later.

CONCLUSION

Mr. Chairman, we often hear the Arctic is an emerging issue. I disagree. The Arctic has emerged. As I have explained, it is no longer an isolated or remote region; rather it is a critical component of our global political, economic, social, physical, and security landscape. The region is experiencing rapid and dynamic change and these 7 unique drivers, the Arctic's 7Cs, help frame these pressing global issues in a way that may help to better understand and address our future Arctic.

Mr. CORREA. Thank you, Dr. Sfraga.

Now our next witness, Dr. Abbie Tingstad, the associate research department director of the Engineering and Applied Sciences at the RAND Corporation.

Dr. Tingstad has authored a number of publications on the Arctic, and she has done extensive research on the Coast Guard capabilities, international cooperation, and the changing strategic environment in the Arctic.

Welcome.

## STATEMENT OF ABBIE TINGSTAD, SENIOR PHYSICAL SCIENTIST, RAND CORPORATION

Ms. TINGSTAD. Thank you very much, Chairman Correa, Ranking Member Lesko, and other distinguished Members of the committee. I appreciate the opportunity to appear before you today.

We have known for many years that the Arctic region is sensitive to environmental shifts, and today it is experiencing one of the most rapid rates of climate change in the world. These changes in the Arctic have created both homeland security and international issues. The Northern Rim of the United States is already an area of concern for illegal, unreported, and unregulated fishing, search and rescue, and environmental protection. In the future, trafficking and terrorism-related problems could arise as well. In addition, the Arctic presents possibilities for both engagement and conflict, with Russia and China in and near U.S. territory.

Why does climate change in the Arctic matter, and what could the United States do about it from a security perspective? In the past, vast, harsh conditions, persistent sea ice, and limited opportunities for economic development have served as a deterrent to presence in the region. Climate is changing patterns of physical access to the Arctic. Maritime access is increasing, although unevenly, and land-based access in some areas is also decreasing.

But climate is not the sole driver of change in the Arctic. For example, technology is also very important. New sensors and autonomous vehicles, for example, could increase the accessibility of the Arctic across land, sea, and air. Other change factors also motivate or discourage access to the region, such as the available and cost

of energy resources, as well as indigenous autonomy and partnerships.

Among others, Russia and China are definitely taking advantage of opportunities in the Arctic. Russia is revitalizing fixed and mobile infrastructure for commercial and military use. For its part, China has been promoting the Polar Silk Road and engaging in Arctic affairs through the Arctic Council, among other things.

Our work on the durability of Arctic cooperation among stakeholders reveal that an increase in maritime safety and security incidents might be most likely to bring Arctic security into question for the United States. Examples of such incidents include maritime vessel collisions, dark vessels engaging in illegal fishing or drug running, oil spills, and acts of terrorism or piracy.

Nations that appear to lack adequate capabilities to prevent and respond to these types of incidents will face a real or perceived security void in the Arctic.

This will result in both domestic and international consequences to include potential declines in well-being for indigenous communities, and a security void might also allow other nations, notably China and Russia, to justify an increase in presence and influence in the region.

Now that environmental access barriers are falling, we must ask: How does climate change alter the needs and abilities of the U.S. Government to carry out responsibilities and use its authorities in the Arctic? Ultimately, the United States must decide on the right level of National capability; and by virtue of its history and authorities, the U.S. Coast Guard will play a large role in any steps forward enhancing governance in the region.

In our work on U.S. Coast Guard capabilities, several assets arose in our analysis as being particularly pertinent to Arctic operations. In addition to existing and planned icebreakers, these include helicopters, aircraft, airfields, National security cutters, medical evacuation capabilities, satellite and other communication networks, rescue coordination centers, and various types of specialist personnel, as well as data.

Importantly, no single one of these capabilities arose as a silver bullet; and there are also many gaps still existing for the Coast Guard and others in the Arctic as well to include communications, domain awareness, and response. Specific types of mitigation options that we identified in our work include a diverse range, including items such as communications infrastructure, remotely controlled air, sea, and amphibious craft for domain awareness, updating data gathering and database construction processes to enable fusion of information, and sustaining both longer-term operations, as well as agile first response capability, among a series of other things.

It is important to recognize that concerns about Arctic security in closing capability caps are more than just Coast Guard issues; they are matters of National relevance. In addition to taking specific actions outlined such as those I have just mentioned, the United States has the opportunity to continue work with the Arctic Council and Arctic Coast Guard Forum. Finding ways to keep discussion channels open for important military security communica-

tions is also vital. The United States might also reconsider ratifying the U.N. Convention on the Law of the Sea.

This is a time for the United States to continue engaging in the Arctic. I will conclude by saying that fixing the security void includes providing prevention and response services that Americans expect from their government, whether they live in Los Angeles, Houston, New York, or Utqiagvik, Alaska.

Thank you.

[The prepared statement of Ms. Tingstad follows:]

PREPARED STATEMENT OF ABBIE TINGSTAD[1] [2]

SEPTEMBER 19, 2019

Chairman Correa, Ranking Member Lesko, and other distinguished Members of the committee, thank you for the opportunity to appear before you this afternoon. We have known for many years that the Arctic region is sensitive to environmental shifts; today, it is experiencing one of the most rapid rates of climate change in the world. These changes in the Arctic have created both homeland security and international issues. The northern rim of the United States is already an area of concern for illegal, unreported, and unregulated (IUU) fishing; search and rescue; and environmental protection. In the future, trafficking- and terrorism-related problems could arise as well. In addition, the Arctic presents possibilities for both engagement and conflict with Russia and China in and near U.S. territory.[3]

Why does climate change in the Arctic matter, and what does the United States need to do about it from a security perspective? I would like to present the following points:

- The Arctic's on-going changes in climate promote both challenges and opportunities; these are also influenced by technology, economic, and other factors.
- Climate change in the Arctic matters for U.S. security because of the potential for a real or perceived security void to develop in the absence of additional action.
- Averting a security void requires sufficient capability to promote safety, security, and stewardship in the region; multiple types of investments are needed to do this.

CHANGING ARCTIC WILL FOSTER PROBLEMS AND OPPORTUNITIES

The Arctic has recently attracted so much attention—from foreign governments, commercial interests, and, increasingly, the U.S. Government—because climate is changing patterns of physical access to the region, altering the historical, broadly-held perception of the Arctic as a relatively static place.[4] The environment for native and other local stakeholders is changing at an intensifying pace.[5] One reason for this is diminished ice-albedo feedback; less ice means that a smaller fraction of solar energy is mirrored back into space, exacerbating the warming of the Arctic environment.[6]

In the past, the Arctic's vast, harsh conditions, its persistent sea ice, and its limited opportunities for economic development have served as a deterrent to Arctic presence. Though the Arctic was strategic during the Cold War (Arctic nations still

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[1] The opinions and conclusions expressed in this testimony are the author's alone and should not be interpreted as representing those of the RAND Corporation or any of the sponsors of its research.

[2] The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier, and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

[3] Abbie Tingstad, Stephanie Pezard, and Scott Stephenson, "Will the Breakdown in U.S.-Russia Cooperation Reach the Arctic?," *RAND Blog,* October 12, 2016. As of September 16, 2019: *https://www.rand.org/blog/2016/10/will-the-breakdown-in-us-russia-cooperation-reach-the.html*.

[4] Ron Kwok, "Arctic Sea Ice Thickness, Volume, and Multiyear Ice Coverage: Losses and Coupled Variability (1958–2018)," *Environmental Research Letters,* Vol. 13, 2018.

[5] Josefino C. Comiso and Dorothy K. Hall, "Climate Trends In The Arctic as Observed From Space," 2014, *WIREs Climate Change,* Vol. 5, 2014, pp. 389–409; R.K. Pachauri and L.A. Meyer, eds., *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,* Geneva, Switzerland: Intergovernmental Panel on Climate Change, 2014.

[6] Comiso and Hall, 2014.

maintain military assets in and around the area), the region itself was not a driver of tensions so much as a battleground in a larger conflict. It is time to re-evaluate security needs and capabilities now that warmer temperatures are opening the Arctic to a different set of challenges and opportunities.

The long distances between remote inhabited areas in the North American Arctic will remain, and the environment across the region will still be relatively harsh. Farmers in Greenland now grow potatoes and Saami reindeer herders worry about newly-invading pests, but the Arctic will not become a tropical paradise in our lifetimes. Warming has an uneven effect on access to the Arctic—diminishing sea ice increases maritime access, but thawing permafrost and softer ice roads inhibit access via land. Even with general icemelt, some areas of the maritime Arctic—notably the Canadian archipelago and northwestern Greenland—are projected to experience particularly persistent sea ice.

Climate is not the sole driver of change shaping the Arctic's future.[7] Technology, even that which is not groundbreaking in today's terms, is influencing access. Ships' hulls are hardened to break ice, and sections of the Trans-Alaska Pipeline running through permafrost are elevated on vertical support members. New sensors and autonomous vehicles will increase the accessibility of Arctic land, air, and sea, even if those areas are not directly accessed by humans. Growing communications networks also will enhance reach across, into, and out of the Arctic.

Other change factors motivate or discourage access to the region. For example, the availability and cost of energy resources influence decisions on whether or how to operate in the Arctic.[8] Indigenous autonomy and partnerships also affect whether and how areas of the Arctic are opened or maintained for business. The vast majority of Greenlanders are indigenous, and Nuuk increasingly manages the country's affairs, although Copenhagen still handles international relations and external security. Canada's Inuit also have an increasingly strong voice in their portions of the Arctic.

