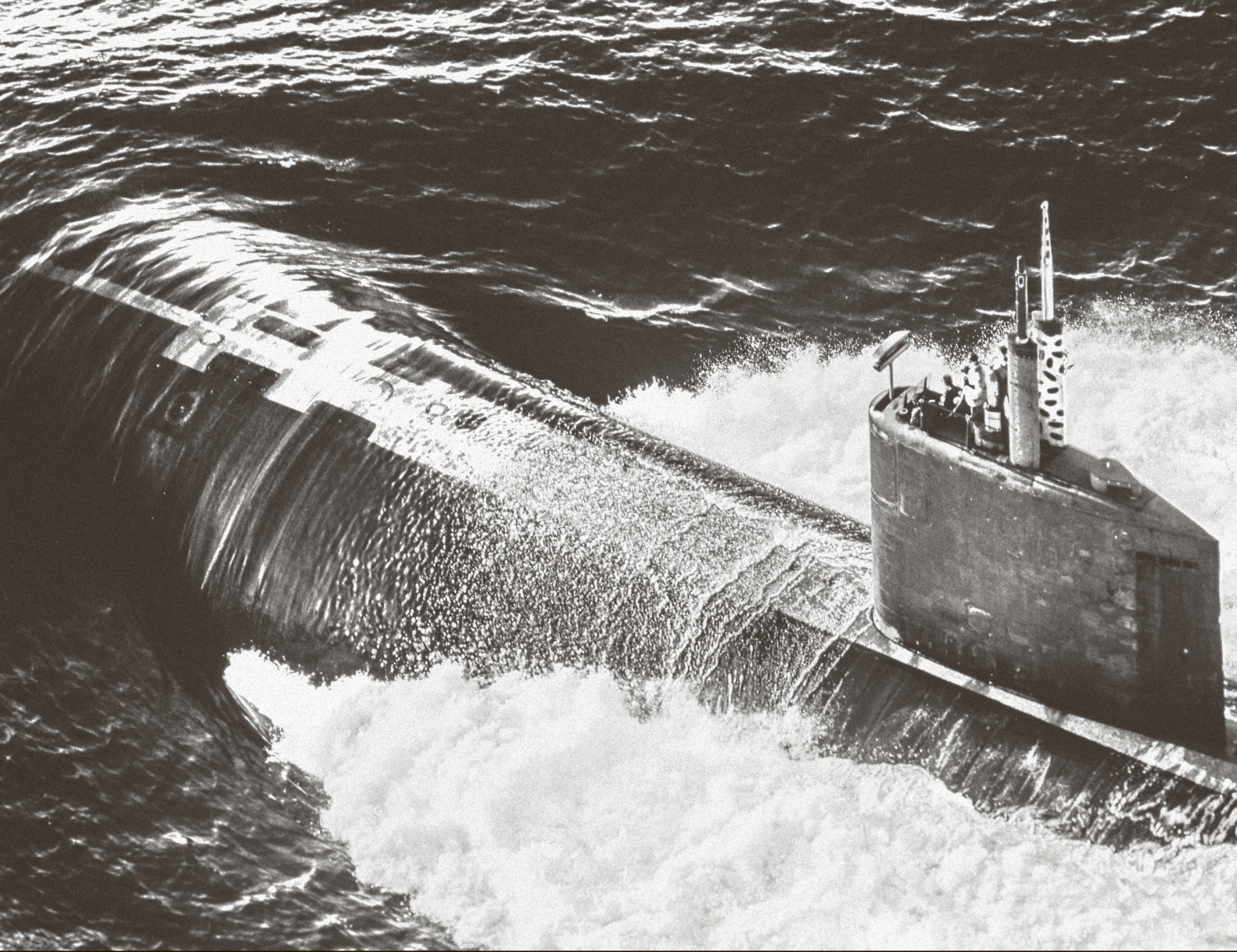




Arctic Temperature Rising: And It's Not Just Climate Change

Sean Nottoli, Gergely Szűcs

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August 2026

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Image: Aerial image of ballistic submarine near Canada's west coast

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About the Danube Institute

The Danube Institute, established in 2013 by the Batthyány Lajos Foundation in Budapest, serves as a hub for the exchange of ideas and individuals within Central Europe and between Central Europe, other parts of Europe, and the English-speaking world. Rooted in a commitment to respectful conservatism in cultural, religious, and social life, the Institute also upholds the broad classical liberal tradition in economics and a realistic Atlanticism in national security policy. These guiding principles are complemented by a dedication to exploring the interplay between democracy and patriotism, emphasizing the nation-state as the cornerstone of democratic governance and international cooperation.

Through research, analysis, publication, debate, and scholarly exchanges, the Danube Institute engages with center-right intellectuals, political leaders, and public-spirited citizens, while also fostering dialogue with counterparts on the democratic center-left. Its activities include establishing and supporting research groups, facilitating international conferences and fellowships, and encouraging youth participation in scholarly and political discourse. By drawing upon the expertise of leading minds across national boundaries, the Institute aims to contribute to the development of democratic societies grounded in national identity and civic engagement.

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Abstract

In geopolitical terms, the Arctic has been mostly considered peripheral since the end of the Soviet Union. Since then, three things have changed. First, NATO's commitment of military assets to the region has diminished: priorities have been elsewhere. Nevertheless, this has been at a time when Russia has maintained a strong military presence in the region. Second, China has shown that it, too, sees the Arctic as a key region: military exercises in the Arctic have often been carried out in collaboration with Russia. Third, climate change appears to be having a major impact - not least of which is an improvement to the navigability of the Northern Sea Route. All of this is occurring in the context of an international legal system that complicates the resolution of major disputes in the region.

