



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

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of the Committee on Homeland Security
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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 society, tribal councils, academia, and congress – can work together to address the widening security threats to the four 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 five 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 UN Special Report⁴ 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

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, D.C 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.

³ <https://www.arctic.noaa.gov/report-card>

⁴ <https://www.ipcc.ch/report/sr15/>

⁵ <https://nca2018.globalchange.gov/>



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 U.S. and U.S. Territories.⁶⁷ 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. 65 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.

⁶ www.americaserodinedges.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 U.S. 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.

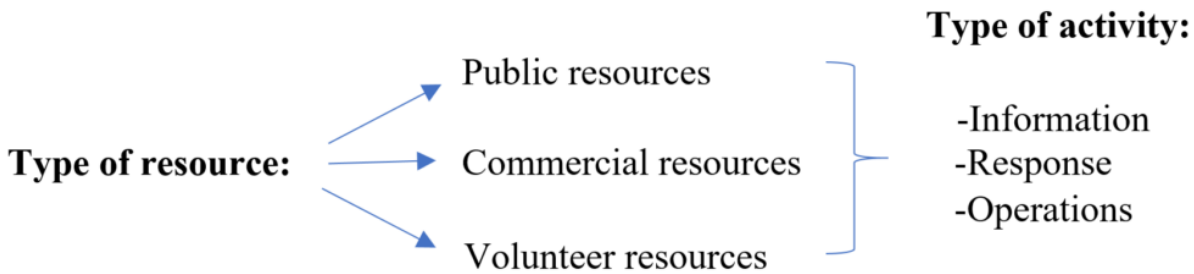
Austin Ahmasuk, a lifelong Nome resident, Inupiaq hunter, fisher, trapper, and community advocate for Bering Strait villages has been running community workshops through Kawerak, the nonprofit arm of the Bering Strait Native Corporation, to help communities understand the issues and needs that come with 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 colleagues 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 Østhagen, 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

⁸ Taken from: <https://www.thearcticinstitute.org/utilising-local-capacities-arctic/>



(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 lifelong 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 four 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 rely, and their capacity to respond to and augment the response of the Coast Guard to maritime disasters.

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>



(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 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 three 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—eleven 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 five 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

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/>



voices heard.” Importantly, the hearing 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 towards that goal of building a more inclusive dialogue on maritime security and economic investment 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 four 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.