

# Prologue: Arctic Polar Security

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The Arctic is a remarkable and dynamic place. It is much more than a geographic region that exists at or above 66 degrees and 33 minutes north latitude on the globe. What defines the Arctic of course depends on the given community vested with a particular definition. The Arctic Circle is a matter of geography. There are vegetation, temperatures, and political definitions as well. The pan-Arctic today remains an ocean space surrounded by lands that remain a part of each respective Arctic sovereign nations. The Arctic Basin is now largely claimed via these same national entities seeking sovereign ownership of ocean floors via the United Nations Convention on the Law of the Sea (UNCLOS), legal clauses referring to extended continental shelves. Accordingly (and in accordance with custom and usual terms), the Arctic is no longer a frontier.

In general and broad terms, the Arctic can be somewhat defined and described along three regional land aspects: the North American Arctic, which comprises the US state of Alaska, Canada’s Yukon, Northwest, and Nunavut Territories, as well as Greenland (under the sovereign jurisdiction of the Kingdom of Denmark); the European Arctic, including the Nordic nations and the Russian Federation west of the Ural mountains; and the Asian Arctic, that region of modern-day Russia that extends east of the Urals to the Bering to the Chukchi Seas. While maritime access to the Arctic on the Atlantic side is thousands of miles wide (extending from Greenland to the Barents Sea), Arctic access on the Pacific side is limited

to a narrow strait that is merely fifty-one nautical miles wide between the Chukchi and Seward Peninsulas.

The Arctic has been inhabited by groups of people who predate recorded history and who, in the modern era, have been made citizens of nations that have their origins in European historical organizational constructs (in particular, the Westphalian state model). The Arctic remains a region that is wild, remote, logistically challenging, and daunting to those who come from lower latitudes. It is the land of the midnight sun in summer, and it is also the place of weeks-long, seemingly perpetual darkness in winter.

The Arctic's physical environment is undergoing a remarkable series of changes that can be largely linked to sustained warming trends across the pan-Arctic. As written widely across the science community from the fall of 2020 and through mid-2021, the highlights are that the Arctic continues to warm at three to four times the rate of lower latitudes across the northern hemisphere (updating prior reports of the Arctic warming at two times the rate of these same latitudes).

Arctic warming is creating a growing number of cascading impacts that contribute to, among other things, a reduction in the volumes and area of Arctic sea ice, melting ice sheets in Greenland, and the thawing (and sometimes melting) of Arctic permafrost—all of which is affecting virtually every aspect of life in the region. The notion of a changing Arctic is certainly not new, nor are the implications surprising. The community of Arctic scientists have been expressing concern about a changing Arctic environment for decades, and this community continues to advance knowledge in characterizing the physical changes in the region at an increasingly fine scale. Media reports about activities of government and industry in the Arctic abound, indicating that the challenges of negotiating the geophysical elements of the region are diminishing due to warming. Accordingly, (acknowledging the vagueness of the remark) governments of Arctic nations are blending advocacy to encourage Arctic development with growing concerns about the activities and intentions of non-like-minded states and non-state actors within the region. Further, as Arctic warming forecasts indicate, this trend is poised to continue, and bring unique challenges that will strain all inhabitants' ability to resiliently adapt—flora, fauna, and people alike.

As the changing Arctic presents new economic and geopolitical threats, risks, and opportunities, environmental change imperils current economic systems and traditional lifestyles in the Arctic. Thawing permafrost is compromising the land that serves as the foundation for Arctic communities and the small number of connecting roads and ports. With less sea ice cover, weather systems are becoming more volatile, allowing for stronger storm systems that further exacerbate coastal erosion through storm surges, high winds, and coastal flooding. Environmental changes in the Bering Sea are now having an impact on traditional commercial and subsistence fisheries as fish stocks are starting to move north, risking, and in some instances already dislocating, traditional food sources for marine mammals and Alaskan Arctic residents alike. Collectively, these environmentally focused changes pose a significant threat to existing coastal communities, local economies, and associated infrastructure within the region.

Enabled by a changing environment, human activity across the Arctic is rising and includes increased commercial marine traffic, bolstered adventure tourism (albeit temporarily dampened due to the coronavirus pandemic), and expanded efforts to develop and conduct resource exploration and extraction methodologies. Newly opened pathways from the diminishing ice environment are a draw for nefarious influences in the region and can possibly contribute to unconventional marine safety and security threats, including increased illicit trafficking and criminal activity.