Among others, Russia and China are definitely taking advantage of economic opportunities in the Arctic. Russia has been increasing its military capabilities there, forming a northern command, establishing two Arctic brigades, developing infrastructure, and deploying and upgrading military assets.[9] The Russian government and economic sector is also investing in fixed and mobile infrastructure for civilian or commercial use, and some of this infrastructure appears to be dual-use. For example, this year, the Russian Ministry of Natural Resources and Environment released a plan for further developing mineral resources in the Arctic and the logistics for bringing them to market via the Northern Sea Route.[10]

China has been promoting the idea of a "Polar Silk Road" in recent years. This builds on China's decades-long interest in polar science and its more recent participation as an observer in Arctic governance issues through the Arctic Council. In its 2018 Arctic policy, China reaffirmed its interests in participating in Arctic governance and development.[11] China's investment in the Yamal Liquid Natural Gas project with Russia was substantial. Other investments have been more modest, and some have not come to fruition (such as the purchase of an unoccupied naval base in Greenland and the now-canceled development of a resort in Svalbard).

The economic promise of shipping lanes, hydrocarbon extraction, and fishing all come with their own challenges. These activities raise the risk of safety hazards and toxic spills. Furthermore, any increased militarization of the Arctic raises the chance of an unintended military confrontation in the Arctic.

We must consider whether and how to provision basic governance in a changing Arctic. Such governance includes U.S. Coast Guard activities, such as search and rescue, drug interdiction, and fisheries enforcement. Although the Coast Guard already operates in the region, its current resources are limited, and it could be overwhelmed with a rapid increase in demand for service capabilities. Here, we explore

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[7] Stephanie Pezard, Abbie Tingstad, Kristin Van Abel, and Scott Stephenson, *Maintaining Arctic Cooperation with Russia: Planning for Regional Change in the Far North,* Santa Monica, Calif.: RAND Corporation, RR–1731–RC, 2017. As of April 29, 2019: *https://www.rand.org/pubs/research__reports/RR1731.html*.

[8] Pezard et al., 2017.

[9] Andrew Osborn, "Putin's Russia in Biggest Arctic Military Push Since Soviet Fall," Reuters, January 30, 2017. As of April 22, 2019: *https://www.reuters.com/article/us-russia-arctic-insight/putins-russia-in-biggest-arctic-military-push-since-soviet-fall-idUSKBN15E0W0*.

[10] "Russia Releases Comprehensive Plan for Arctic Logistics," *Maritime Executive,* March 19, 2019. As of April 22, 2019: *https://www.maritime-executive.com/article/russia-releases-comprehensive-plan-for-arctic-logistics*.

[11] People's Republic of China, State Council, "China's Arctic Policy," white paper, January 26, 2018. As of April 22, 2019: *http://english.gov.cn/archive/white__paper/2018/01/26/content__281476026660336.htm*.

the concept of an Arctic security gap and some of the capability shortfalls that may inhibit the United States' ability to avoid it—assuming this is something the Nation decides to prioritize.

DOES THE UNITED STATES FACE AN ARCTIC SECURITY GAP?

Our work on the durability of Arctic cooperation among stakeholders—particularly among nation-states—revealed that, although natural resources and territorial claims are important, they might have less potential to escalate tensions over the next 2 decades than an increase in maritime safety and security incidents.[12] Examples of such incidents include maritime vessel collisions, "dark"[13] vessels engaging in IUU fishing or drug running, oil spills, and acts of terrorism or piracy. Nations that appear to lack adequate capabilities to prevent and respond to these types of incidents will face a real or perceived security void in the Arctic. This will have consequences domestically as well as internationally. Economic opportunities, such as resource extraction, legal fishing, trans-Arctic shipping, and wind and data farms, could stagnate. Indigenous community wellbeing could decline, and broader social problems, such as violent crime and illegal drug use, might be exacerbated. A security void might also allow other nations, notably China and Russia, to justify an increase in presence and influence in the region.

Now that environmental access barriers are falling, we must ask: How does climate change alter the needs and abilities of the U.S. Government to carry out responsibilities and use its authorities in the Arctic? It is imperative to know which key Government responsibilities and authorities can be carried out in the Arctic and under which on-going or emerging circumstances they will be necessary. For example, defending the Nation's exclusive economic zone represents a small fraction of the Coast Guard's discretionary budget. Should this be increased—either in total dollar amount or as a fraction of the budget—and why?

Answering these types of questions is a necessary step toward understanding whether the United States has a security gap in the Arctic and what the nature of any gap is. Such a gap, whether perceived or real, could lead to undesirable and avoidable consequences. Ultimately, however, the United States must decide on the right level of capability in the Arctic. By virtue of its operational history, statutory missions, and authorities, the Coast Guard will play a large role in any steps toward enhancing governance activities in the Arctic. However, our recent work on Coast Guard capability gaps in the Arctic reveals that this Department of Homeland Security component and military service is already operating at a disadvantage in the region.[14]

The numbers and capabilities of icebreaking vessels are frequently cited as a proxy for Arctic operating capability or as a more general reflection on Arctic interest or influence.[15] Differences between nations are acute; Russia holds a dramatic lead over all others with dozens of these ships, including several newer ones, some of which are nuclear-powered. In contrast, the United States has only 2 operational icebeakers—the heavy icebreaker U.S. Coast Guard Cutter (USGCG) Polar Star (commissioned in 1976) and the medium icebreaker USGCG Healy (commissioned in 1999). More are planned through the Polar Security Cutter program.[16] Canada, Finland, and Sweden all have more operational icebreakers than the United States. This summer, China operationalized its second polar icebreaker, the first to be made in China.

However, the availability of these specialized ships is just one of many areas in which the United States may face capacity or capability shortfalls. Generally speaking, infrastructure—ports, onshore facilities, roads, railroads, airfields, hospitals,

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[12] Stephanie Pezard, Abbie Tingstad, and Alexandra Hall, *The Future of Arctic Cooperation in a Changing Strategic Environment: Insights from a Scenario-Based Exercise Organised by RAND and Hosted by NUPI,* Santa Monica, Calif.: RAND Corporation, PE–268–RC, 2018. As of April 29, 2019: *https://www.rand.org/pubs/perspectives/PE268.html*.

[13] Not emitting via the Automatic Identification System (AIS) used to locate maritime vessels. AIS relies on the cooperative or voluntary use of the system.

[14] Abbie Tingstad, Scott Savitz, Kristin Van Abel, Dulani Woods, Katherine Anania, Michelle D. Ziegler, Aaron C. Davenport, and Katherine Costello, *Identifying Potential Gaps in U.S. Coast Guard Arctic Capabilities,* Santa Monica, Calif.: RAND Corporation, RR–2310–DHS, 2018. As of April 29, 2019: *https://www.rand.org/pubs/research_reports/RR2310.html*.

[15] Charlie Gao, "The 'Icebreaker Gap': How Russia is Planning to Build More Icebreakers to Project Power in the Arctic," *National Interest,* August 19, 2018. As of March 19, 2019: *https://nationalinterest.org/blog/buzz/icebreaker-gap-how-russia-planning-build-more-icebreakers-project-power-arctic-29102*.

[16] U.S. Coast Guard, "Polar Security Cutter Program," webpage, undated. As of September 16, 2019: *https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-Acquisitions-CG-9/Programs/Surface-Programs/Polar-Icebreaker*.

and urban centers—is much thinner on the ground in the North American Arctic. Russia and Northern Europe have booming cities and industries in the far north, whereas the United States and Canada have far lower densities of population. This limits the ability of U.S. organizations, such as the Coast Guard, to carry out their roles and responsibilities in the region. For example, northern Alaska has few facilities and airfields that can support larger aircraft operations and maintenance. This is one limitation on the scope and scale of Coast Guard summertime presence (the Coast Guard budget is another). In some cases, more than one stakeholder might need access to limited infrastructure in northern Alaska, leading to competition for use.

## OUR PATH FORWARD REQUIRES MULTIPLE INVESTMENTS

On-going regional changes mean that U.S. efforts in the Arctic will require regular access to the services common to other parts of the United States. For example, most of the United States enjoys access to year-round search and rescue and disaster relief support from a range of national, State, and local entities. Several potential gaps might stand in the way of Coast Guard—among other—operations in the Arctic. The prioritization of these gaps in the context of other National needs must be considered in decisions moving forward.

We found that no single capability worked in every Arctic scenario or acted as a "silver bullet" to mitigate every shortfall. For this study, we defined capability broadly, as a means to accomplish a mission, function, or objective.[17] Capabilities included individual materiel assets, such as icebreakers and helicopters; fixed infrastructure, such as ports and airfields; and organizations, agreements for cooperation, and people (including training).

First, we looked at the existing capabilities that the Coast Guard, Federal interagency partners, local communities, and commercial providers could use to add value in different scenarios. In addition to existing icebreakers, the most valuable assets included MH–60 Jayhawk helicopters; HC–130 aircraft; airports and airfields; ports; National Security Cutters; drones, medical evacuation capabilities; satellite and other communications networks; rescue coordination centers; Coast Guard sector specialist personnel; and data on maritime traffic, weather, ice, and other conditions important for on-scene response. The variety of these examples help highlight the diversity of capabilities that are needed for Arctic operations.

Second, we examined shortfalls in the existing capabilities within the study scenarios. We found that the shortfalls varied as much or more as the existing capabilities. In general, these gaps—defined as capabilities not readily available or planned to be available to the Coast Guard—fell into the broad categories of communications, awareness, and response.

Communications are critical for Coast Guard (and a variety of other) missions. Problems in the Arctic include patchy and unreliable voice communications and extremely limited or nonexistent bandwidth.

An important aspect of awareness is understanding and assessing situations. In the Arctic, the term "operating blind" is used to describe the level of awareness: Threats and hazards are often poorly understood, and those that are identified cannot be regularly monitored because the capacity and capability to do so do not exist. There is particular concern about threats and hazards that do not or cannot actively emit signals, such as "dark" vessels and fast-moving ice. The ability to fuse information from individual data streams into a unified picture of activity and conditions is also challenging.

