



POLICY BRIEF

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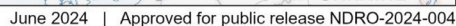


Figure 1. NATO in the Arctic

KEY FINDINGS

- Climate change is a key driver of strategic competition in the Arctic and threatens human security, resilience, deterrence, and defense. The region is shifting from cooperation to competition, where hybrid/systemic gray zone activity is likely to increase.
- The Arctic holds tremendous resources and presence is critical to ensuring future access.
- Russia's ongoing military modernization, China's Arctic ambitions, NATO enlargement, and Arctic economic potential and strategic location make the Arctic a venue for strategic competition.
- The Arctic is facing increased geopolitical competition and outreach which must be responded to. Security policy is the priority.
- Russia is learning and adapting, and China seeks involvement in the Arctic. NATO should thus focus more on its Northern Flank, and the EU should also include the Arctic in strategic planning.
- Nations are products of their cultures, and Russia respects strength. NATO must be strengthened and present in the Arctic.
- Investment is needed in a constant, stable presence with enhanced technological, information assurance, and military capabilities.
- Sustaining Arctic operations is difficult and expensive. Cooperation, collaboration, and coordination are essential.
- An ice curtain is not inevitable. Consider a double-track approach with Russia if their actions toward Ukraine so warrant.
- The Arctic is one aspect of the global chessboard. Russian and Chinese interests are global. Like-minded Arctic nations and stakeholders must also adopt a global perspective.

INTRODUCTION

No longer the region of “high north, low tension,” the Arctic, specifically its security landscape, has undergone an immense transformation and is emerging at the forefront of strategic competition.⁰¹ Russia's invasion of Ukraine imposed an inflection point in Arctic cooperation. As Western cooperation with Russia freezes, Russia is increasingly turning to China for the funding, support, and technology necessary to sustain economic development of the Russian Arctic Zone. While Sino-Russian cooperation is generally considered a limited, mutually beneficial partnership, recent developments include economic investment, technological transfers, military exercises, and a memorandum of understanding between Russian and Chinese border guard units.⁰² Meanwhile, the accession of Finland and Sweden into the North Atlantic Treaty Organization (NATO) has shifted the Alliance's geographical center of gravity northward and reinvigorated NATO's approach to the High North to ensure collective defense along its Northern Flank.

The Arctic is increasingly divided between an emerging Sino-Russian relationship and the seven NATO Arctic Allies. This evolving security landscape serves as the foundation for the annual High North Security Dialogue (HNSD), cohosted by the George C. Marshall European Center for Security Studies (GCMC) and the Ted Stevens Center for Arctic Security Studies (TSC). This year's Dialogue, held under the Chatham House Rule, brought together over 60 regional alumni, security practitioners, senior policymakers, diplomats, industry leaders, and academic experts representing 15 Arctic nations and like-minded stakeholders. Previously known as the European Security Seminar-North series, HNSD 2024 examined the emerging Sino-Russian partnership, transatlantic cooperation, integrated deterrence, and defense of the High North. Participants assessed the impact of climate change, economic and societal development, and innovative technologies on regional security and stability. Building upon the foundational dialogue and findings of previous iterations, this year's cohort sought to exchange perspectives and enhance collective understanding of Arctic security challenges and opportunities.

Importantly, the HNSD explored the emergence of a so-called “ice curtain,” developing actionable policy recom-

mendations oriented to building resilience, advancing transatlantic cooperation, countering hybrid warfare, strengthening deterrence, and defending NATO's Northern Flank.

The findings in this paper do not necessarily reflect the individual views of participants or the hosting institutions, but rather the consensus of the invited experts, reflecting a diverse array of expertise.

BALANCING STRATEGIC COMPETITION AND COOPERATION

The Arctic security landscape is evolving. Climate, economic, geopolitical, and technological trends are catapulting the region to the forefront of security discussions. Russia, under President Vladimir Putin, has demonstrated an increasing propensity to disregard rule of law, international norms, and the sovereignty of other nations, reminiscent of the Soviet Union's approach during the Iron Curtain era. Yet it is impossible to uniformly apply old deterrence theories and strategic approaches to a region that has evolved significantly since the bipolar era of the Cold War. The post-Cold War collaborative unipolar world has given way to an emerging bipolar or even multipolar arrangement, with four primary actors increasingly shaping the security landscape of the High North: NATO Allies, Russia, China, and the European Union. Environmental and economic drivers further complicate the security situation.