The opportunities to develop the Arctic are an incentive for both Arctic and non-Arctic nations to pursue easier access, extract mineral and petrochemical resources, pursue fish proteins (at present, outside of the Central Arctic Ocean), conduct maritime transport, advance tourism, and project sovereign influence through nationally flagged vessels. Transportation networks across the Arctic are principally limited to air and seasonal marine conveyance. Economic development remains limited due to the area's remoteness, lack of infrastructure, the high cost of extant modes of travel, and the difficulty of establishing new roads, ports, and facilities.

Reductions in sea ice have reduced the access barrier to maritime operations, and as a result, activity is increasing in the Bering, Chukchi, and Beaufort Sea regions. Of course, the same is true of the overall pan-Arctic, which includes the Northern Sea Route (NSR) along Russia's northern shore and the Northwest Passage across northern Canada. The

Arctic's diminishing sea ice environment is increasing accessibility to the vast hydrocarbon deposits within the region, which allows for Arctic nation-states like the Russian Federation to expand their resource-extraction efforts. It is also enabling sea lanes of the Arctic to open sooner and stay open longer through the summer months and increasingly into the fall. May 2020, for example, saw the earliest recorded springtime transit of the NSR, and January 2021 witnessed the route's latest wintertime transit, a record that is likely to be routinely broken in the seasons to come. The emerging economic potential of the NSR, and the possibility of a viable transpolar route within this century have incentivized nations and industry to consider leveraging these new and shorter routes for transporting maritime commerce as an economic advantage. Meanwhile, Canada's fabled Northwest Passage looms larger as a potential source of Canadian tourism in the post-COVID-19 world. Canada maintains the Northwest Passage as an internal waterway, not subject to the provisions of freedom-of-navigation principle as codified in the UNCLOS. The United States maintains the Northwest Passage is an international waterway and applies the same logic to Russia's NSR. This remains a source of disagreement between the United States and Canada, but both nations have continued to "agree to disagree" on the status and continue to find ways to accommodate their opposing views on an important Arctic waterway.

When the United States became an Arctic nation in 1867, it became responsible for facilitating domestic security and defending national sovereignty across a significant frontier, known to generations of Alaska Indigenous residents and a handful of explorers, miners, trappers, and settlers from the continental United States, Canada, Russia, or other places. Canada's Arctic shares similar geography, long-term resident human ancestry, and many elements of associated history with Alaska's Arctic regions. As well, the dynamics of environmental change, economic challenges, and the effects of influences from lower latitudes continue to complicate the overall North American Arctic, which is uniquely different in many aspects from either the European or Asian Arctic regions.

As trends indicate, human activity across the Arctic continues to increase in scope and magnitude. As new Arctic expansion and operations bring a more diverse and less experienced population to the region, and the rapidly changing Arctic environment confounds traditional

understandings, the percentage of those truly prepared for the Arctic environment is in decline. This leads to risk-prone behaviours that stress resources and challenge security and defence forces' ability to conduct search and rescue; provide humanitarian assistance; protect fisheries, marine species, and wildlife; and lead disaster-response operations. Additionally, as more outsiders enter the Arctic, the reasons for their arrival become more diverse, resulting in increased need for vigilance when enforcing respective national laws and regulations.

The diminishing Arctic ice environment that is enabling rising competition is manifesting itself in a multi-faceted manner. It is well understood the Russian Federation has restored and refurbished several former Soviet bases across Russian Arctic, while creating new facilities and establishing forces at those stations capable of projecting power in and through the Arctic, well beyond national borders. If this were simply a matter establishing a safe and secure Russian Arctic by creating sound defence through a more than capable offence, then such activities may be reasonable and possibly even acceptable. However, Russian national decisions, and associated defence planning, are opaque at best, and the asymmetric Arctic military advantage created in the Russian Federation should be met with resolve and strength by the United States and Canada—as resolve and strength has historically been a successful method of stabilizing relations between Moscow, Washington, and Ottawa.

Russia's approach to managing the NSR potentially restricts well-established measures of maritime freedom of navigation outside of established territorial waters. The country's practices have the potential to obliquely, if not directly, restrict freedom of navigation and counter the NSR's status as an international waterway.

