

Anticipating Policy Options for Addressing U.S. Arctic Hurdles

Addendum

Abbie Tingstad

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Anticipating Policy Options for Addressing U.S. Arctic Hurdles

Testimony of Abbie Tingstad¹
The RAND Corporation²

Addendum to testimony before the Committee on Transportation and Infrastructure
Subcommittee on Coast Guard and Maritime Transportation
United States House of Representatives

Submitted June 19, 2019

Following the hearing on May 8, 2019, the congressional committee sought additional information and requested answers to the questions in this document. The answers were submitted for the record. An important caveat to the answers presented herein is that these do not address some of the major relevant policy and fiscal questions surrounding U.S. Arctic strategy that remain unanswered. The research that I discussed during the subcommittee hearing and that informs the answers to the questions posed below primarily addresses operational issues and the capabilities needed to address them. Therefore, the responses here do not constitute policy recommendations. I have followed the policy context in cases where the questions posed presume one.

Questions from Chairman Sean Maloney

Question 1

Has the Administration's refusal to acknowledge climate change hindered our efforts in the Arctic?

Answer

My research has not explicitly examined the current administration's positions on the Arctic. What I can say is that awareness of the Arctic and appreciation for the significance of climate change impacts (on sea ice especially but also, for example, on permafrost melt) among planners

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and operators concerned with the region appears to have endured (e.g., in the U.S. Coast Guard's and U.S. Navy's Arctic strategy documents), based on my continued engagement with this community. According to the analysis that my colleagues and I conducted on Arctic cooperation mechanisms, the Secretary of State's discussion of security issues at the May 2019 Arctic Council Ministerial Meeting in Rovaniemi, Finland, and the lack of a joint declaration at the conclusion of this event appear to be departures from the historical pattern of engagement at this venue.

Question 2

What role could port and maritime transportation infrastructure play in facilitating international cooperation and regional economic development?

Answer

Because of the confluence of change drivers, such as climate and economic opportunity, in the Arctic surface maritime environment, nation-states and other stakeholders (e.g., commercial companies, indigenous populations) may increasingly interact there. Port and maritime transportation infrastructure is needed to contribute to the region's economic growth, as well as to enable regional search and rescue, environmental response, and law enforcement activities. Without these support functions, Arctic economic growth will be limited, or the region will face high risks of experiencing safety, environmental hazards, or other significant incidents that could undermine prosperity. Port and maritime infrastructure will help operationalize international agreements (e.g., for search and rescue) and further enable opportunities for international economic partnering. Before making major infrastructure investment decisions, stakeholders should consider the possible political implications (e.g., Arctic populations' negative reactions to recent Chinese efforts to invest in their territories), as well as potential negative consequences to local communities.

Questions from Congressman Alan Lowenthal

Question 1

What types of oversight might reduce the likelihood of an oil spill in this region?

Answer

Oil spills are not an explicit focus of my research. Generally speaking, however, stakeholders express concern about appropriately shaping regulations and enabling the enforcement of those regulations through organizing, training, and equipping the right people, particularly those with oversight responsibilities (e.g., personnel at the U.S. Coast Guard, the Department of the Interior, and the Environmental Protection Agency). International cooperation on oil spill prevention and mitigation through the auspices of the Arctic Council, construction of the Polar Code, and other means have been promising. In our research on potential U.S. Coast Guard Arctic gaps, we

assessed that the following steps, among others, would better enable oil spill prevention and response:

- Review requirements for industry “self-help” or organic response mechanisms.
- Pre-position response supplies in local communities.
- Develop additional mechanisms to leverage autonomy.

An additional area of concern is the lack of information about the potential for large spills in the region, the current capability and capacity among partners to remedy any spills, and the variety and severity of environmental impacts that large spills could have. Much remains to be learned about Arctic ecosystems and the environment.

Question 2

What impacts will an increase in maritime traffic have on communities that subsist on ocean mammals like bowhead whales?

Answer

This is an important question for Arctic community resilience. My research has not looked at this issue. However, the immediate and higher-order impacts of maritime infrastructure development and traffic on ecosystems is undoubtedly a key consideration for future planning and an important area for continued discussion and research with international and other partners, given the high level of physical connectivity in the Arctic.

Questions from Congressman Anthony Brown

Question 1

What infrastructure investments can we make now to lower the “cost of doing business” in the Arctic in the long-run?

Answer

From the perspective of enhancing Arctic safety, security, and stewardship, key investments must be made in redundant Arctic communications (voice, data), domain awareness (via space, air, ground, maritime surface, maritime subsurface, and cyber), and response capability (including immediate on-scene capability, as well as longer-term sustainment of operations). The types of capabilities that might be useful to a future U.S. Coast Guard operating in the Arctic 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 servicemembers in overcoming decisionmaking challenges associated with attenuated communications channels

- investing in remotely controlled air, sea, and amphibious craft for providing 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 the role of automation and thus 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; infrastructure; and logistics to sustain longer-term operations and 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 pre-positioning key response items in partner communities
- enforcing new industry self-help regulations.

Question 2

What is a reasonable timetable to initiate broad infrastructure investments that will enable a ready Federal presence?

Answer

There is urgency for better enabling inherently intertwined safety, security, and stewardship activities in the Arctic. A big concern is that it will take one or more major disasters to motivate needed capability investments in communications, domain awareness, and response. Furthermore, many helpful assets (e.g., satellite communications, visualization tools, helicopters, trained personnel) can, in theory, be obtained or developed in the near term. Thus, certain investments can and should be made in the near term before a disaster occurs. There are several factors other than capability level to consider. Two of the most important include implications for indigenous and other local activities and the messaging to international stakeholders (e.g., to avoid the perception of an aggressive buildup of military capabilities that might elevate geopolitical tensions, which would be counterproductive to safety, security, and stewardship goals).

Uncertainty in the speed and precise nature of Arctic physical environment, economic, and other changes makes it difficult to assign precise investment timetables. However, it is important to be mindful of the multi-year process for bringing these types of investments to the point of providing utility for operations. Starting sooner rather than later will help avoid a reactive rather than proactive response to Arctic change.