Finally, the ability to respond to a threat or hazard in the Arctic is extremely limited and strongly depends on the proximity to the incident location of scarce material assets, people, and supporting infrastructure. Naturally, reducing the incidence of threats and hazards is an important first step. However, if prevention fails, ensuring that the right people and assets are available and can be deployed rapidly to the right place is necessary. Responders must consider harsh operating conditions and the few resources available for coordination. Ensuring sufficient sustainment of operations is the next challenge. Access to appropriate follow-up materiel and procedures, including medical care and hazardous material clean-up, is not guaranteed.

This study was not intended to provide recommendations on specific ways to mitigate gaps. However, the diversity of ways in which workshop participants elected to shore up capability and capacity in the context of different scenarios alludes to a rich set of possibilities. No one type of mobile asset, fixed infrastructure, organiza-

[17] Department of Homeland Security, *Department of Homeland Security Manual for the Operation of the Joint Requirements Integration and Management System,* Washington, DC, DHS Instruction Manual 107–01–001–01, April 4, 2016, p. 3.

tion, collaboration, or other entity satisfied every potential gap. Rather, combining existing capabilities and increasing their capacities, while diversifying capabilities to support communications, awareness, and response, is necessary to tackle current and future vulnerabilities in the Arctic.

Specific types of mitigation options considered include the following:

- installing additional communications infrastructure and leveraging the growing number of commercial communications satellites in polar orbits
- exercising communications tactics, techniques, and procedures to train service members in overcoming decision-making challenges associated with weak communications channels
- investing in remotely-controlled air, sea, and amphibious craft for persistent wide-area surveillance, especially if these assets are networked together and to sensors on other assets to provide a common operating picture
- updating data-gathering and database construction processes to enhance automation and improve data quality, make data accessible, and fuse information into a common operating picture
- developing operating concepts, plans, and investment strategies that recognize the need for agile first-response assets as well as infrastructure and logistics to sustain longer-term operations and (literally) conduct heavy lifting
- investigating remotely-controlled airlift and oil-spill response capability
- adding small-boat landing capability to icebreakers
- increasing the number of forward operating locations and resources, including local and mobile elements
- prepositioning key response items in partner communities
- enforcing new industry self-help regulations
- improving long-term relationships with native communities (including through additional Coast Guard cultural training).

One issue that concerns me greatly is the characterization—in the media at least—of the United States' Arctic operating challenges as merely an "icebreaker gap."[18] I do think that the United States is dangerously limited in its ability to break ice. However, while this generalization of Arctic challenges might be convenient, it distracts from the broader problem of systemic capability shortfalls, as detailed earlier.

It is just as important to recognize that concerns about Arctic security and closing capability gaps are more than just Coast Guard issues—they are matters of National relevance. In addition to taking specific actions such as those outlined earlier, the United States has the opportunity to continue work in the Arctic Council and Arctic Coast Guard Forum. Finding ways to keep discussion channels open for important military security communications is also vital. The United States might also reconsider ratifying the United Nations Convention on the Law of the Sea. Historically, Arctic cooperation and governance has benefited when stakeholders operate under the same frameworks.

Change anywhere necessitates a re-evaluation of security needs and capabilities. In this respect, the Arctic is not exceptional. Consider continuing efforts by the United States to re-evaluate military operations in anti-access environments in response to evolving threats or how the use of drone boats and synthetic drugs is challenging methods of drug interdiction.

This is a time for the United States to continue engaging in the Arctic.[19] Fixing the security void does not only involve military might, but also includes providing prevention and response services that Americans expect from their Government, whether they live in Los Angeles, Houston, New York, or Utqiagvik, Alaska.

Mr. CORREA. Thank you, Dr. Tingstad, for your comments.

Now I would like to call Dr. Victoria Hermann, who is the president and managing director of the Arctic Institute for 5 minutes of comments.

Dr. Hermann is research-focused on human development in resource economies. She was a fellow at the National Academies of Science, and is a Fulbright Scholar.

Welcome.

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[18] Gao, 2018.

[19] Pezard et al., 2017; Abbie Tingstad and Stephanie Pezard, "What Does 'America First' Look Like in the Arctic?," *RAND Blog,* May 25, 2017. As of September 16, 2019: *https://www.rand.org/blog/2017/05/what-does-america-first-look-like-in-the-arctic.html.*

**STATEMENT OF VICTORIA HERMANN, PRESIDENT AND MANAGING DIRECTOR, THE ARCTIC INSTITUTE**

Ms. HERMANN. Thank you, Chairman Correa, Ranking Member Lesko, distinguished Members of the committee. Thank you for the opportunity to appear before you this afternoon.

As the president and managing director of a regional Arctic think tank, my research aims to identify the gaps in Federal support to enhance Arctic security, to augment emergency response, and to assist coastal Arctic villages in adapting to the impacts of climate change that we can no longer avoid.

However, I live in Washington, DC, and, therefore, I cannot observe the day-to-day coastal and marine changes along Arctic coastlines that are the most immediate threat to our Northern Border.

So, when I was invited to this hearing, I reached out to colleagues in Alaska from the Norton Sound to Bristol Bay, with a question: What is the most critical maritime security issue we should discuss here?

Today, my testimony is guided by the many indigenous and local Arctic experts I have listened to and learned from. If there is one takeaway message from their message, it is this: For America's northernmost citizens, for the world's northernmost residents, climate change is already a life-threatening everyday reality.

The most recent NOAA Arctic report card delivered an unambiguous finding. The impacts of climate change are already forcing the region to undergo an unprecedented transition. Arctic air and sea temperatures are warming at more than twice the rate of the global average. The Arctic ocean has lost 95 percent of its oldest documented sea ice. This new, more dangerous normal poses the greatest threat to human safety, to marine ecosystems, and to our capacity to respond to Maritime emergencies.

In September, 2016, I first traveled to Nome, Alaska, a remote port city of 3,500 residents just south of the Arctic Circle. Through my research, I had the privilege of interviewing 20 local leaders to discuss how the settlement's infrastructure, population, and port are coping with the consequences of a changing climate. I believe that these interviews provide critical perspectives to support informed committee deliberations through three key findings:

The first, Arctic coastal residents are the first responders to any maritime security threat. As Austin Ahmasuk, a lifelong Inupiaq hunter and community advocate, noted in his interview, "As we looked at how things like oil or hazardous spills are treated in this region, we came to a very dramatic realization. We are the first responders, and we have few response assets to ensure healthy environments. Annually, 14,000 to 18,000 gallons of spilled oil, or hazardous substances, occur in this region. We know our homelands and home waters, but over the last 2 years, we have not been able to speak at the table for our lands and waters."

Disaster response and search-and-rescue capabilities are only as strong as the commitments to communication channels, technical commitments, and infrastructure investments to support collaboration with community first responders on our Nation's Arctic coast lines. Better integrating and enhancing community-based observing networks as part of the Arctic Domain Awareness Center, a DHS Center of Excellence, offers one opportunity to address this issue

if it is done in a way that makes local leaders feel valued and included in upfront decision making.

No. 2, climate change is creating significant economic costs to U.S. coastal settlements and some local economic opportunity. However, at present, local economies are overburdened by costs, and are unable to capture economic gains due to a lack of strategic investment in infrastructure. This is, perhaps, best grounded by lifelong Bristol Bay commercial fisherman, Brett Veerhusen.

"The Bearing Sea and Aleutian Islands are some of the richest fishing grounds on earth, contributing to American and the world's food security. Increased vessel traffic through the Arctic poses both opportunities and challenges for our fishing fleets, but those challenges can be devastating if we cannot respond quickly to emergencies and protects those fisheries."

The third and final point: Arctic residents that act as first responders are living in a continual state of emergency from climate impacts. Coastal communities are facing threats to public safety, to food security, and traditional livelihoods from changing terrestrial and marine ecosystem conditions. Threats to human security and U.S. Arctic towns, villages, and cities, must be integrated into investments and policy decisions for a secure northern homeland.

Just this morning a news headline read, "Summer, 2019, was Hellish for the Arctic, the Front Line of Climate Change." The Arctic has generated more crisis headlines like this than any other region. Nonetheless, in Mr. Ahmasuk's words we struggle mightily to have our voices heard. The hearing today is absent of many voices of community first responders and indigenous knowledge-holders. It is incumbent upon us here in Washington, DC, to work harder to bring their voices to this table and to reach further to meet them at their tables above the Arctic Circle through field visits and hearings.

As we work toward that goal of building a more inclusive dialog on maritime security and economic investment in transportation, I urge us all to consider how we can ensure every Arctic conversation and legislation is guided by those local leaders and made with reference to the climate impacts already costing billions of dollars in damages, multiplying security threats, and devastating traditional maritime livelihoods, not only for the 4 million people that call the Arctic home, but for communities across America, because what happens in the Arctic does not stay in the Arctic. It affects us all.

Thank you.

[The prepared statement of Ms. Hermann follows:]

PREPARED STATEMENT OF VICTORIA HERRMANN[1][2]

SEPTEMBER 19, 2019

Chairman Thompson, Chairman Correa, distinguished Members of the committee, and my fellow Arctic collogues, thank you for the opportunity to appear before you this afternoon to listen, to discuss, and ultimately to learn how we—across civil soci-

[1] The opinions and conclusions expressed in this testimony are the author's alone and should not be interpreted as representing those of The Arctic Institute or any of the sponsors of its research.

[2] The Arctic Institute is an independent, nonprofit organization headquartered in Washington, DC with a network of researchers across the world with a mission is to help shape policy for a secure, just, and sustainable Arctic through objective, multidisciplinary research of the highest caliber.

ety, Tribal councils, academia, and Congress—can work together to address the widening security threats to the 4 million people that call the Arctic home. If there is one thesis to take away from my testimony, it is this: For America's northernmost citizens, for the world's northernmost residents, climate change is already an everyday, life-threatening reality. It is incumbent upon those here today to safeguard American lives in the Arctic against the impacts we can no longer avoid, and empower local leaders and Alaska Native community champions as the first responders of maritime emergencies.