Russia is a considerable Arctic maritime power. With a dominant number of icebreakers, ranging from vessels suitable for riverine operations to nuclear-powered ocean-going ships and submarines, the Russian military can project sovereign influence throughout the pan-Arctic in multiple directions simultaneously. Indeed, Russia's ability to muster and project military forces in the Arctic are remarkable. The range and complexity of these activities have continued to grow substantially following the re-establishment of the Long-Range Aviation branch of the Russian Aerospace Forces back in January 2007.

The military exercises that Russia staged in the Bering Sea in late August 2020 are a deeply worrying example that demonstrates Moscow's lack of understanding, poor communication, and willingness to engage in provocation; this places not only military forces and response measures at risk, but citizens as well, as was the case with the US-flagged/owned/crewed commercial fishing vessels that were interrupted and alarmed by poorly understood and reportedly aggressive Russian military manoeuvres.

Since the routine establishment of extended economic zones (EEZ)—normally two hundred nautical miles from shore, as codified in the UNCLOS in 1982—foreign vessels are granted the right of innocent passage, which permits transit and freedom of navigation as long as these vessels are not conducting such prohibited activities as weapons testing, polluting, fishing, or scientific research.

As the Russian Federation is an Arctic nation that shares a critical waterways-management challenge with the United States, it is in both nations' interests to resolve conflicts, effectively communicate, and find solutions to prevent escalation of tension and a rise in military actions along shared and increasingly economically important waterways in the Chukchi and Bering Seas.

The Peoples Republic of China's efforts in the Arctic have thus far taken a different form than Russia's. China continues to maximize its influence through use of its economic power to create the potential for access to policy and governance forums such as the Arctic Council and uses its economic strength to potentially position itself to gain access to Arctic regional mineral wealth, fish proteins, and more. China's economic partnership with Russia for Arctic liquified natural gas (LNG) is one example of how China is using the Arctic to advance its so-called Belt and Road Initiative.

China continues to project its sovereign presence into and across the Arctic via *Xue Long I* and *Xue Long II* icebreaker cruises, with a third *Xue Long* ship to join these activities soon. There are media reports that China is seeking to follow Russia's examples by developing nuclear-powered icebreakers. In addition to investments in LNG on Russia's Arctic Yamal Peninsula, China's ability to leverage its influence to gain access to commercial ports in Iceland and its efforts to advance its commercial mining interests in Greenland signal that the country's strategic aims

contain what is arguably a comprehensive pan-Arctic approach. Based on Beijing's actions in other regions, it is reasonable to conclude that China's need for raw resources, such as mineral and fish proteins, will continue to drive its aspirations and activities across the Arctic.

It is clear from its words and actions that the People's Republic of China sees the Arctic as an important aspect to its overall global ambitions. It is also fairly clear that China will continue its efforts to gain access to resources and deliver products to market while also establishing and exerting its influence among the community of Arctic nations, who may be tempted by promises of infrastructure investment and economic development through Chinese investment. To that end, it may prove wise for Arctic nations to look more closely at China's actions and the outcomes of its economic engagement in other regions around the planet. These countries would do well to ask: Is agreeing and accepting Chinese investment worth the risk?

Chinese icebreakers continue to ply Arctic waters, including in the Arctic Basin outside of the US Arctic EEZ in the Chukchi and Beaufort Seas. It is not inconceivable that such a presence could lead to mineral exploration and other extractive measures in the future—closer to the US Arctic maritime EEZ than we would likely prefer, particularly when we consider the insufficient measures Chinese industry has made toward environmental stewardship in other regions across the globe.

China's willingness to support infrastructure in developing regions provides many reasons for caution, and close examination of any promise or offer made by the Chinese government or government-supported industry is certainly warranted. Regrettably, there are several places where Beijing has yet to substantially deliver on such promises and, as is often the case, where profound disappointment has been the result. One need only look to Africa, South Asia, and Southeast Asia to get a full picture of the corresponding risks that await the Arctic. China is not an Arctic nation, of course, yet it is acting as though it has sovereign interests in the region, and its advocates have asserted that China seeks and should be granted a role in Arctic governance at a number of multi-national fora, such as the 2019 US Arctic Research Commission and the Woodrow Wilson Center, which hosted a conference on the "Impacts of a Diminishing Ice Arctic on Naval and Maritime Operations." In sum, China's effectiveness in leveraging its

national economic strength as a means to gain political influence across the Arctic is competing and conflicting with corresponding US national interests.