Russia

Undoubtedly, Russia has significant legitimate interests in the Arctic—it holds about 53 percent of the Arctic coastline and governs just over half of the Arctic population. In April 2014, Russian President Vladimir Putin noted at a Russian Security Council session that “[the Arctic] is a concentration of practically all aspects of national security—military, political, economic, technological, environmental, and that of resources.”⁰³ Moscow continues to preserve military strength in the Arctic region, with key forces largely unaffected despite the war. Russia is conducting malign, hybrid activities such as GPS jamming that deviate from adherence to international customs and norms. Cutting under-

sea cables and disrupting critical infrastructure are other capabilities Russia is honing. For the Kremlin, the Arctic is both a symbolic and strategic issue; Moscow no longer sees its interests as being served through a cooperative relationship with the West. If, however, Russia perceives cooperation in the region to be in its interests, it will likely do so.

Though Russia had a history of Arctic cooperation stemming from then-Soviet Union President Mikhail Gorbachev's 1987 Zone of Peace speech, the illegal invasion of Ukraine marked a clear turning point in Russian Arctic policy.⁰⁴ With Western cooperation essentially frozen, Russia has turned eastward. The Sino-Russian partnership demands a closer examination, as the “no limits friendship” is predominantly transactional but likely to continue despite mistrust and imbalance.⁰⁵ China has seized upon regional economic and likely security opportunities, using Russia's need for financial and technological support of energy projects to gain footing in Arctic affairs, advance its Arctic expertise, and enhance its long-term presence there. The partnership is also likely one facet of China's and Russia's drive for a different world order.

Yet, despite a number of shared ambitions, the Sino-Russian relationship is complex and imperfect. There is no ice curtain...yet. Russia is focused on developing its northern natural resources and communities but desperately needs foreign economic investment and technology to do so. Its own domestic Arctic strategy has been stymied by the diversion of badly needed resources to fuel its insatiable war machine. China seeks to improve its scientific—dual-purpose—understanding of the region, exploit the Arctic's natural resources, participate in regional governance mechanisms, and develop the northern shipping routes. While China has the capacity to provide Russia with capital, infrastructure, technology, and markets necessary to support some of Russia's regional objectives, a high level of strategic mistrust and misalignment remains. Indeed, some facets of the Sino-Russian relationship seem to reflect signaling to NATO rather than actual cooperation. Nonetheless, the strengthening of the Sino-Russian relationship should be of concern for like-minded Arctic nations and stakeholders.

In addition to the growing strategic cooperation between Moscow and Beijing, the US, NATO Allies, European partners, and other Arctic stakeholders should be keenly aware of the potential for Russia's heightened military presence in the North. Long the dominant actor in the Arctic, Russia has recently adhered to a multitiered approach, integrating hybrid and grey zone activities—illegal, coercive, aggressive, and deceptive (ICAD)—as well as strengthening regional conventional and nuclear capabilities. Moreover, Russia has dismantled key arms-control mechanisms and avenues for cooperation and dialogue.⁰⁶

Moscow is modernizing its military forces—including nuclear forces—and learning and adapting from mistakes in Ukraine. New weapons systems, such as hypersonic missiles, have upended early warning and response mechanisms. Russia has refurbished its northernmost bases and stationed high-end platforms there, further decreasing the reaction time of Western Allies and partners. For instance, a hypersonic missile launched from a base in Franz Josef Land or the waters nearby will provide far less reaction time than a Cold War-era missile launched from Novaya Zemlya. The threat of a future kinetic operation is underpinned by an active hybrid warfare approach, putting near continual pressure on Western governments, infrastructure, and populations.