In the context of the emerging great power competition of the 21st century, this paper shows how the primary competitors to NATO can exploit critical capability gaps in allied Arctic capabilities to generate strategic uncertainty and challenge allied cohesion and decision-making. As the world becomes more globalized, this paper posits that diverse domains are no longer in isolation. Authoritarian actors and competitors with the NATO alliance can utilize capability gaps in one region to make strategic gains in another. This paper considers recent investment by, as well as joint activities between, Russia and China. Environmental changes in the Arctic region provide an opportunity for those countries to severely strain NATO and its allies' capabilities: meanwhile, they can make strategic gains in other domains such as the Indo-Pacific, the Middle East, and Central Europe.

This paper proposes an imaginary scenario in which rivalry in and around the Arctic between China and Russia on one side and NATO on the other develops to the latter's disadvantage. The scenario shows that competitors to NATO and its allies' don't need to defeat NATO in an all out physical confrontation to either make strategic gains or weaken it. Instead, all they need do is utilize capability gaps to create uncertainty to threaten allied cohesion and decision-making from within. The paper concludes with specific recommendations for NATO to minimize the risk of such a scenario.

Introduction

Arctic temperatures are soaring, and it's not just because of climate change. The inhospitable frigid ice and snow of the northernmost region of our planet is quickly becoming the next theater for the great power competition of the 21st century. For far too long, the Arctic has been viewed as a region on the periphery of modern security. After the fall of the Soviet Union, modern defense planners shifted their gaze from the north, assuming that it had lost the majority of its significance. Accordingly, since the 1990s, the allies of NATO have had a track record of divesting from the region, cutting spending, and shutting down critical defense infrastructure that was heavily relied upon during the Cold War. This lack of foresight has been rapidly exploited. As the ice continues to recede, new economic corridors and military options are opening up, leaving gaps in security for NATO and its allies that are currently being exploited by their primary competitors, Russia and China.

This paper will outline and explore the evolving security challenges and their implications for the future in the Arctic region. After decades of allied divestment, changing temperatures, and investment in the region by Beijing and Moscow, the Arctic is increasingly becoming one of the greatest security risks and gaps in NATO members' capabilities. On the flip side, Russia and China are actively working to exploit the changing geography and strategic opportunities the Arctic is beginning to offer. Through the opening of new trade routes, new joint military operations, and major new investments in Arctic infrastructure and weapons systems, Russia and China have made it clear that they intend to dominate the region and exploit every advantage it offers - both economic and military.

Why The Arctic Matters

Beyond the beauty of the endless field of ice and snow, the Arctic region offers more than just scenic views, but real strategic opportunities for any nation that is looking to expand its influence or ultimately challenge the current global order. For the United States and its European allies, the Arctic represents the last line of defense and an essential choke point in countering attack from possible intercontinental ballistic missiles and naval strikes from foreign aggressors.

Russia's Re-Emergence

On March 27, 2025, Russian President Vladimir Putin took the stage at the 6th annual 'Arctic Territory of Dialogue' hosted by the International Arctic Forum. Planned and predominantly funded by the Russian government, it was almost entirely a Russian affair. With the ongoing war in Ukraine, the nations of the West and the Arctic Council states largely declined to send official representation. However, there were a few researchers and academics from various Western countries, including the United States, and China made sure to send prominent business officials as delegates. While failing to attract official representation from the West, Putin did succeed in getting attention from Western media, and his message for them was clear: the Arctic is ours. Hosting the event at Murmansk, near the border of Finland, one of NATO's newest Arctic based allies, Putin addressed the world and made it clear in no uncertain terms that Russia was the largest Arctic power, and the region was subject to its rules. Putin noted in his speech that Russia was working to greatly enhance its combat and military capabilities in the region: once Russia's positions were secured, then and only then, would there be opportunity for greater international cooperation in the region.¹

If there is only one part of the Russian President's speech that is not under dispute, it is the fact that Russia is the largest Arctic nation on Earth, with 24,000km of coastline in the region. Its current plans for and utilization of the region have been far from defensive. Russia's strategy for the region can be summed up in one simple phrase: "Total Control."

As Russia has advanced a more militarily aggressive posture on the global stage, it has increased its investments well beyond Ukraine and has worked to transform the Arctic into a militarised domain. It regularly conducts the largest military exercises in the region, and they have been growing exponentially. In September 2021, Russia conducted exercises in the High North that included over 8,000 troops, 120 aircraft, and 50 warships. More recently, in May 2026, the Russian Defense Ministry announced large-scale nuclear drills that were conducted from the 19th to the 21st, which included over 64,000 troops, 73 warships, 140 aircraft, and 13 nuclear-capable submarines.²

With climate change freeing more sea routes in the Arctic, Russia is moving quickly to establish itself as the main security provider of the region. It is important to note that the international community views the Northern Sea Route as international waters, and Russia sees it as an internal, Russian waterway.³

Russia and the Arctic: Pre and Post Ukraine

Even though Russia has long seen the Arctic as an indispensable part of its own security, policy toward the region has greatly changed since the start of the war in Ukraine. Before the second invasion of Ukraine, and even after the annexation of Crimea by Russia in 2021, Foreign Minister Sergey Lavrov publicly stated that even though there were tensions, that the Arctic was a special zone of engagement with the West, even going so far as to calling the Arctic an exemption from geopolitical activity.⁴ Even amidst the sanctions on Russia following its annexation of Crimea, engagement with the West via institutions such as the Arctic Council was seen as a place to ease tensions and foster relations - as recently as 2021. Following Russia's invasion of Ukraine, however, Minister Lavrov has changed his tone. Since 2022, the Minister has made many public statements on not only the growing importance of the Arctic: further, he has lobbied various accusations against NATO and Western countries on their growing activities in the region, calling them destabilizing actors.