To be sure, the Arctic is but one area in which China has chosen to pursue greater geostrategic competition with the United States and Canada, but the pace of Chinese advancement in and across the pan-Arctic region, including the country's increasing presence in Arctic waters, is outpacing efforts to deter and dissuade such actions, which potentially (and likely) challenge the respective national interests of the United States and Canada.

A similar intent may be discerned on Russia's part. However, while the strength and considerable reach of Russia's military forces across the Arctic—to say nothing of Europe and the Middle East—are of course cause for concern, these forces are dispatched by a nation whose economic ability to sustain such forces in the long term is subject to serious doubt. Russian economic shortfalls compromise Russian military strength, particularly when compared to the economic muscle of China, the world's second-largest economy. Accordingly, Russia's fellow Arctic nations should seek out ways to manage tensions with the Russian Federation. This is all the more feasible when one considers the mutual strength afforded by US, Canadian, and European membership in a multi-lateral security alliance like the North Atlantic Treaty Organization. Such measures should first and foremost seek to find a way to decouple joint approaches between Moscow and Beijing. This may be possible through a diplomatic rapprochement that does not condone or reward past and current malign actions by Russia but is nevertheless guided by the realization that Moscow, Washington, and Ottawa share several common interests in the Arctic. This approach may well be aligned with Canada-US interests and serve to better manage escalation of military tensions in the Arctic.

The above discussion provides a representative sample of the geostrategic challenges that face the United States and Canada as the two nations pursue their national interests in the Arctic. It is important to emphasize here that great power *competition* need not become great power *confrontation*, and measures to manage and de-escalate international tensions are important, if not critical. To be sure, escalation management requires the means and capabilities to back words with commensurate force. Such



capabilities are the preserve of the US and Canadian security forces, and it will require vigilance in planning and strategizing to characterize existing risks and implement measures to mitigate associated threats.

The Arctic is an exceptional region. Indeed, its “exceptionalism” can be seen in the size, breadth, and depth of ongoing collaboration in such areas as Arctic science, economic activity, recognition of Indigenous peoples, and governance-related activities, including the mechanisms associated with the Arctic Council: these are the envy of many other regions across the globe. However, continuation of these aspects of Arctic exceptionalism is by no means assured, and investment in Arctic initiatives related to science, economics, and measures to ensure Canada-United States (CANUS) security and sovereignty are well within both countries’ interests.

Responding to the drivers of concern, it will be important, if not critical, to provide sustained support to Canadian and US law-enforcement agencies with improvements and increased capabilities so that they can smartly project their respective nation’s presence and power in the Arctic region. Possible measures range from providing the clenched fist of resolve through security missions to extending the hand of help in response to civil crises, as well as advancing science and research in a pan-Arctic context to support the public good.

Ultimately, the hoped-for result is the real and critical ability to field capable maritime and air platforms in the Arctic and enable US and Canadian security forces to secure and defend the maritime and air approaches to the North American Arctic. This also means providing these platforms with the ability to serve as fully capable instruments of national sovereignty, with the ability to deter, dissuade, and defend against risks and threats to US and Canadian national borders and receive and conduct command and control to establish situational awareness and overall domain understanding across remote and austere regions that have well-understood limitations in communications and logistics infrastructure.

As regards logistics: there should be consideration and deliberation when it comes to either developing or enhancing existing infrastructure in the North American Arctic, with the goal of serving an expeditionary/intermediary function of providing logistical support and an affordable level of repair function in support of security operations. Quite frankly,

advancing expeditionary support/logistics activities in the Arctic region could prove the most helpful start in building the programmatic ramp that could result in a multi-year approach to smart civil/military solutions that enable security forces to better protect transportation, tourism, and other industry activities.

The North American Aerospace Defense Command (NORAD) is a binational keystone of defence from strategic attack, one that is oriented via the North Warning System to defend against attacks that would leverage air and space above the Arctic. A principal, day-to-day activity for CANUS defence and security forces in and across the Arctic region is to provide assistance to search-and-rescue and disaster responses. Both the Canadian and the US security forces conduct well-known and highly regarded search-and-rescue missions, in addition to providing pollution and other environmental responses. Oil spill response is costly, and proactive prevention is difficult and logistically straining. The scientific and spill response communities provide important support to these efforts, but, to be sure, advancing the science of spill response and improving inspection capabilities through the use of science and autonomous systems to better monitor storage facilities across vast and remote regions will grow more important as facilities age and become more compromised by thawing permafrost and other environmental changes underway across the Arctic.