The most recent annual U.S. National Oceanic and Atmospheric Administration Arctic Report Card, released in December 2018, delivered an unambiguous finding.[3] The impacts of climate change are already forcing the circumpolar region to undergo an "unprecedented transition" in human history. As Arctic air and sea temperatures warm at more than twice the rate of the global average, the Arctic Ocean has lost 95 percent of its oldest documented sea ice. For the past 5 years (2014–2018), Arctic air temperatures have exceeded all previous records since 1900, and the 12 lowest sea ice extents in the satellite record have occurred in the last 12 years. Following the 2018 U.N. Special Report[4] and the 4th U.S. National Climate Assessment,[5] the Arctic Report Card was only the latest installment in a protracted series of disquieting findings that the Arctic has entered a new, more dangerous normal.

The homeland security challenges raised by these scientific publications is clear: The dramatic changes brought about by Arctic warming pose the greatest threat to the stability of the region, and requires a whole-of-Government approach to address the human security, economic development, and marine environment dimensions of maritime security in a climate-changed Arctic.

As the president and managing director of a regional Arctic think tank, much of my field and policy research focuses on the human security implications of a changing Arctic for remote Indigenous and non-Indigenous communities across the circumpolar north. In co-creating knowledge about the magnitude of more frequent and extreme slow and sudden onset disasters for Arctic settlements, my research goal is to identify gaps in Federal support to enhance coastal community resilience and adaptive capacity; to augment emergency response to slow and sudden onset climate disasters; and to capture localized economic potential with an ecologically sustainable framework.

Today, my testimony will focus on community and transportation infrastructure investment to meet that goal. These insights are guided by the many Indigenous and local Arctic experts I have listened and learned from, and are technically grounded in a qualitative research project I completed to study the local consequences of sea level rise and shoreline erosion in communities across the United States and U.S. Territories.[6] [7] In 2016–2017 with the assistance of co-principle investigator Eli Keene, I conducted over 350 interviews with local American leaders to pinpoint the most pertinent social, economic, and community vulnerabilities to coastal environmental hazards. Sixty-five of these interviews were conducted in the State of Alaska. I believe that these interviews provide critical perspectives to support informed committee deliberations and decisions on maritime and transportation security issues for the Arctic. In particular, this testimony will emphasize the following points derived from these research interviews:

(1) Arctic residents, fishermen, mayors, and subsistence hunters are the first responders to any maritime security threat in American Arctic and Subarctic waters. It is critical for maritime security operations to bolster technical, financial, and communication support to these first responders in an era of increased commercial shipping and cruise tourism.

(2) Empowered coastal villages that act as first responders are simultaneously facing a continual state of emergency from climate change impacts. Coastal communities face threats to public safety, food security, and traditional livelihoods from changing terrestrial and marine ecosystem conditions. Threats to human security in U.S. Arctic coastal towns, villages, and cities must be integrated into investments and policy decisions for a secure northern homeland.

(3) Climate change impacts are creating both significant economic costs to U.S. Arctic coastal settlements and local economic opportunity; however, at present local economies are overburdened by costs and unable to capture economic opportunities due to a lack of strategic investment.

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[3] *https://www.arctic.noaa.gov/report-card*.
[4] *https://www.ipcc.ch/report/sr15/*.
[5] *https://nca2018.globalchange.gov/*.
[6] *www.americaserodingedges.org*.
[7] *https://www.nationalgeographic.org/find-explorers/victoria-stephanie-herrmann*.

These topics, among many others that were raised in interviews, are highlighted here due to their relevance to Arctic maritime security in 2016, and because of their likelihood to increase as challenges the United States will face in medium- and long-term time horizons.

*(1) U.S. Arctic Residents are First Responders to Emergencies*

In August and September 2016, I traveled to Nome, Alaska in the Bering Strait region below the Arctic Circle. Nome is a remote town, off-the-road system, of 3,500 residents and a leading contender for the site of the first U.S. deepwater port in the Arctic. I had the privilege of interviewing 20 local leaders, including the mayor, the port manager, the marine advocate of Kawerak, Inc., and subsistence hunting and fishing experts to discuss how the settlement's infrastructure, population, and port are coping with the consequences of a changing climate.

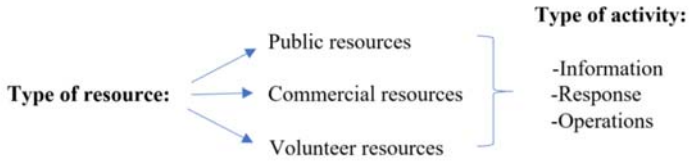
Austin Ahmasuk, a lifelong Nome resident, Inupiaq hunter, fisher, trapper, and community advocate for Bering Strait villages has been running community workshops through Kawerak, the nonprofit arm of the Bering Strait Native Corporation, to help communities understand the issues and needs that come with more ships. Mr. Ahmasuk noted in his interview,

"As we looked at how things like oil spills or hazardous spills are treated in this region, we came to a very dramatic realization—we are the first responders. And we are looking at some 14,000 gallons or so annually of [spilled] oil or hazardous substances in this region," Austin tells us. Austin has been running community workshops through Kawerak, the nonprofit arm of the Bering Strait Native Corporation, to help communities understand the issues and needs that come with more ships.

"In fact, just today I was in contact with one of our communities in our environmental program about a spill that was occurring in Brevik. Just this morning [August 24, 2016]. So it's some 14,000 gallons annually and the challenge with all those spills is the response. We have very little response capability in this region."

As my Arctic Institute collogues across the circumpolar north find in their research, disaster response and search and rescue capabilities are only as strong as the communication channels, technical commitments, and infrastructure investments to support coordination and planning collaboration with community first responders on any nation-state's Arctic coastline. Aptly written by our Senior Fellow Andreas Osthagen, PhD,

"The number of small-scale maritime emergency incidents occurring in Arctic waters is increasing. Demands are made for national governments to invest in and sustain relatively expensive Arctic capacities, such as coast guard vessels, long-range helicopters, and oil-spill response units. An often-overlooked dimension, however, are the local resources already present in Arctic communities. Albeit few and far between, Arctic communities is the foundation emergency management in the north must be built on through three key approaches:"




Each of these areas can be improved by:

*Information*

- Improve the spread of information concerning offshore safety and survival for the local population.
- Mandate training/exercise participation for maritime actors.
- Mandate so-called 'self-rescue' training and equipment for maritime tourists.
- Organize 'how-to' campaigns in local communities together with relevant non-profit organizations.
- Make use of the Arctic engagement of non-profit organizations with additional resources to create projects aimed at local capacity enhancement.

*Response*

- Increase the number of vertical and horizontal exercises between the various local actors.
- Enhance community role-clarification with clearly-defined lines of responsibility in preparation for large-scale incidents.
- Explore how local maritime industries can be further included in a system or network for local emergency response.

*Operations (permanent)*

- Every Arctic community has some form of local engagement in case of an emergency. It is thus up to the local and national governments to provide a framework in which these resources can be further improved and utilized.
- Explore the options for a maritime component to the already existing schemes.
- Consider establishing a dedicated tool or hub for learning and knowledge enhancement concerned with maritime emergency management that can work on both the local and National levels by informing communities and the public debate.[8]

*(2) U.S. Arctic Coastal Residents and Local Governments Need Technical Support and Locally Guided Investment To Address Maritime Economic Costs and Economic Opportunities in a Climate Changed North.*

Arctic climate change poses both economic costs and opportunities to the local, regional, and National economy, predicated on sustainable decision making in how to effectively manage geohazards and changing ecosystems. According to the Alaska Chapter of the U.S. Fourth National Climate Assessment, for which I was the Review Editor,

"Alaska's marine fish and wildlife habitats, species distributions, and food webs, all of which are important to Alaska's residents, are increasingly affected by retreating and thinning arctic summer sea ice, increasing temperatures, and ocean acidification. Continued warming will accelerate related ecosystem alterations in ways that are difficult to predict, making adaptation more challenging.
"Arctic sea ice—its presence or absence and year-to-year changes in extent, duration, and thickness—in conjunction with increasing ocean temperatures and ocean acidification, affects a number of marine ecosystems and their inhabitants, including marine mammals, the distribution of marine Alaska fish and their food sources."[9]

This is perhaps best grounded by life-long Alaskan commercial fisherman Brett Veerhusen in his observations working in some of the busiest U.S. Arctic and subarctic water,

"The Bering Sea and Aleutian Islands are some of the richest fishing grounds on earth, contributing to American and the world's food security. Increased vessel traffic through the Arctic poses both opportunities as challenges for our fishing fleets and coastal communities. We must adapt so we can respond quickly to emergencies and protect our fisheries."

In early October, polar scientists will analyze the final data collected from the summer of 2019. They will make an official assessment of the Arctic sea-ice minimum for this year—the point at which the Arctic has the least amount of ice. As we sit today, approximately 3.9 million square kilometres of the Arctic Ocean are covered by sea ice, only the second time the annual minimum has dropped below 4 million square kilometres since satellite measurements began in 1979.[10] These dramatic changes have immediate and dangerous consequences for Arctic coastal communities, economies, the infrastructure upon which they reply, and their capacity to respond to and augment the response of the Coast Guard to maritime disasters.

*(3) Coastal U.S. Arctic Settlements Are Living in a Continued State of Emergency.*

When I was invited to testify before the U.S. House Committee on Homeland Security, I emailed a number of colleagues in Alaska, northern Canada, and Norway with a question—what is the most critical issue for us to discuss during this hearing. And despite their geographic, cultural, and employment differences, working in

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[8] Taken from: *https://www.thearcticinstitute.org/utilising-local-capacities-arctic/*.