In a video address to the 13th Session of the Arctic Council, Minister Lavrov accused Western countries of singlehandedly destabilizing and destroying the current responsible, collective management of the region.⁵

The destabilizing actions Minister Lavrov likely refers to is the expansion of NATO to include Finland and Sweden. Once strictly neutral countries, both Sweden and Finland decided, in the wake of the invasion of Ukraine, that it was in their best interests to seek NATO membership in order to guarantee their security. Their decision to ultimately apply for NATO membership would come shortly after Russian Foreign Ministry spokeswoman Maria Zakharova made a public statement in April of 2022, as Russian troops were forced to quit their offensive on Kyiv and regroup in the Donbas. She had stated that if Sweden and Finland decided to join NATO, there would be “political and military consequences.”⁶

The point should be clear. Before the invasion of Ukraine, Russia disclosed its intentions to use the Arctic as a unique place to foster international cooperation. After the invasion of Ukraine, it has begun lobbying accusations against the West of being dangerous actors in the region. Diplomatically, Moscow is building a justification for increased military capabilities and countermeasures in the Arctic by portraying NATO as the key source of tension.

Russia's Arctic Military: More Than Just Deterrence

When Western journalists cover news stories on Russia's Arctic presence, they often emphasize Russia's attempts to protect its nuclear deterrent. They discuss the nuclear capable submarines that Russia maintains in the High North that are meant to ensure Russia has a second strike capability in case of nuclear war. While this is still important and is still very much of concern to decision makers in Moscow, it is far from the primary focus for the Russian military in the region. Given the serious nature of nuclear weapons and the long history of the Cold War, journalists should be forgiven for overlooking the obvious: *Moscow has been hard at work not only preserving second strike capabilities, but also aggressively growing first strike options against NATO nations.*

Beyond nuclear weapons, Russia has built very real, practical military options for striking potential adversaries first in the region.

With Arctic air bases hosting long range strike capabilities, integrated missile systems and growing naval infantry presence, Russia has been building a force that could not only assert their control of the Arctic, but also give them options to strike targets in the Atlantic in a wartime scenario- even including targets in North America.

First/Second Strike Capabilities

To truly understand the scope of Russia's real Arctic capabilities, it is critical to first understand that what was once considered a second-strike capability can now be used for a first strike.

Military experts assert that Russia is using the Arctic as a testing ground for new experimental weapons designed to infiltrate and bypass NATO borders, both in Europe and North America. These weapons are a new breed of Weapons of Mass Destruction (WMD), openly bragged about by the Kremlin as being able to detonate nuclear devices underwater - acting as a dirty bomb targeting coastal cities, rendering NATO coastlines uninhabitable. These weapons include the so-called “2M39 torpedo”. Propelled by an onboard nuclear reactor, these torpedoes have an effectively limitless range and a destructive yield of 100 megatons. These weapons are currently being prepared for deployment across Russia's growing Arctic bases.⁷

Along with weapons development, Russia has begun to assert more control over the region, trying to limit traffic from international warships in the Northern Sea Route, demanding that the government be given a 45-day notice and request formal permission to sail in the area.⁸ The Russian military has also begun construction of major facilities at both ends of the Northern Sea Route, including airfields and radar, entrenching its presence and control over all traffic in the region.

As part of this effort, Moscow has refurbished 50 Soviet installations and has begun the deployment of special forces throughout the area. Most worrying to US defense officials is Moscow's assertion of its Northern Fleet being the security guarantor of the region and growing presence on the Kola Peninsula near Finland: this allows Russia to project air and sea power as far as Greenland and boosts its ability to close the GIUK-N (Greenland, Iceland, United Kingdom, Norway) gap.⁹

Arctic Warming and Its Potential Implications

The Changing Landscape

A crucial question is: what are the environmental changes that are happening in the Arctic? This aspect is worth talking about given the effects such changes carry within themselves. In essence, if the climate drastically alters, so too does everything else change. A lot of organisms either adapt or perish, and many key political players will be forced to implement different ways of dominance and surveillance.

This section serves to scope out the major alterations taking place in the High North. These aspects are precisely the ones which will dictate a lot of future geopolitical movements, global migration and even agricultural trends.

There is a trend of global warming taking place: this is generally supported by facts - even though the warming is not uniform in pace and not evenly spread across all areas. It seems that much of the ice is melting away in the northern zones of the earth, and at a pace that is directly correlated with CO2 levels.¹⁰ Data by the U.S. National Snow and Ice Data Center shows that the Arctic icecap is retreating at a highly alarming pace,¹¹ with a particularly visible withdrawal over the last 14 years or so. There is a notable decline in ice levels in 2026 from 2012 in the Arctic zone.¹²

The US National Aeronautics and Space Administration (NASA) also came out with similar data in its evaluations and models. There is a decrease of both ice generally and the permanent icecap. Since 1979, when the monitoring began, the sea ice has shrunk to some 5.52 million square miles (1.429 million square kilometers), a record low.¹³ (Sea ice is defined as the “total area of the ocean with at least 15% ice concentration.”)¹⁴

One of the greatest shifts which could possibly occur is an ocean current alteration. This is due to the fact that the world's ocean currents connect every region and influence weather patterns. They are responsible largely for what we call stability in climate, temperature and rainfall.

It is ocean currents that keep Europe, with all of its bays and peninsulas, relatively temperate compared to other areas in similar latitudes in North America and East Asia.

The key question, therefore is: how are the currents affected by the Arctic icemelt? The currents are generally slowing down with the warming of the waters. Several currents, such as the Atlantic Meridional Overturning Circulation or AMOC, move as a conveyor belt going from south to north and south again. They travel slowly and carry warm water up from the Southern Hemisphere to the northern portions of the globe. In short, the impact of global warming on ocean currents is as yet unknown, but could have massive and global implications.