Advancing the capability of CANUS security forces in the Arctic also means advancing trusted relationships. For example, the Arctic Coast Guard Forum provides an opportunity to advance needed co-operation among all eight Arctic coast guards. The Arctic Security Forces Roundtable provides a chance for seven of eight Arctic nations and several non-Arctic European nations to contribute Arctic-oriented defence support to civil authorities. The US Coast Guard maintains an important relationship with its Russian counterpart (for Bering and Chukchi Sea waterways management), and security and defence forces from the United States, Canada, and the Kingdom of Denmark work closely in Arctic military regional co-operation. Sustaining trusted relationships is a domestic matter as well. In the Alaskan Arctic, there exists good co-operation across federal- and state-level departments and agencies, Alaska Native communities, and academic partners. The same is true in Yukon, the Northwest Territories, and Nunavut, where federal and territorial authorities operate

with respect and understanding vis-à-vis Arctic Indigenous communities. It remains critical to consult with and understand the challenges faced by Canadian and US citizens of the Arctic, who see first-hand the changes the region is undergoing and can provide uniquely important insights that are beneficial to safety and security responders. The adage that you can't surge trust or a trusted relationship applies in full measure to the Arctic.

While the region is increasingly impacted by the changing physical terrain and a rise in human activity, it also provides some of the best examples of international political, industrial, and academic co-operation on the planet. Highlights include the Arctic Council, led by eight nations and six internationally recognized Arctic Indigenous groups and supported by outstanding scientific research and focused working groups: namely, the International Maritime Organization (and its Polar Code), the International Arctic Science Committee, and the University of the Arctic.

The United States and Canada are fortunate to have each other as close Arctic defence and security partners and allies. This includes a shared defence commitment through the North Atlantic Treaty Organization, shared aerospace domains, and the maritime approaches to Canadian and US sovereign territory via NORAD and a complementary defence arrangement through United States Northern Command and Canada's Joint Operations Command. This binational defence co-operation is supported by the Canada-US Permanent Joint Board of Defence (PJBD), established in 1940 by joint declaration between the US president and the Canadian prime minister. PJBD today includes four CANUS departments: the US Department of Defense and Department of Homeland Security and the Canadian Department of National Defence and Department of Public Safety. As useful as the forum is in terms of advancing binational defence and security co-operation, it remains, perhaps, a bit episodically under-leveraged in both Washington and Ottawa.

National strategies for Canadian and US federal agencies drive policy and resource decisions that affect the security of both nations. The State of Alaska and the Canadian provinces drive regional governance, with local and tribal governance providing granular understanding of the developing threats, risks, and opportunities in the region. Looking to the future, it is important to understand, from the current baselines of security and defence, the policy, planning, and resourcing decisions needed in the near

term, to better effect outcomes from the range of possible conditions that could emerge and dominate Canadian and US policy-makers, both nationally, regionally, and locally, in the years to come.

As the current crop of US and Canadian national leaders continue to evolve their strategic understanding of the Arctic region, knowledge-products, which capture insights and perspectives, and bi-national collaboration will provide a unique opportunity to inform planners and policy-makers alike as they revise and develop new federal strategies and policies in Ottawa and Washington. Such collaboration should extend to regional and local decision makers as well, to strengthen the fabric of CANUS co-operation in and across the North American Arctic.

In closing, it remains supremely important that Canada, the United States, and our respective allies and partners maintain a clear-eyed view of the Arctic's fast-approaching future. The region is already hosting an array of military forces. It is undergoing substantial physical change. Arctic environmental security is an integral part of the overall Arctic security equation, which in turn is vitally important to both Canadian and American national (and national security) interests. There is an opportunity for it to become a peaceful, protected, and integrated part of our respective nations, and while economic opportunity carries both a risk and a responsibility, it is important to see the Arctic as much more than a giant multi-national park—indeed, it is a region of many uses. However, we would do well to remember that such uses must be conducted with care, discernment, communication, and coordination, and ultimately with an eye to protecting a region that is fragile and still remote, wild, and remarkable.