NATO, EU, Arctic-Nation Partners, and Beyond

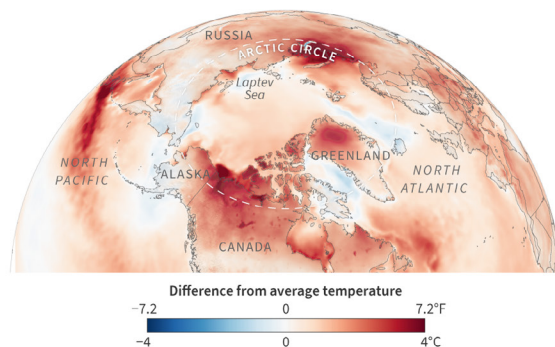
NATO and the EU play a fundamental role in the High North, focused on different but overlapping goals. NATO's primary focus remains on collective security, but the EU can employ soft power capabilities. Sweden and Finland's accessions to NATO, fueled by Russia's aggression in Ukraine, have strengthened the Alliance but have also complicated collective defense. NATO must now defend along a 1,340 km (830 mile) border with Russia. However, Sweden and Finland bring extensive capabilities to the Alliance, consolidating NATO's defense posture in the Baltics while elevating regional activities, deterrence, and defense strategies. Increasingly, the High North is no longer an isolated region, but an extension of NATO's Eastern Flank, with the Baltic Sea acting as a connector. The security architecture of the High North region has fundamentally shifted, even as some political uncertainty persists in the United States' enduring commitment to the transatlantic

relationship. During HNSD, it was noted that while the US has periodic internal political discourse that questions the US commitment to NATO, US policy positions and associated actions to the Alliance have never faltered.

The United States has made a powerful commitment to the region in its new *2024 Department of Defense Arctic Strategy*.⁰⁷ A comprehensive strategy designed for the evolving security environment, it highlights the need to enhance Arctic capabilities, particularly for domain awareness, communications, weather forecasting, and intelligence, engage with Allies and partners, and exercise to improve regional interoperability, particularly within the Alliance. The strategy seeks to preserve the Arctic as a stable region. Indeed, the United States and Russia share a 1,600-mile (2,575 km) nautical border off Alaska, driving the two nations to reach agreement on key fisheries and maritime traffic in the past. Though tensions are increasing, the US Coast Guard maintains professional working relationships through the Bering Strait in order to carry out its missions. Yet tensions with Russia are much higher in the European High North, the most heavily populated, most heavily developed, and most militarized subregion of the Arctic.

As the Arctic becomes increasingly interconnected within the global chessboard, other nations are also looking northward. There are thirteen Arctic Council observer states, with nations such as Japan, South Korea, and Singapore engaging in Arctic research or formulating Arctic policy. BRICS nations are also showing increasing interest. As these non-Arctic nations' capabilities and interests grow, they may seek to further contribute to scientific research, commercial maritime traffic, and economic opportunities in the Arctic, potentially impacting the security environment.

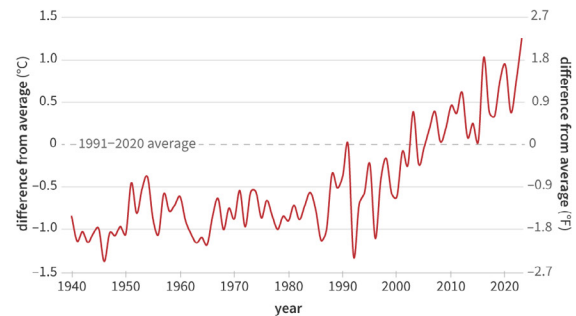
Widespread warmth across the Arctic in summer 2023



Jul-Sep 2023 vs.
Jul-Sep average (1991-2020)

NOAA Climate.gov
Data: C3S ERA5

2023 brought Arctic's hottest summer on record



Jul-Sep average
1940-2023

NOAA Climate.gov
Data: S. Bigalke

Figure 2. Temperatures across the Arctic region in 2023

Climate Change

Climate change remains a central driver of regional environmental trends, notably cooperation and competition. Warming in the region is occurring up to four times faster than the rest of the world.⁰⁸ Changes in the Arctic environment and landscape impact local community resilience and defense operations.

The climate-security nexus is highlighted as permafrost thawing and coastal erosion threaten regional infrastructure. Diminishing sea ice is raising global interest in transpolar routes. 2023 was the hottest Arctic summer on record (fig. 2), and the ice extent was measured as the sixth lowest since 1979, when satellite records first began. Arctic precipitation in 2023 ranked the sixth highest, resulting in wetter and more difficult terrain to operate in. Climate change further affects the fragile ecosystem, altering native fish stocks, reindeer grazing land, and phytoplankton blooms, with effects felt far beyond the Arctic region.⁰⁹ Indeed, climate change is forcing nations to look northward as the physical environment changes. Fishing stocks and thus global fishing fleets are moving northward. An increasingly open Arctic will elevate maritime traffic in the region as well as the exploration and development of natural resources. Arctic nations must be prepared to defend their sovereignty, protect life and property, and uphold

international rules and norms in a region once held to be largely unpassable, unless by a submarine, bomber, or ballistic missile. NATO must shift its thinking to adapt to this new reality.