Permafrost... or Not

An aspect often not discussed is the melting of permafrost - the constantly frozen layer of soil in Arctic regions. It is melting in parts of Siberia in Russia, Northern Canada and certain areas of the United States, mostly Alaska permafrost (or its absence) is measured by checking where the ice is located in the ground, or thaw depth. In the warm season, the summer, the depth of no ice is measured in order to calculate how much was lost of the frozen layer compared to previous years. This is done by, for example, the National Snow and Ice Data Center.¹⁵

It measures thaw depth with its Circular Program Active Layer Monitoring or CALM in many areas of the world.¹⁶ The melting, observed through the decreasing of frozen layers, of permafrost that is shown by CALM is alarming for a multitude of reasons. Some of these include the infrastructural hazards which may come along with a release of dangerous diseases that had previously been frozen in the ground. Further, the melting of the permafrost could make extraction of mineral resources possible for the first time (or at least easier). A boom in exploration and production would run the risk of further damage to the permafrost and increased chance of release of dangerous diseases - a vicious cycle.

Climate change that begins in the Arctic could well have a profound impact in other parts of the world - even in the Tropics. Varying rainfall patterns affect the prospects of agriculture. If farming becomes difficult or impossible in a particular place, wholesale emigration from that place is a likely outcome. Depending on the particular circumstances, this movement may be seen by the countries in which the migrants are arriving as being a major security threat.

This large scale migration would be caused more by the direct conditions themselves resulting from the changing climate. One example would be that a farmer does not leave his farm in search of better opportunities because it is exceedingly warm and dry but because, resulting from that, he cannot, by his own means and training, grow a healthy crop anymore. This is important since the farmer may be able to grow crops with the right technology. The technology usually relates to irrigation. It may serve to ease the life and labor of many subsistence farmers in dry regions. Water shortage is usually not a simple fix type of problem. Water is the main substance of physical life itself.

It is vital to have complex societal problem solving mechanisms for whatever happens in the Arctic zone of the global cycle of water, such as melts, there will often be larger scale effects elsewhere. Therefore, the derisking or strengthening of the northern zones is not just for the areas themselves but for the global human community.

Aside from impacts on migration of people, the slowing of the AMOC current may have an impact on the native habitats of animals. A warming of the AMOC's ocean water could disorient different species of fishes. This could then have a large effect on the fishing industries of many areas, particularly in or near the Arctic. Traditional communities that depend on stewardship of animals could be very severely affected. Infrastructural damage may occur if roads, buildings and other vital constructions sink or move because of the shifting earth. As the ice melts, the ground tends to shift easily by becoming less solid. At times, methane and other trapped gases are released. Finally, it is possible that global warming frees up agricultural land that had otherwise been marginal or unusable. In some scenarios, this could lead to conflict between states or other parties that seek to control newly viable territory.



A memorial in Murmansk, Russia showing a deckhouse fragment of the Kursk nuclear submarine to commemorate the submariners who died in peacetime (Shutterstock)

China's Arctic Ambitions

China has made the Arctic a clear priority, given its aim of expanding influence globally. China has been increasing its reach in the region slowly but assuredly. It first lobbied - successfully - to become an observer state in the Arctic Council in 2013. This was followed five years later by a proclamation that China is officially a near-Arctic country. Further, the Communist Party of China (CPC) issued an official statement that “China is an important stakeholder in Arctic affairs...involved in the transregional and global issues in the Arctic especially in such areas as climate change, environment, scientific research, utilization of shipping routes, resource exploration and exploitation, security, and global governance.”¹⁷ In its 14th official Five-Year plan (2021-2025), the CPC included the Arctic into its official strategy for the first time. In it, the Party refers to Arctic shipping lanes as the new “Polar Silk Road”, and cited the potential of the construction of Chinese owned infrastructure for its Belt and Road initiative in the Arctic.¹⁸

Furthermore, policy papers put forward by the China Classification Society (NB Classification societies are charged with ensuring safety and security of the seas with respect of vessels and seas-based infrastructures) highlighted the potential for minerals and fisheries in the Arctic: they urged Beijing to increase investment in the region to “break the monopoly position of Scandinavian countries”¹⁹ in the region.

In the current and 15th Five-Year Plan (2026-2030) recently approved by the Party, China has refined these goals into three primary objectives for the region. First and foremost is expanding its global ocean governance and influence. Second is the investment in the development of the “Polar Silk Road” and the utilization of the opening Northern Sea Route. And third is increasing deep-sea and polar research and exploration for seeking resources to exploit.²⁰

Beyond just talk and political posturing, the Chinese have made real strides and major investments to ensure their stake in the Arctic region.

In preparation for the construction of the “Polar Silk Road”, China has been rapidly expanding its fleet of icebreakers and has announced plans to build nuclear powered icebreakers.²¹ It currently operates three conventional (diesel powered) with more under construction. Beyond investments in polar vessels, the Chinese Development Bank partnered with Russia and invested US\$9.5 billion for the construction of the “Polar Silk Road” after reaching an agreement with Russia. With these investments, China has funded major construction of infrastructure that has helped build up the North Sea Route (NSR) : this in turn helped Chinese vessels complete the first successful voyage from Asia to Europe via the Northern Sea Route in 2013.

Aside from talking about breaking the Arctic stranglehold of the Scandinavian countries, and funding the construction of infrastructure, Beijing has also used China's fishing fleet as a device to exploit the “untapped potential” of wildlife in the far north. The China Maritime Studies Institute of the US Navy has long been concerned with the operations of the Chinese fishing fleet, which continually fails to respect the Law of the Sea - often by infringing on territorial waters of other countries.

At first glance, it seems that all of this infrastructure and assets are civilian in nature and would likely only promote economic, rather than security, competition in the Arctic. Officially, according to the Chinese government, Chinese Arctic installations are meant to study things such as space weather, atmospheric chemistry, glaciology, ecology, and the overall effects of climate change in the region. All legitimate scientific pursuits. However, there is a challenge, which is the People's Liberation Army's official doctrine of “military-civilian fusion.” The Chinese military makes clear in its *Science of Military Strategy* publication used to educate new recruits at its People's Liberation Army National Defense University in Beijing, that the integration of all civilian assets for universal, joint use with the military is a necessity.²²

This means that officially, as a matter of policy, all Chinese assets should be considered to have a dual use. Any logistics hubs or civilian research stations constructed are typically required to have the ability and to cooperate with the military when needed. This matters to the Scandinavian states and those allies located across the GIUK gap.