[9] Taylor, P.C., W. Maslowski, J. Perlwitz, and D.J. Wuebbles, 2017: *Arctic Changes and their Effects on Alaska and the Rest of the United States.* Climate Science Special Report: Fourth National Climate Assessment, Volume I. Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock, Eds., U.S. Global Change Research Program, Washington, DC, USA, 303–332. doi:10.7930/J00863GK.

[10] *https://www.nature.com/articles/d41586-019-02653-x*.

fishing vessels, local government, marine conservation, and reindeer herding, they all had one answer: Climate change—the necessity to respond to and increase investments in resilient infrastructure for coastal villages as they face a rapid shift in climate and ecological systems. To borrow the words of Anahma Shannon, environmental coordinator for Kawerak, from her 2016 interview, "Villages really suffer because they are in a continual state of emergency." She went further to describe a dangerous state of emergency in the village of Savoonga on St. Lawrence Island in the Bering Sea caused by disappearing sea ice.

"Villages really suffer because they are in a continual state of emergency. In normal years, every year, the ice would be close up. We'd have thick ice, good ice. But in the recent years we haven't and 3 years ago now Savoonga had declared a food emergency and they usually get 900 walrus, they only got 300 that year and they eat that every day. Every day. So they went from having normal packed freezers to having hardly being able to eat."

There are no easy solutions for these villages from a maritime security standpoint. By 2050, Alaska will be 2 to 4 degrees warmer than it is today regardless of how much we reduce our greenhouse gas emissions. The National Oceanic and Atmospheric Administration (NOAA) predicts that Alaska's summer waters will be ice-free by 2030—11 years from today. However, it is essential that any Arctic Congressional discussion occurring in Washington, DC acknowledge that developing investment strategies, maritime transportation policies, and a vision for a more secure northern homeland must be rooted in the human security of U.S. Arctic residents.

Amid the discussion around the cumulative impacts, the complexities and differences of each individual community can get lost. While the environmental challenges arising across Alaska are similar, even similarly-situated communities approach these changes with different histories, economic backgrounds, lands, natural resources, and relationships between native corporations and other bodies of local government. In the month Co-PI Eli Keene and I spent interviewing community members and leaders in 5 coastal Alaska Native villages, the most salient takeaway was the diversity in each community's experiences.[11]

The Arctic has generated more crisis headlines about climate change than any other region except the Pacific Islands. Nonetheless, in Mr. Ahmasuk's view: "We struggle mightily to have our voices heard." Importantly, the hearing [sic] Our today is absent of many voices of community champions and indigenous knowledge holders, from the Bering to the Barents Sea. It is incumbent upon us here in Washington, DC to work harder to bring their voices to this table and to reach further to sit at their table above the Arctic Circle through field visits and hearings. As we work toward that goal of building a more inclusive dialog on maritime security and economic investement in maritime transportation in and for the Arctic, I urge us all to consider how we can ensure every conversation and legislation made about Arctic transportation and security is guided by local leaders and made with reference to addressing the climate change impacts already costing billions of dollars in damages, devastating family livelihoods, and inflicting irreplaceable cultural loss not only on the 4 million people that call the Arctic home, but on communities across America. Because what happens in the Arctic doesn't stay in the Arctic. It affects us all.

Mr. CORREA. Thank you, Dr. Hermann, for your testimony.

Our final witness is Mr. Luke Coffey, who is the director of the Douglas and Sarah Allison Center for Foreign Policy at the Heritage Foundation. Prior to joining the Heritage Foundation, Mr. Coffey served in the United Kingdom's Ministry of Defence as Special Advisor to then-Secretary of State for Defense, where he worked on Arctic security issues. He served as a commissioned officer in the U.S. Army, and was awarded the Bronze Star.

Welcome, sir.

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[11] These two paragraphs are taken from the co-authored post with Co-PI Eli Keene, "A Continual State of Emergency: Climate Change and Native Lands in Northwest Alaska." November 15, 2016. *https://www.thearcticinstitute.org/continual-state-emergency-climate-change-native-lands-northwest-alaska/*.

**STATEMENT OF LUKE COFFEY, DIRECTOR, DOUGLAS AND SARAH ALLISON CENTER FOR FOREIGN POLICY, HERITAGE FOUNDATION**

Mr. COFFEY. Thank you for that introduction.

Chairman Correa, Ranking Member Lesko, and distinguished Members of the committee, I am honored to speak before this committee today about Arctic security issues.

With your permission, Mr. Chairman, I will summarize my prepared statement that has been submitted for the record.

Mr. CORREA. Please.

Mr. COFFEY. Increased economic activity in the Arctic due to advancements in technology and reduced ice will likely lead to a larger military presence. This isn't because there is a heightened threat of conflict in the region, but many of the capabilities needed in the Arctic, such as search and rescue, are more immediately, and at least for now, more effectively provided by the military and the Coast Guard.

Reduced ice in the summer months means new shipping lanes, increased tourism, further natural resource exploration but these changes, in my opinion, will take time and should be put into perspective.

For example, the Northern Sea route that is often touted as a future rival to the Suez Canal has interestingly last year only 18 million tons of goods transited along that route. Of this, only 491,000 tons made the full journey from Europe to Asia. This is 4 hundredths of 1 percent of the volume of goods that transited through the Suez Canal during the same year.

So far, the Trump administration has been a mixed bag when it comes to Arctic policy. On a positive note, Secretary Pompeo's visit to Iceland was the first Cabinet-level visit to that country in more than a decade; and it ended the Obama's administration diplomatic sanctions on that country over the issue of whaling. Also, the administration recently announced the opening of a part-time diplomatic presence in Greenland; and this is something that Heritage Foundation has been calling for.

However, there have been some shortcomings. The unwillingness of the United States to agree to a joint statement during the 2019 Arctic Council Ministerial over the issue of climate change was unfortunate. Sometimes, America's voice is missing in the debate. At last year's Arctic Circle assembly in Iceland, U.S. Government officials could not be seen. They certainly were not heard. Those of us that were there knew that—know that China happily filled this void, and I am grateful that this year, Secretary Perry will be giving the keynote address at that event.

Mr. Chairman, today the United States has 4 primary security interests in the Arctic: First, ensuring the territorial defense of the United States. In this sense, our relationship with Canada is vital, and relations with Iceland and Greenland are also important because these two countries are essentially the forward operating bases of the North American continent.

Second, enforcing U.S. sovereignty in the region. In the Arctic, sovereignty equals security and stability. This means respecting the sovereignty of others while maintaining the ability to enforce

one's own sovereignty. This will reduce the chances of armed conflict and ensure that tensions remain low in the region.

Third, meeting our treaty obligations in the Arctic under—through NATO. Five of the world's 8 Arctic countries belong to NATO, but the alliance has no agreed policy on the region and this needs to changes.

Finally, ensuring the free flow of shipping and other economic activities in the region. After all, economic freedom tends to lead to prosperity and security.

Mr. Chairman, while the military threat in the Arctic remains low, U.S. policy makers cannot ignore Russia and China's role there. Both directly impact America's ability to meet its security interests in the region. Russia's recent steps to militarize the region is a concern. Russia has invested greatly in its Arctic footprint by building or refurbishing dozens of bases. The Arctic-based Northern Fleet accounts for two-thirds of the Russia navy. An Arctic command was established in 2015 to coordinate all Russia military activities in the region. Russia can do as it likes inside its own borders; but it is Moscow's actions in places like Georgia, Ukraine, and Syria that makes Russia's motives in the Arctic questionable.

In the simplest terms, China sees its role in the Arctic as a place where it can expand its economic influence and diplomatic interests; but considering the problems China has created in places like Djibouti or Sri Lanka, there are reasons to be worried.

Beijing's Arctic strategy offers a useful glimpse in how it wants the rest of the world to see the role of China in the region. Running 5,500 words long in the English language version, the strategy is littered with all the popular Arctic buzz phrases, "common interests of all country," "law-based governance," "climate change," "sustainable development." The irony is not lost on observers of the South China Sea where China has shunned international norms to exert dubious claims of sovereignty, or by the fact that China is the world's largest emitter of greenhouse gases.

Even though China's closest point to the Arctic Circle is more than 800 nautical miles away, as you can see on the screen, Beijing refers to itself as a near-Arctic state which is a term that is completely made up. Extending Beijing's logic to other countries would mean that Kazakhstan, Belarus, Latvia, Lithuania, Estonia, Poland, Germany, the United Kingdom, and Ireland are also "near-Arctic states," and these aren't countries we normally associate with the Arctic.

In conclusion, I want to highlight some of the challenges of operating militarily in the region. Equipment has to be hardened for extreme cold weather, high-frequency radio signals can be degraded due to magnetic and solar phenomena. GPS can be degraded due to poor satellite geometry, and some of Alaska's shipping lanes have not been surveyed properly since Captain James Cook sailed through in 1778. This is why proper investment in the region by the Coast Guard and the DOD is so important. This is not about preparing for war. This is about just preparing for the future.

Thank you, Mr. Chairman, Ranking Member, and Members of the committee. I look forward to your questions.

[The prepared statement of Mr. Coffey follows:]

## PREPARED STATEMENT OF LUKE COFFEY

Chairman Correa, Ranking Member Lesko, and distinguished Members of the committee. I am honored to speak before this esteemed committee about Arctic security issues.

My name is Luke Coffey. I am the director of the Douglas and Sarah Allison Center for Foreign Policy in the Kathryn and Shelby Cullom Davis Institute for National Security and Foreign Policy at The Heritage Foundation. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

The Arctic region, commonly referred to as the High North, is becoming more contested than ever before. The Arctic encompasses the lands and territorial waters of 8 countries on 3 continents. Unlike the Antarctic, the Arctic has no land mass covering its pole (the North Pole), just ocean. The region is home to some of the roughest terrain and harshest weather on the planet.