CHARTING A COURSE: FINDINGS AND RECOMMENDATIONS

BUILDING ARCTIC RESILIENCE

Recommendations

- **Boost Alliance-wide coordination.** Collaboration should be an Alliance-wide effort, focusing on collective rather than individual strength. This necessitates economic cooperation, as economic strength is the backbone of security. Allies should determine which nation is the best provider of a capability, allowing a focus on strengths without duplicating efforts. Further, reforming NATO's Civil Emergency Planning Committee to focus on resilience can help coordinate all aspects of resiliency to ensure efficiency and reduce duplicative efforts. While an Alliance-wide effort is

most desirable, nearer term results may likely be better achieved via a coalition of the willing.

- **Pursue engagement at the political and societal levels.** It is critical to reorient to the evolving strategic environment and jump-start action to improve sustainable economic development and strengthen societal resilience. All willing and capable Arctic stakeholders should be included in regional efforts to ensure stability and security. Transparency is important and requires timely and clear communications.
- **Strengthen human security.** Climate change is redefining economic and human security across the Arctic subregions. Notably, local and indigenous communities are particularly vulnerable to the significant environmental and ecosystem changes, yet these communities are often absent from broader regional discussions. Many Arctic indigenous groups have inhabited the region for thousands of years. Over forty ethnic groups with myriad cultural, historical, and economic backgrounds compose the indigenous population in the Arctic.¹⁰ Arctic states should further integrate indigenous knowledge, perspectives, and awareness into security discussions and policy.
- **Enhance comprehensive security.** Nordic nations have long embodied the comprehensive security concept, which should be replicated as possible across the High North. With the Baltic Sea now serving as a connector of the European continent to the Arctic, comprehensive security should be exported and adapted to advance national resilience.
- **Invest in the defense industrial base.** The defense industrial bases in Western nations has diminished since the early 1990s and end of the Cold War. Countries should reinvigorate defense industries in coordinated and meaningful ways to increase capacity. New technologies, such as unmanned platforms, artificial intelligence (AI), and quantum computing have particular applicability to the Arctic environment. Governments and industry should work together to develop necessary capabilities.
- **Improve critical infrastructure redundancies.** Due to significant vulnerabilities in undersea cables, efforts

should be made to seek innovative solutions to ensure reliable communications and data exchanges. Similarly, energy infrastructure is vulnerable and often lacks redundancies. Governments, in concert with industry, should enhance all-domain awareness, introduce redundancies, and reduce vulnerabilities. Additionally, transportation infrastructure should be prioritized, ensuring both North – South and West – East movement are possible. Faster permitting for infrastructure, access to private capital, and strengthening the work force could drive investment in this area. Nations should invest in their own infrastructure rather than providing an opportunity for China to gain a foothold.

- **Improve all-domain awareness.** From seabed to space, quantum computing may assist with the processing of massive amounts of data to assist with intelligence and surveillance, improving awareness in all domains.
- **Ensure hotlines.** Direct communications with Russian counterparts are nearly nonexistent. Enhanced coordinating mechanisms will reduce the risk of escalation due to misunderstandings and misperceptions.
- **Bolster all-domain resilience.** The challenges of the Arctic geophysical environment reduce resiliency, with limited options for infrastructure, logistics, and communications. A multifaceted approach is recommended, focusing on cyber and communications as much as health and transportation. Cooperation in solving these regional challenges inherently builds resilience.