In particular, most analysts worry about the Yellow River station in Svalbard, Norway. While its stated purpose is to study auroras and climate science, it also possesses the capability to aid in military communications, coordinate satellite and intelligence gathering operations, as well as operational planning for the Arctic region as a whole.

China currently operates four major Arctic stations along the critical GIUK gap, in Norway, Iceland, and Sweden. Together, according to Western security assessments, these research stations give China the ability to map out submarine navigation routes in the region, gather intelligence on critical NATO undersea communication cables, gather data on NATO satellites and monitor NATO activities on the land, at sea, in the air, and in space.

Fragile (Legal) Ecosystems

Legal conflicts could also arise from a large-scale icemelt. The crucial problem is that there is no single universal legal structure in the Arctic. Rights concerning fishing, shipping, territorial integrity, and scientific research are all governed by different agreements.

These agreements include: the United Nations Convention on the Law of the Sea or UNCLOS; the Arctic Council; the International Maritime Organization or IMO and the North-East Atlantic Fisheries Commission or NEAFC. Each legal ecosystem relates to a specific issue: together, they do not provide a forum for the resolution of all issues that arise from climate change.

Consider, for instance, the Arctic Council. This body promotes cooperation among member states in order to protect the Arctic environment. The Council fights against pollution, supports biodiversity, and strives for cooperation to promote sustainability. Its decisions are non-binding on its membership, which consists of Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States as well as eight indigenous groups.

There are also 38 other observers.²³ Agreements overseen by the Council include the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic,²⁴ the Agreement on Cooperation on Marine Oil Pollution Preparedness²⁵ and Response in the Arctic and the Agreement on Enhancing International Arctic Scientific Cooperation.²⁶

The United Nations Convention on the Law of the Sea or UNCLOS²⁷ provides a highly complicated framework of legislation for the governance of the oceans. Obviously, it also applies to the Arctic area. UNCLOS sets out rules such as territorial seas, continental shelves and exclusive economic zones.

The International Maritime Organization or IMO is the U.N. organ which ensures safe and secure shipping along with the reaching of the Sustainable Development Goals, among others. This objective includes coordination and the protection of the environment. The organization has also engaged in the handling of at-sea legal disputes, when involving pollution. The matters at stake are generally in the realm of liability and compensation.²⁸

Finally there is the North-East Atlantic Fisheries Commission or NEAFC.²⁹ This Organization is concerned with the manners and types of fishing in the area. It exists to maintain the industry meanwhile ensuring protection for the ecosystem and guaranteeing sustainability.

Aside from the agreements that are overseen by these organizations, there are national laws, in which each country enforces different norms for each of the various aspects.

In short, there is no single and strong legal ecosystem for the Arctic as a whole. There are many small mechanisms by different agreements. This is an advantage for the resolution of smaller conflicts and daily situations requiring creative and fast mediation. However, it is very far from clear how the system in place would help to resolve a major conflict, let alone one with serious security implications.

In summary, three conclusions are possible. Firstly, climate change that begins (or that is seen to begin) in the Arctic could have global implications. Second, climate change will very likely have massive political, societal and (probably) security implications. Third, the legal structure that does exist will probably not be adequate, in its current state, to provide swift and meaningful remedies.

China and Russia's Arctic Alliance

On July 25, 2024, American and Canadian fighter jets were forced to scramble. Four nuclear capable bombers from the direction of Russia had begun flying along the borders of Alaska in the Bering Sea. While it was not unheard of to have Russian bombers flying near Alaska, what was new was that two of those nuclear capable bombers weren't Russian.

They were Chinese.

Two Russian Tu-95MS and Chinese Xi'an H-6 strategic bombers were flying together in formation in Alaska's Air Defense Identification Zone (AIDZ), approximately 200 miles off the coast of Alaska.³¹ This kind of mission was a first for China, and it sent a strong message about how Beijing sees the Arctic.

We should expect more cooperation like this from Russia and China moving forward. On February 4, 2022, the Russian and Chinese governments, shortly before the beginning of the Ukraine war, issued a joint statement on future cooperation between the two in the Arctic. They officially agreed to work towards sustainable development of the region.³²

However, joint bombing missions such as that which occurred in 2024 signal much more intense engagement, especially in light of the Ukraine war. What is important to note is that this agreement was made before the advent of the war and the resulting gridlock in the Arctic Council. This suggests strongly that both governments view the Arctic as an area for long-term cooperation rather than simply commercial engagement.

While the spokesman of the Chinese Defense Ministry, Zhang Xiaogang, publicly stated that China and Russia's joint patrol featuring nuclear capable bombers was merely a standard operation to communicate "shared resolve and capability to address regional security challenges and safeguard peace and stability"³³, China's operations in the region have not stopped there.

On September 28, 2024, in another first, Chinese coast guard vessels joined their Russian counterparts for a patrol of the Bering Sea. China and Russia have expanded cooperation between their coastguards (for Russia, the Border Guard) since signing a memorandum of understanding with each other in 2023. Significantly, the memorandum was formally signed in Murmansk, Russia's Arctic city that lies near the border of Finland.³⁴

While this was a first for Russia and China's respective Coast/Border Guards, there had been a spike in regular Russian and Chinese naval cooperation in the region immediately prior to the incident. Most notably and in the summer of 2023, Russia and China carried out a joint naval operation sailing off the coast of the Aleutian Islands in Alaska.³⁵ The US Navy responded by dispatching four destroyers to monitor the 11 Russian and Chinese warships that were sailing off the coast of American sovereign territory.

In the context of Beijing's official stance of the dual use and importance of civilian-military fusion of assets, together with these incidents involving China's military and Coast Guard, it is easy to see why NATO and Western analysts are highly skeptical of the purported benign nature of China's planned investment and coordination in the region.