The region is also one of the least populated areas in the world, with sparse nomadic communities and few large cities and towns. Regions are often very remote and lack basic transport infrastructure. In Greenland no two population centers are connected by a road. Norway's Ny Alesund, located on the Svalbard archipelago, is the world's most northerly permanently inhabited place with a population of only 35. Although official population figures are non-existent, the Nordic Council of Ministers estimates the figure is 4 million,[1] making the Arctic's population about the size of Los Angeles. Approximately half of the Arctic population lives in Russia.

The region is rich in minerals, wildlife, fish, and other natural resources. According to some estimates, up to 13 percent of the world's undiscovered oil reserves and almost one-third of the world's undiscovered natural gas reserves are located in the Arctic.[2]

The melting of some Arctic ice during the summer months creates security challenges, but also new opportunities for economic development. Reduced ice will mean new shipping lanes opening, increased tourism, and further natural resource exploration. However, it will also mean a larger military presence by more actors than ever before. This increase in economic activity will mean a larger military presence. This is not because there is a heightened threat of conflict in the region—on the contrary things are relatively calm.

However, many capabilities needed in the Arctic, such as search and rescue, are more immediately, and at least for now, more effectively, provided by the military and coast guard.

### U.S. ARCTIC SECURITY INTERESTS

The United States became an Arctic power on October 18, 1867, at the ceremony transferring Alaska from Russia to the United States. At the time this purchase was ridiculed and was known as "Seward's Folly"—named after the then-Secretary of State William Seward. However with a stroke of a pen, Seward ended Russian influence in North America, gave the United States direct access to the northern Pacific Ocean, and added territory nearly twice the size of Texas for about 2 cents an acre along with 33,000 miles of coastline. In his retirement Seward was asked what his greatest achievement was. He said: "The purchase of Alaska. But it will take another generation to find it out."[3]

So far the Trump administration has been a mixed bag when it comes to U.S. Arctic policy. On the positive side, there have been practical policy outcomes regarding the Arctic since 2017. The Trump administration has ended diplomatic sanctions applied to Iceland by the Obama administration over the issue of whaling.[4] Secretary Pompeo's visit to Iceland was the first Cabinet-level visit since 2008 and did a lot

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[1] Nordic Council of Ministers, *Arctic Social Indicators, January 27, 2011, p. 13, http://library.arcticportal.org/712/1/Arctic__Social__Indicators__NCoM.pdf* (accessed September 16, 2019).

[2] U.S. Geological Survey, "Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle," July 23, 2008, *http://pubs.usgs.gov/fs/2008/3049/* (accessed September 16, 2019).

[3] Frederick W. Seward, "Seward's Folly: A Son's View," *University of Rochester Library Bulletin,* Spring 1967, *https://rbscp.lib.rochester.edu/487* (accessed September 16, 2019).

[4] Bryan Walsh, "Obama Takes Steps to Stop Icelandic Whaling. Could He Do More?" *Time,* September 16, 2011, *http://science.time.com/2011/09/16/obama-takes-steps-to-stop-icelandic-whaling-could-he-do-more/* (accessed September 16, 2019).

to improve bilateral relations with an important Arctic and NATO ally.[5] Secretary Mike Pompeo and his predecessor Secretary Rex Tillerson both attended the Arctic Council Ministerial meeting—continuing a trend first started under the Obama administration.

There has been a renewed focus on China's role in the Arctic and Secretary Pompeo made this issue his focal point at the recent Arctic Council Ministerial. There has also been increased funding for the U.S. Coast Guard's Polar Security Cutter program. After years of putting it on the back burner, the Trump administration recently announced that the United States will maintain a part-time diplomatic presence in Greenland.

However, there have been some shortcomings. The unwillingness of the United States to agree to a joint statement during the 2019 Arctic Council Ministerial strained U.S. engagement in the region. The position of Special Representative for the Arctic has been left unfilled by the Trump administration leaving the United States as the only Arctic power without a Special Representative or Arctic Ambassador.

Sometimes America's voice is missing in the debate. At last year's Arctic Circle Assembly in Iceland, U.S. Government officials could not be seen. They definitely were not heard. Those who were there know that China happily filled this void.

Today, the United States has 4 primary security interests in the Arctic region:

*(1) Ensuring the territorial defense of the United States.*—This is particularly true as it pertains to the growing ballistic missile threat. In this regard our relationship with Canada is key. This is also why it is important for the United States deepen its relations with Iceland and Greenland—both serving essentially the forward operating bases of the North American continent.

*(2) Enforcing U.S. sovereignty in the region.*—In the Arctic, sovereignty equals security and stability. Respecting the national sovereignty of others in the Arctic while maintaining the ability to enforce one's own sovereignty will ensure that the chances of armed conflict in the region remain low. This is why investment in the U.S. Coast Guard is vital to America's Arctic security interest.

*(3) Meeting treaty obligations in the Arctic region through the North Atlantic Treaty Organization (NATO).*—Five of the world's 8 Arctic countries belong to NATO. Another 2, Finland and Sweden, have a very close relationship with NATO. However, NATO has no agreed common position or policy on its role in the Arctic region. This needs to change.

*(4) Ensuring the free flow of shipping and other economic activities in the region.*—Economic freedom leads to prosperity and security. With melting ice creating new economic and shipping opportunities in the region it is in America's interests that shipping lanes remain open in line with international norms.

*U.S. Strategic Challenges in the Arctic*

While the military threat in the Arctic remains low, U.S. policy makers cannot ignore Russia's recent activities to militarize the Arctic region or China's increasing role in the region. Both directly impact America's ability to meet the 4 aforementioned security interests.

*Russia's Militarization*

Russia is motivated to play an active role in the Arctic region for 3 reasons:

*(1) Low-risk promotion of Russian nationalism.*—Because nationalism is on the rise in Russia, Putin's Arctic strategy is popular among the population. For Russian President Vladimir Putin, the Arctic is an area that allows Russia to flex its muscles without incurring any significant geopolitical risk.

*(2) The economic potential of the region*.—Russia is also eager to promote its economic interests in the region. Half of the world's Arctic territory and half of the Arctic region's population is located in Russia. It is well-known that the Arctic is home to large stockpiles of proven, yet unexploited, oil and gas reserves. The majority of these reserves is thought to be located in Russia. In particular, Russia hopes the Northern Sea Route (NSR) will become one of the world's most important shipping lanes.

*(3) Russia's security in the region.*—Russia has invested heavily in militarizing its Arctic region. While the Arctic region remains peaceful, Russia's recent steps to militarize the region, coupled with its bellicose behavior toward its neighbors, makes the Arctic a security concern.

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[5] Lesley Wroughton, "U.S. and Iceland Boost Trade Ties, Discuss Arctic Security," *Reuters,* February 15, 2019, *https://www.reuters.com/article/us-usa-iceland-pompeo/us-and-iceland-boost-trade-ties-discuss-arctic-security-idUSKCN1Q41RT* (accessed September 16, 2019).

While the Arctic region remains peaceful, Russia's recent steps to militarize the Arctic, coupled with its bellicose behavior toward its neighbors, makes the Arctic a security concern. The Arctic-based Northern Fleet accounts for two-thirds of the Russian Navy. An Arctic command was established in 2015 to coordinate all Russian military activities in the Arctic region. Two Arctic brigades have been formed, and Russia is planning to form Arctic Coastal Defense divisions, which will be under the command of the Northern Fleet and stationed on the Kola Peninsula and in Russia's eastern Arctic.[6] Russia's Northern Fleet is building newly-refitted submarines and Russia announced in May 2017 that its buildup of the Northern Fleet's nuclear capacity is intended "to phase 'NATO out of [the] Arctic.'"[7]

Russia is developing equipment optimized for Arctic conditions like the Mi–38 helicopter and 3 new nuclear icebreakers to add to the 40 icebreakers already in service (6 of which are nuclear).[8] Air power in the Arctic is increasingly important to Russia; in January, the Northern Fleet announced it would "significantly expand the geography of the Arctic flights."[9] These flights are often aggressive.

Twelve Russian aircraft simulated an attack against NATO naval forces taking part in a May 2017 exercise, EASTLANT17, near Troms, Norway, and later that month,[10] Russian aircraft targeted aircraft from 12 nations including the United States.[11] that took part in the Arctic Challenge 2017 exercise, near Bod.[12] In April 2018, Maritime Patrol Aircraft from Russia's Pacific Fleet for the first time exercised locating and bombing enemy submarines in the Arctic, while fighter jets exercised repelling an air invasion in the Arctic region.

Over the past decade, Russian investment in Arctic bases has resulted in 14 operational airfields in the Arctic along with 16 deep-water ports.[13] Russia reportedly has placed radar and S–300 missiles on the Arctic bases at Franz Joseph Land, New Siberian Islands, Novaya Zemlya, and Severnaya Zemlya.[14] Last year, Russia activated a new radar complex on Wrangel Island.[15] Beginning in 2019–2025, Russia plans to lay a nearly 8,000-mile fiber-optic cable across its Arctic coast, linking military installations along the way from the Kola Peninsula through Vladivostok.[16]

As an Arctic power, Russia's military presence in the region is to be expected. However, it should be viewed with some caution due to Russia's pattern of aggression. Last year EUCOM Commander General Scaparrotti testified saying, "Although the chances of military conflict in the Arctic are low in the near-term, Russia is increasing its qualitative advantage in Arctic operations, and its military bases will serve to reinforce Russia's position with the threat of force."[17]

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[6] MarEx, "New Forces to Guard Northern Sea Route," *The Maritime Executive,* January 20, 2017, *http://www.maritime-executive.com/article/new-forces-to-guard-northern-sea-route* (accessed September 16, 2019).