Surfaced Chinese submarine in the Huangpu River within Shanghai, China (Shutterstock)

A Security Crisis for NATO in 203X

The Arctic Moves to Center Stage

Let us put all the pieces together and imagine a real-world wartime scenario that demonstrates the importance of everything that has been discussed so far in this paper. The following is an analytical stress test rather than a full prediction. For the following section of the paper, imagine that you are a NATO military officer receiving reports in real time as the following events unfold.

You stare at the screen in front of you. You ask yourself, "How could we have been so blind?"

Following the Russian defeat in Ukraine just three years prior, Europe and all of NATO had given a sigh of relief. The once mighty Russian bear seemed to be an infant throwing a tantrum on the global stage, and it had been treated as such. After the Ukrainians managed to expel or destroy the last of Russia's forces in their country, European leadership and the majority of the allies of NATO had begun to relax. They began cutting the massive amounts of military spending that the Trump Administration and pressures from Moscow had forced them to adopt in the mid 2020s. After all, the scale of Russian military losses had been enormous. Sanctions remained in place, but intelligence assessments increasingly concluded that Russia would require at least a decade to rebuild its conventional forces. Politicians across Europe began asking the same question: why continue spending wartime levels of money on defense when the war had already been won? They were eager to resume and even increase their spending on public welfare programs. With the threat from Moscow seemingly gone, Europe's voters once again lost their favor for increased defense spending. Indeed, most believed that war could never happen in Europe again.

With those cuts, whatever funds NATO and their constituent militaries had were focused on drones. As the Ukraine war had shown, they were obviously the future of warfare - highly effective, and most importantly, cheap.

NATO command centers now spent most of their time watching the skies for any incursions from drones and were prepared to confront them wherever they popped up.

The Arctic rarely appeared in strategic discussions except when shipping routes, climate change, or Russian icebreakers were mentioned. Intelligence briefings continued to warn about growing Russian and Chinese activity in the High North, but the assessments were usually filed under long-term concerns rather than immediate threats. After all, the Arctic was the periphery.

As an officer you were aware of what sort of assets the Russians had in the Arctic and were aware of massive joint Chinese/Russian projects in the region, but you did not see these as a threat. After all, Moscow was using the region to maintain its standard nuclear deterrent and promote trade. It was not somewhere that you would expect a war to start.

You scrolled through your phone as you see headlines of a new crisis in the Strait of Hormuz and the Suez Canal. You sighed - the Iranians had shut down the Strait again, and their proxies in Yemen had been attacking ships going towards or from the Suez Canal. But what else was new? As you began to think who among your colleagues was going to be involved in that mess a message appeared on your screen:

"Large Activity of Russian Northern Fleet detected. Nuclear subs, Borei and Yansen class, Knyaz Vladimir and Severodvinsk unaccounted for. Suspected largescale naval drills."

The message was concerning, but not unprecedented. The Northern Fleet had conducted large Arctic exercises before. They had had major drills involving thousands of troops and hundreds of aircraft and vessels in the Arctic for years. Intelligence analysts assessed there was no indication of imminent attack. While you directed efforts to try to find - as soon as possible - where those nuclear submarines were, you reassure yourself:



February 2023 meeting of NATO Ministers of Defence at the NATO Headquarters in Brussels (Shutterstock)

They're drills. The timing is odd, but not alarming. They're trying to signal strength, not war." Later, you tried to email one of your colleagues and realized that the Wi-Fi wasn't working.

It wasn't just you. People in various headquarters across NATO were reporting connectivity issues everywhere. When you were able to receive reports, you were hearing rumors of undersea cables having been cut and cyber-attacks on your servers. It was then that you received a definite report of a massive incursion of drones into Polish airspace.

As you tried to help coordinate a response, you realized that radar and tracking systems were experiencing technical issues. This was not only the case in Europe proper, but also in locations like Greenland, Iceland and Scotland - all critical places for monitoring the small gap that keeps the Russian fleet out of the Atlantic.

Satellite links were intermittent at best, and undersea cables were experiencing major outages. To make matters worse, maritime reconnaissance craft were giving contradictory reports. They still had eyes in the region, but no one could confidently tell what was going on.

The result was chaotic. Some networks were functioning. Others were not. Intelligence arrived late. Communications became unreliable. Nobody knew whether the problems were accidental, technical, cyber-related, or part of a coordinated campaign. It was here that you noticed something very strange.

Almost all your briefings moving forward involved the Arctic. From the increased activity on the Kola Peninsula to the disrupted monitoring systems along the GIUK gap. Every briefing included something from the Arctic. The High North was no longer a sideshow. It was the main theatre.

More unhelpful reports flooded in. GPS and satellites had become unreliable. Tracking of Russia's Northern Fleet was intermittent at best. NATO had absolutely no idea where Russia's nuclear submarines were. More crucially, it was not clear whether the missing submarines were being used for routine deterrence or whether they were being positioned for conflict.

Any definite news was bad - including more drone incursions in Poland, cyber attacks in Germany and GPS being unavailable in Norway. Meanwhile, the submarines were still missing...

Then, a new wave of reports hit. Some were discussing increased Russian activity on the Kola Peninsula along the border of Finland. Others showed disruptions of energy from pipelines in the Baltic and North Seas. Countries like the UK and the Netherlands appeared to be able to cope, but the Baltic States were in a real crisis. Power and communications cables were concentrated in one small area of the Baltic Sea. If those were disrupted, they were in serious trouble.

Just as you were about to ask for an update on the situation in finding those subs, a message on your phone appeared. *"Have Russian troops crossed the border into Estonia?"* You watch the news story as a reporter stated "Unconfirmed reports indicate that armed personnel have seized key government buildings in Narva, a small border city along Estonia's border with Russia. Estonian authorities report Russian military vehicles operating nearby. Moscow denies involvement."

For nearly twelve hours nobody could agree on what was happening. Some reports described a local uprising in Narva. Others pointed to activity by Russian special forces. Still others suggested that Estonia was overreacting. Every hour that passed without clarity became another hour in which NATO failed to agree on a response.

As you began to realize the gravity of the situation, the new Russian President appeared on screens, making a public statement saying that the Russian Federation was not involved in the events in Narva, but that it was sympathetic to ethnic Russians living under persecution from the Estonian government. He stated the matter was purely an internal affair of Estonia, and that the movement of military vehicles and troops along the border was merely defensive after hearing about the instability in the neighbouring part of Estonia.

There was immediate uproar. The Estonian government was demanding that NATO's Article Five be triggered. No one could be completely certain if the armed soldiers were Russian or Estonian citizens. The American and UK governments were concerned about finding the missing Russian nuclear submarines first before any response was given. More reports about energy and information disruption flashed on screens. More reports couldn't be verified.

While this was all happening, Beijing released an official statement, urging the Americans and Europeans to show restraint in their response, and offering to host talks between NATO and Moscow.

The following weeks brought chaos. News reports covered stories about the missing Russian nuclear submarines, some speculating that they were sailing freely in the Atlantic. European energy markets were going haywire as uncertainty caused prices to skyrocket. Oil pipelines in the North Sea were damaged, and engineers had yet to determine if it was coincidental or intentional. The Suez Canal remained closed. Governments were swamped with emergency meetings. They still could not reliably tell if these infrastructure failures were isolated incidents or part of something larger. The Americans were on high alert. While the vast majority of their naval forces were preoccupied monitoring the first and second island chains in the Indo-Pacific and the Arabian Sea, some units were available to hunt for the Russian submarines in the Atlantic. US Air Force strategic bombers were being kept at a maximum level of preparedness. The Western European partners of NATO too were using their naval forces to try to secure and monitor the GIUK gap and Russian assets in the Atlantic. They could not put up a meaningful force to reopen the Suez Canal.

China made regular outreach efforts to NATO members, trying to facilitate peace talks between the Alliance and Russia. Chinese state media began running regular news stories claiming to show China's calm, responsible leadership as contrasted to NATO's confusion. It was a nightmare scenario. Moscow was creating the problem and Beijing was painting itself as the solution. Analysts for years had debated whether Russia and China's interests in the Arctic really converged. Now the truth seemed obvious. Beijing was taking advantage of the situation extremely well.

Aware of the energy crisis, China offered security guarantees to European oil tankers that utilized the Northern Sea Route. Though it passed through a majority of Russian territory, China had a considerable stake in the critical infrastructure that supported trade in the region. And it guaranteed safe passage to all nations, even the United States. Russia's president stressed that they were not seeking conflict with NATO, and that the Northern Sea Route was open.

In one fell swoop Moscow and Beijing had managed to make great strides towards achieving a *fait d'accompli*. They had expertly utilized NATO apathy and budget cuts to critical monitoring in areas like the Arctic to exert maximum pressure. Exploiting NATO's weakness in the region, they had managed to create critical uncertainty and dilemmas when they needed it most. The result was a deeply divided NATO with smaller member states feeling betrayed from a lack of response, questioning the worth of the alliance. Moscow and Beijing had also revealed the attitudes of larger member states who didn't want to risk all out war over what they saw as a small territorial incursion. China increased its prestige portraying itself as the great peacemaker: in a greatly cynical move, it was also helping to lay the groundwork for Europe's dependence on Russia for oil and natural gas. In short, they had managed to expose weaknesses and test NATO's unity in a way that had until now been unforeseen.

When you had a moment to catch your breath, you realized that this was not actually out of the blue. The warning signs had been extremely public and obvious. There had been the continued Russian military build up, with ever-increasing drills in the Arctic. There had been China's major investment in infrastructure along the Northern Sea Route - pushing it as an alternative to routes that were plagued with violence and instability in the Middle East. This had been a plan years in the making, and anyone could have seen the groundwork being done. None of the various efforts of Moscow and Beijing had been hidden.

One worrying development had become clear. Russia did not have to defeat NATO in a head-to-head conflict to achieve its goals. It just had to find a way to weaken it from within, and the Arctic was one of the greatest assets available to achieve that end.

You had one final thought as reality began to sink in.

"Our mistake wasn't failing to see the Arctic. It was believing that it would always remain on the periphery."

Change Assumptions, and...

How do we prevent a scenario like the above from coming true, and how can we better protect the cohesion of NATO from similar threats?

First, we need to change our assumptions. While we should be prepared for a scenario where Arctic assets are used in combat against the Alliance, we need to realize that the Arctic already affords NATO's potential adversaries a major opportunity to create stress and dilemmas for the alliance.

Recommendation One: The Creation of an Official NATO Arctic Command

NATO officials are aware of the growing significance of the Arctic and have been making changes to how it operates. Historically, NATO has divided the responsibilities of monitoring the Arctic region among several commands, institutions and governments that span the North Atlantic theater. While this structure reflects the multinational nature of the Alliance, it can also complicate the integration of information and decision-making during rapidly developing crises.

In contrast, Russia's posture in the region has long been centered around on and around the Kola Peninsula and the Northern Fleet that is based there. The result has been that of a more integrated approach than that is normally found in NATO's current multinational command structure. The challenge is not in military capability, but rather the ability to realize that events that seem to be unrelated in a fast-paced scenario actually are related. One of the primary concerns here has been the preservation of their nuclear deterrent, which has aided Russian commanders to see the intrinsic link between the Arctic Ocean, Barents Sea, Norwegian Sea, GIUK Gap, and North Atlantic and view them as operationally interconnected as part of a single system. This has given Russian staff officers certain advantages when it comes to strategic planning, situational awareness, and coordinating forces and efforts across multiple areas.

In the scenario described above, Russia was able to exploit this advantage to create strategic ambiguity in order to complicate NATO decision making and slow its response. As noted, Russia didn't have to beat NATO in an all-out conflict: it only had to make things uncertain.