[7] Daniel Brown, "Russia's NATO Northern Fleet Beefs Up Its Nuclear Capabilities to Phase 'NATO Out of Arctic,'" *Business Insider,* June 1, 2017, *http://www.businessinsider.com/russias-northern-fleet-beefs-up-its-nuclear-capabilities-phase-nato-out-arctic-2017-96* (accessed July 14, 2017).

[8] Osborn, "Putin's Russia in Biggest Arctic Military Push Since Soviet Fall."

[9] Atle Staalesen, "Russian Navy Announces It Will Significantly Expand Arctic Air Patrols," *The Barents Observer,* January 2, 2018, *https://thebarentsobserver.com/en/security/2018/01/russian-navy-announces-it-will-significantly-increase-arctic-air-patrols#.Wkt86ZewoVM.twitter* (accessed September 16, 2019).

[10] Ibid.

[11] Thomas Nilsen, "Arctic Challenge 2017 Set for Take Off," *The Barents Observer,* Mary 16, 2017, *https://thebarentsobserver.com/en/security/2017/05/arctic-challenge-2017-set-take* (accessed September 16, 2019).

[12] Nilsen, "Russian Bombers Simulated an Attack Against this Radar on Norway's Barents Sea Coast."

[13] Robbie Gramer, "Here's What Russia's Military Build-Up in the Arctic Looks Like," *Foreign Policy,* January 25, 2017, *http://foreignpolicy.com/2017/01/25/heres-what-russias-military-buildup-in-the-arctic-looks-like-trump-oil-military-high-north-infographic-map/?utm__content=buffer12641&utm__medium=social&utm__source=twitter.com&utm__campaign=buffer* (accessed June 2, 2017).

[14] Trude Pettersen, "Northern Fleet Gets Own Air Force, Air Defense Forces," *The Barents Observer,* February 1, 2016, *https://thebarentsobserver.com/en/security/2016/02/northern-fleet-gets-own-air-force-air-defense-forces* (accessed July 14, 2017).

[15] Damien Sharkov, "Russia Deploys Air Radar on Arctic Wrangel Island," *Newsweek,* January 4, 2017, *http://www.newsweek.com/russia-deploys-air-radar-arctic-wrangel-island-538527* (accessed September 16, 2019).

[16] Thomas Nilsen, "Russia Plans to Lay Trans-Arctic Fiber Cable Linking Military Installations," *The Barents Observer,* April 24, 2018, *https://thebarentsobserver.com/en/security/2018/04/russia-slated-lay-military-trans-arctic-fibre-cable#.Wt-EVDOjlWI.twitter* (accessed September 16, 2019).

[17] European Command, "EUCOM Posture Statement 2018," March 8, 2018, *http://www.eucom.mil/mission/eucom-posture-statement-2018* (accessed September 16, 2019).

CHINA'S INCREASING ROLE

With the focus on what China is doing in the South China Sea, its massive infrastructure investments in Central Asia and Africa, and the trade war with the United States, it is easy to overlook another aspect of Beijing's foreign policy: The Arctic.

In the simplest terms, China sees the Arctic region as another place in the world to advance its economic interests and expand its diplomatic influence. As a non-Arctic country, China is mindful that its Arctic ambitions in international Arctic institutions are naturally limited—but this has not stopped Beijing from increasing its economic presence in the region.

China's Arctic strategy published last year offers a useful glimpse into how Beijing views its role in the region.[18] Running 5,500 words long in the English language version, the strategy is littered with all the Arctic buzzwords like "common interests of all countries," "law-based governance," "climate change," and "sustainable development." The irony is not lost on observers of the South China Sea where China has shunned international norms to exert dubious claims of sovereignty, or the fact that China is the world's largest emitter of greenhouse gases.

Even though China's closest point to the Arctic Circle is more than 800 nautical miles away, Beijing refers to itself as a "near-Arctic state"[19]—a term made up by Beijing and not found in the lexicon of Arctic discourse. In fact, extending Beijing's logic to other countries would mean that Belarus, Estonia, Germany, Ireland, Kazakhstan, Latvia, Lithuania, the Netherlands, Poland, and the United Kingdom are also "near-Arctic states." These are hardly the countries that one imagines when thinking about the Arctic. As Secretary Pompeo has said: "There are Arctic states, and non-Arctic states. No third category exists. China claiming otherwise entitles them to exactly nothing."[20]

But even with its self-professed and exaggerated role in the Arctic, China does have legitimate interests in the region. After all, China is a global trading nation. It is the world's second-largest economy. It holds a permanent seat on the U.N. Security Council.

Thankfully, so far China's motivation in the Arctic seems to be more about economics and less about security. But considering the economic mess and massive debt China has left in places like Sri Lanka and Djibouti, it is only normal to question China's motivations in the Arctic.

So far the Trump administration has used every available opportunity on the international stage to raise awareness of Chinese ambition in the Arctic. During a recent trip to Iceland Vice President Mike Pence made Chinese economic activity in the Arctic one of the focal points of his visit.[21] During the 2019 Arctic Council Ministerial meeting, Secretary Pompeo devoted a sizable amount of his speech highlighting the threat China posed to U.S. interests in the region, saying, "The United States and Arctic nations welcome transparent Chinese investment that reflect economic interests, not National security ambitions."[22]

For the most part China wants to increase access and influence in the Arctic region for economic reasons and it is through this lens that U.S. policy makers should approach Chinese activity in the Arctic region.

CONCLUSION

America's interests in the Arctic region will only increase in the years to come. As other nations devote resources and assets in the region to secure their national interests, America cannot afford to fall behind. The United States needs to champion an agenda that advances the U.S. National interest and devotes the required

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[18] The State Council Information Office of the People's Republic of China, "China's Arctic Policy," White Paper, January 26, 2018, *http://english.www.gov.cn/archive/white_paper/2018/-01/26/content_281476026660336.htm* (accessed on September 16, 2019).

[19] Ibid.

[20] Radio Canada International, "US Stuns Audience by Tongue-Lashing China, Russia on Eve of Arctic Council Ministerial," May 6, 2019, *https://thebarentsobserver.com/en/arctic/2019/05/us-stuns-audience-tongue-lashing-china-russia-eve-arctic-council-ministerial* (accessed September 16, 2019).

[21] "Pence, in Visit to Iceland, to Discuss 'Incursions' into Arctic Circle by China, Russia: Official," *Reuters,* August 28, 2019, *https://www.reuters.com/article/us-usa-pence/pence-in-visit-to-iceland-to-discuss-incursions-into-arctic-circle-by-china-russia-official-idUSKCN1VI1QW* (accessed September 16, 2019).

[22] Simon Johnson, "Pompeo: Russia Is 'aggressive' in Arctic, China's Work There also Needs Watching," *Reuters,* May 6, 2019, *https://www.reuters.com/article/us-finland-arctic-council/pompeo-russia-is-aggressive-in-arctic-chinas-work-there-also-needs-watching-idUSKCN1SC1AY* (accessed September 16, 2019).

National resources to the region. With the Arctic becoming increasingly important for economic and geopolitical reasons, now is not the time for the United States to turn away from its own backyard.

Mr. CORREA. Thank you, Mr. Coffey. I want to thank all the witnesses for their testimony. Without objection, the witnesses full statements will be inserted into the record. I remind each Member that he or she will have 5 minutes of questions for the panel, and I would now like to recognize myself for 5 minutes of questions. Your testimony, all of you, covered a great deal in terms of the challenges to our country and to our government and to the Arctic and I would ask what do you see as the single biggest challenge facing the United States and the Coast Guard in the Arctic? Each one of you could answer that question.

Mr. SFRAGA. Perhaps, Mr. Chairman, I will start because I know my colleagues will have many other items, but to me, it is this idea of domain awareness. If we don't have basic charting as was pointed out, if we don't know the domain in which we are to operate, we simply can't do it efficiently. You can't build a port; you can't ship oil and gas; you can't develop an Arctic; you can't protect communities; you can't forecast what coastlines would look like unless we have fully charted the U.S. oceans, including the Arctic around our region, especially in Alaska. As was noted, those are lacking considerably.

So, I think that was one significant area of good hydrological surveys of our territory, because even if you have Coast Guard cutters and you want to put in ports, you still won't know what terrain you are dealing with unless you have basic data, so I would support the research related to hydrological charting and surveying.

Mr. CORREA. Yes?

Ms. TINGSTAD. I don't disagree with that at all, but I would characterize the problem, maybe according to a slightly larger scope, which is this issue of a potential security void perceived or real coming about, because if the United States is not able to provide the prevention and response capabilities required in the Arctic as they are elsewhere across the United States. I think that domain awareness is certainly a big part of that. So, too, are communications and response capabilities to include the ice breakers, but I want to highlight that our research did find that it really takes a portfolio of capabilities.

So, although ice breakers are important, for example, and so, too, is charting, there are a suite of capabilities that the Coast Guard, for example, will need to operate effectively in the region. Thank you.

Mr. CORREA. Dr. Herrmann.

Ms. HERRMANN. I would add robust partnerships. As you, Chairman Correa, said in your opening remarks, the U.S. Coast Guard is forced to do more with less, and some of that could be augmented by providing more partnerships, partnerships with scientific institutions to increase our charting, partnerships with those first responders in Alaskan native communities all along the coastlines, more partnerships in the international arena, as Mr. Coffey noted, about a lack of engagement——

Mr. CORREA. So let me interrupt you. Statements were made that we have traditionally had good relations, cooperation with the

Russians, two places, in space and at the Arctic. So do we concur that given that cooperation can become competition that can become friction, because now you are just not talking about a frozen iceland, you are talking about major resources. Do we see ourselves going in that direction?