As of writing, the responsibility of overseeing the Arctic domain is spread out through Joint Force Command (JFC) Norfolk, MARCOM, Norad, US Northern Command, US European Command, the various national Arctic Commands of member states and their intelligence services. While it is natural in an alliance as grand as NATO that there will be many different moving parts, there is a greater need for an inclusive, streamlined command structure. Historically, many within the alliance have sought to maintain the Arctic as a low risk area, fearing that the establishment of any formalized command structure in the region would incentivize the Russians into further weaponizing the Arctic against the West. However, even with the lack of provocation, Russia has rapidly militarized the region. To NATO's credit, recent initiatives such as JFC Norfolk, Arctic Sentry and Task Force X-Arctic have been put in place as a result of this greater need to view the Arctic and North Atlantic as a singular strategic theater. As these initiatives mature, policy makers need to consider there is an ultimate need for and establish an official Arctic Command reminiscent of America's Indo-Pacific, European, and Central Commands.

A central Arctic Command would need to be the realization of the current initiatives at work. It would need to integrate satellite, undersea and air surveillance, as well as protect key infrastructure and streamline intelligence reporting. It would strategically look at the Arctic, North Atlantic, and GIUK Gap as a singular domain. The goal is not to create another layer of bureaucracy, but rather to ensure that across the broader region are evaluated through a singular operational framework.

Recommendation Two: Defend Undersea Cables Like Airspace

Whenever there is an incursion into allied airspace, NATO is quick and efficient at responding. Jets are scrambled, adversaries are quickly either escorted, challenged or confronted. Utilizing existing infrastructure such as SOSUS/IUSS (Sound Surveillance System/Integrated Undersea Surveillance System) , NATO should expand existing undersea surveillance efforts. Investment into rapidly advancing undersea drone technology, as well as fixed seabed sensors, allied satellite surveillance and increased maritime patrolling should be made a high priority.

The objective would not be to build an impenetrable shield around critical underwater infrastructure. Rather, it would be to provide persistent awareness surrounding undersea assets so as to reduce the possibility of ambiguity. In the scenario above, a majority of the ambiguity and uncertainty that was generated could have mitigated from greater monitoring and faster attribution to disruptions in the Arctic and North Atlantic. By reducing uncertainty and improving surveillance of critical assets, NATO can make it significantly more difficult for a potential adversary to exploit ambiguity as a strategic tool.

Recommendation Three: Increased Ice Breaker Coordination and Investment

Compared to that of Russia, NATO's current icebreaker capability is fragmented. NATO member states such as the US, Canada, Norway, Finland, Sweden, and Denmark are the primary operators of icebreakers for NATO. A hypothetical future NATO Arctic Command should become the central command center for allied icebreaking missions that would be used as the primary first response and intelligence gathering forces for NATO in the Arctic region.

NATO also needs to invest in more icebreakers. The United States in particular requires a larger fleet. Until recently, it has only run two. One heavy icebreaker is *Polar Star*, whose duties have it mostly in Antarctica. This leaves the medium sized Healy as the United State's only icebreaker in the Arctic region. Both these ships are aging, with The *Polar Star* celebrating its 50th birthday in 2026, and the *Healy* now entering its 26th year of service.

The United States runs the risk of having the totality of its Arctic operations slow to a standstill, as it did in 2020 when an engine fire aboard the *Healy* caused the US Coast Guard to officially cancel all Arctic operations at that time.³⁵ The US Coast Guard has long advocated for the construction of more icebreakers and has pointed out that the US alone requires as many as eight more heavy icebreakers like *Polar Star* to meet national security requirements.³⁶

In the context of the United States, there are significant political and physical barriers preventing the construction of new icebreakers. The primary two are the necessity under US law that new icebreakers be produced domestically, and the second being the reality that US shipyards currently suffer a lack of experience in building icebreakers. Much to the Trump Administration's credit, the United States has made great strides to address these problems with a landmark new agreement between the US, Canada and Finland known as the "ICE Pact."³⁷

The 2025 agreement will see allied investment in Texas shipyards to revitalize American icebreaker building capacity and greatly increase cooperation and has already resulted in one new medium sized icebreaker, the *Storis*, to enter service in August of 2025. Contrary to common misconception, icebreakers do far more than just break ice. Icebreakers are extremely versatile crafts capable of carrying out a diverse array of missions. These include guaranteeing access to particular waters, monitoring and responding to threats to critical infrastructure and gathering intelligence.

Many of these vessels are equipped and carry aerial assets such as helicopters and drones, which can provide the alliance with a bird's eye view that can supplement satellite views in situations where their feed goes down. And, perhaps most importantly, in an era that seems like it will be dominated by drones, they can act as drone motherships for both air and undersea unmanned vehicles.

To put plainly, the icebreaker is an all-in-one asset that provides logistical support, awareness, and access to a region where all the above are scarce. In the scenario described above, access and awareness are exactly what NATO lacks during the opening stages of the hypothetical crisis.

Concluding Remarks

As the world faces a renewed great power competition and increased geopolitical instability along increasingly important choke points such as the Suez Canal and Strait of Hormuz, areas like the Arctic are ceasing to be on the periphery. Instead, they are becoming increasingly the next domain of security and economic competition. NATO's rivals will be searching for ways to exploit weakness and exert pressures to degrade and counter the Alliance's influence. The Arctic currently offers them one of the greatest opportunities to do so.

It is not necessarily the threat of World War III of which the allied democracies need to be wary. Rather, it is strategic ambiguity.

The rivals need not necessarily defeat NATO in an all-out conflict: all they need to do is widen the current holes in NATO's capabilities.

To ensure scenarios such as those which were described in this paper do not occur, the allied nations of NATO are going to have to increase investment and improve command structures that oversee the Arctic. The region offers perhaps both the greatest opportunity and threat to the Alliance for ensuring peace. The clock is ticking, and as Arctic temperatures continue to climb both physically and metaphorically, the time to prepare for and prevent conflict is running out.

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