Ms. HERRMANN. I think we could if we don't provide robust partnerships. We have, since the fall of the Iron Curtain, since the fall of the Cold War, seen the Arctic as a peaceful region, and we have tried very hard through the Arctic Council to ensure that that has still been the case. However, when we don't invest in our allies through those partnerships in Scandinavia, if we don't invest in those partnerships with Canada——

Mr. CORREA. Running out of time. Let me have Mr. Coffey say a few words. Thank you very much, Dr. Herrmann.

Mr. COFFEY. I agree with the issue about situational awareness, so I can't—I have nothing to add in terms of what was already said, but I will say one thing about our lack of awareness of the fact that we are an Arctic country. Outside committee rooms like this or certain offices and certain think tanks around town, there seems to be this inability to grasp the idea that we are an Arctic country being so far away from it where we are.

Mr. CORREA. Thank you very much. I am going to now recognize the Ranking Member of the subcommittee, the gentle person from Arizona, Mrs. Lesko, for 5 minutes of questions.

Mrs. LESKO. Thank you, Mr. Chairman. My first question will be for Mr. Sfraga, is that how you say your name? By the way, I read your testimonies, all of yours, and very interesting. Good job. Can you describe China's Polar Silk Road Initiative and its significance to the changing dynamic in the Arctic?

Mr. SFRAGA. Thank you, Ranking Member. China plays the game of Go, big, long strategic vision. Their Polar Silk Road, their shipping lanes, they see the Arctic like they see Africa. This is a region that they would like to have a lot of influence in. There is oil and gas; there is other critical minerals; there is rare earth minerals; and so, there are a number of ways to influence a region—militarily, economically. Economically is where they are going with an over $20 billion investment in the Yamal Peninsula, that is a way to influence the region.

So China, in my perspective, is influencing the region and the Polar Silk Road as a resource area for them. It diversifies their energy portfolio. It allows them to influence the dialog and what is happening in a region, even though they claim to be a near-Arctic nation. So this is long-term. They also are an observer to the Arctic Council, which means they get to speak at the Arctic Council when allowed to, to influence where they can, the dialog. Not all of it is nefarious, but nevertheless, this is long-term.

So we might think in election cycles or in weeks or months or years, the Chinese think in decades. And so if a new ocean is opening, they are going to try every way they can to influence what is happening there governance-wise, and also economically.

Mrs. LESKO. Thank you. My next question is for Mr. Coffey. Can you explain the significance of Russia's claim that the Northern Sea Route is an internal Russian waterway? How does that impact Freedom of Navigation concerns?

Mr. COFFEY. Russia's claim that the Northern Sea Route is part of its internal waterways is a very dubious claim that is based on very loose interpretation of Article 234 of UNCLOS, which says they can put certain restrictions on the navigation and transit in its EEZ, due to environmental concerns and other issues. Russia's claim is not within the norms of international law. As far as I know the only U.S. ally that has challenged this in terms of a Freedom of Navigation operation is France. It did so recently in a transit to the Northern Sea Route, a French supply ship, French naval supply ship, and I think actually under certain circumstances when the time is right, the United States should also show that it does not recognize Russia's claim that this is an internal waterway and conduct Freedom of Navigation operations in the region.

Mrs. LESKO. Thank you. Interesting. Dr. Herrmann, do you believe the United States needs to develop strategic ports in the Arctic?

Ms. HERRMANN. I think that at present the port infrastructure and wider infrastructure in port cities isn't built to reap the economic benefits of increased tourism in a sustainable way. We have not invested in that environmental sustainability both through regulation to ensure that we are not polluting those critical fisheries to our food security and to Alaska fishermen, but we are also not investing in that infrastructure to ensure that when tourists come that Alaska native craftswomen and -men are able to gain those economic benefits, so increased investment in port cities all across the Arctic, particularly, Nome, but I think that that is a key thing that we need to do in the next 5 years.

Mrs. LESKO. So Dr. Herrmann, just so I understand, are you saying that you are supporting it in the future, but not right now because we haven't built the infrastructure yet?

Ms. HERRMANN. We have not built the infrastructure yet. I think that we need to, as I said in my statement, listen, and learn from those who live in these port cities and be guided by those voices, so I think that, you know, investing in those assets before making the large-scale investment in a port, making sure that those cities are well-supported and are being led by local voices is the first step before any other major infrastructure investment is taken.

Mrs. LESKO. Thank you.

I am almost out of time, so I will yield back my time.

Mr. CORREA. Thank you, Mrs. Lesko. Now I would like to recognize Mrs. Demings for questions.

Mrs. DEMINGS. Thank you so much, Mr. Chairman. Thank you to our witnesses for being here. Unfortunately, our time is limited. They have called votes, but I would like to ask this question and whichever one of you feel best prepared, please answer. How would you describe the geopolitical tensions that currently are developing within the region, and what efforts do you believe U.S. allies are engaged in to really foster international cooperation?

Mr. COFFEY. Perhaps I could have the first stab at that. As I said, I believe that the level of geopolitical tension in the region is low, especially in a security or military sense, but as we have seen with Russia's actions in other places of the world—Georgia, Ukraine, Syria—things could quickly change and they seem to have the political will and a willingness to use military force to advance

national interests and I don't think cold weather is going to stop them. So I think we have to plan accordingly assuming that, you know, Russia could act in a belligerent way in the region, especially considering that 5 of the Arctic countries, as I said, are in NATO, and the United States is obligated to defend Oslo, Norway, in the same way we are obligated to defend Orlando, Florida, so that needs to be factored into our way of thinking, I believe.

Mrs. DEMINGS. Thank you. Doctor.

Ms. TINGSTAD. Thanks for that question. So in our work on Arctic cooperation, we noted a long history of doing exactly that in the region, and there are many structures and frameworks in place to enable that. So, I don't want to overlook that in this discussion. But as has already been noted, our work also found that there were very few types of flashpoints, or tensions, that could arise in the near-term future at least in the Arctic because the stakeholders involved benefit from this cooperation economically and in other ways as well; but that said, I do think that one of the items that I mentioned in my testimony is this idea of a security void and nations being able to conduct their roles and responsibilities in the region as they would elsewhere in their territories, and I do think that that is something the United States needs to pay attention to moving forward in the region. Thank you.

Mrs. DEMINGS. Thank you so much. Regretfully, I am going to have to yield back, Mr. Chair.

Mr. CORREA. I would now call Mr. Katko from New York.

Mr. KATKO. Well, I don't regret that you finished early because now I can ask questions and then go vote. So thank you for accommodating that and thank you for having this hearing, because it is a really important issue. One thing I love about Homeland Security, we are generally on the same page all the time, Democrats and Republicans, and this is another example of that. So, I am just curious as we are having this whole discussion here, I want to take a step back because everything I have heard from everybody else I agree with, and we need to increase funding the Coast Guard and get a presence up there that is better and more sustained, but how did this happen?

Can anybody venture an opinion as to how we let our guard down to this extent and allowed Russia to have so much more influence in that area? Why would we do that especially with our involvement with NATO and those countries? Anybody want to hazard an opinion on that? Mr. Coffey, you want to start?

Mr. COFFEY. Sure. Well, I think it goes back to the point I made about the lack of awareness of our role status as an Arctic power in terms of the policy community and DOD and Department of Homeland Security, but also, the inability to have a serious debate about this issue and our No. 1 security alliance, NATO, and this is because of an internal division between Norway and Canada over what role NATO should have in the region. To give you just one example, the NATO strategic concepts, its most recent one, which highlights all the future challenges to the alliance doesn't even mention the word "Arctic" once. Literally it is not found. So that also feeds into our policy making as well, so perhaps we are a little bit behind the curve because of our—it is our own fault.

Mr. KATKO. Doctor.

Ms. HERRMANN. I would agree with that. The United States is often called the reluctant Arctic nation, right? We are not at the table as often because we don't view ourselves as an Arctic nation. When you go to Moscow, when you speak with our Russian colleagues, right, they know that they are an Arctic nation. Our U.S. special representative to the Arctic, Admiral Pap, that has been an empty office for the past 2 years now. We do not promote ourselves as an Arctic nation. We are thousands of miles away from Alaska and those voices just aren't heard in these halls. So in order to ensure that those conversations are happening at NATO, I think we first have to fully acknowledge and come to the table as an Arctic nation.

Mr. KATKO. I know we are talking about the Coast Guard and the Coast Guard's presence and needs, but it is also a Department of Defense issue as well obviously. I just—I am just dumbfounded as to why we would let this happen, but anybody else want to add anything to that? Doc?

Mr. SFRAGA. I would add just a few things. As an Alaskan, I have an interesting perspective, perhaps, in that the F–35s will be vetted down in Eielson Air Force Base here in just a little bit, and missile defense is almost exactly 100 miles from my driveway, so we are hypersensitive about what happens across the Bering Strait, what happens in the Indo-Pacific region.

I think we have let our guard down as a country for a number of reasons: One, if you go back in history, you look at World War II, it was reactionary. Alaska was at the sphere of a lot that happened in World War II, so we built an Alcan. We put in more forces there. Then the Cold War happened.

During the Cold War, the United States and Russia played a great game under the ice, and above the air. Still today, we have Russian bombers that have come across and they are escorted from international waters. But at the end of the Cold War, there was a reset where we could sort-of let our guard down and think about things. Then, of course, as a Nation, we were looking elsewhere after 9/11. This now climate change serves the fourth pillar of this where we are seeing this ocean open before us——

Mr. CORREA. I am going to interrupt you. We are running out of time and I just want to thank the witnesses today for your comments. We are going to continue to address these issues, and I want to thank the Members of the committee also for the questions and you can add additional questions for the witnesses in writing and we would ask you to respond to them as well.

Without objection, the committee record shall be kept open for 10 days. Seeing no further business, the committee stands adjourned. Thank you very much.

[Whereupon, at 3:13 p.m., the subcommittee was adjourned.]

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