ADVANCING TRANSATLANTIC COOPERATION

Findings

The 75th anniversary of NATO serves as a reminder of the historic importance for transatlantic security partnership, but also, with the backdrop of changing geopolitical dynamics, this milestone underlines the necessity of sustaining and expanding military cooperation. Both NATO and the EU play a fundamental role in the Arctic region, fo-

cused on different but overlapping goals. NATO's primary focus remains on collective security, but the EU can employ soft power capabilities. Enhancing interinstitutional cooperation is crucial to effectively and sufficiently address security concerns. The EU's willingness to play a larger role in European security and defense policy through its *Strategic Compass* and the third Joint Declaration on EU-NATO cooperation in 2023 are foundational for military collaboration.¹¹

Like-minded Arctic nations and stakeholders should intensify cooperative efforts to provide sufficient resources to develop key technologies, secure trade routes, advance economic robustness, and enhance crucial research. Important cooperation has been conducted within the framework of the US-EU Trade and Technology Council (TTC), with the sixth Ministerial meeting affirming closer and continuous partnership specially on critical and emerging technologies, communication, supply chains and the green energy economic transformations.¹² Indeed, efforts must connect across industry, society, technology, and scientific efforts in order to truly be successful (fig.3).

The foundation of societal transatlantic cooperation moving forward lies in shared values and cultural ties. To strengthen these connections, we propose a focus on bottom-up grassroots movements and the building of interpersonal relationships, particularly through people-to-people and Indigenous initiatives.

Nordic Arctic relations with Russia have cooled and the evolving strategic landscape necessitates a new approach to trans-Atlantic cooperation. The recommendations outlined below are intended to replace local initiatives previously conducted under the Barents Euro-Arctic Council (BEAC). The Barents cooperation collapsed rapidly following the outbreak of war in Ukraine, and the reintegration of Russia into these cooperative frameworks is unlikely in the near future. The loss of trust and personal connections built over decades will take at least one generation, if not more, to rebuild. For example, pro-Russia demonstrations by Russians have occurred in Kirkenes since the war in Ukraine began. In March of this year, Russians in Norway, including those in Svalbard, Kirkenes, and Oslo, participated in the Russian election, with high turnout rates in some

areas (Barentsburg: 82.61 percent; Kirkenes: 75.38 percent; Oslo: 49.85 percent).¹³ This highlights the need for Nordic nations to reassess and realign cooperative efforts.

Recommendations

- **Promote educational exchanges.** Educational cooperation of Arctic stakeholders should be bolstered by expanding programs such as Fulbright and Erasmus+. ¹⁴ Erasmus+ concentrates on educational and vocational mobility, emphasizing capacity building, institutional collaboration, and skills development, while Fulbright is a US-funded program aimed at increasing understanding. Given the vast geographical distances involved, like-minded Arctic nations and partner nations should promote virtual exchange programs to increase accessibility and encourage joint degree programs between universities. One promising avenue for this is the COIL (Collaborative Online International Learning) program developed by the State University of New York (SUNY). This educational initiative, which brings students from different countries together in online seminars, is well-suited for like-minded Arctic nations and partners such as Japan and South Korea, fostering intercultural competency. There may even be potential to include India to broaden COIL's influence.
- **Increase youth engagement.** It is important to engage emerging and future leaders, investing in the next generation through
 - Transatlantic youth forums focusing on regional and global challenges
 - Summer camps and workshops centered on youth leadership and civic engagement
 - Online mentorship programs connecting youth with industry experts
 - Organizing hackathons and innovation contests for transatlantic teams created through COIL, potentially partnering with organizations like Tokyo Hackerspace

- **Undertake cultural initiatives.** Like-minded Arctic nations should support arts and cultural initiatives, particularly through artist residency programs that foster creative collaborations across borders.
- **Expand civil society partnerships.** To strengthen civil society connections, sister cities programs across the Arctic should be enhanced. The potential also exists to create sister regions. These partnerships facilitate people-to-people diplomacy and allow joint work on common social issues. This increases support for organizations developing transatlantic projects. Digital collaboration should be leveraged through online platforms. Other organizations to leverage include the Arctic Economic Council and the Arctic Mayors Forum. Indigenous, local communities, international, and industry voices should be included to improve co-operation.
- **Strengthen civilian-military partnerships.** The Arctic Security Roundtable can strengthen civ-mil cooperation and build linkages between various fora, such as the Arctic Security Forces Roundtable (ASFR) and Arctic Chiefs of Defense (ACHODs).
- **Align efforts on critical minerals.** Given the vital role of rare earth elements (REE), there is an urgent need to work more closely to identify, extract, transport, refine, and produce REE to reduce strategic vulnerabilities. Building on the 2023 EU Critical Raw Materials Act and the November 2023 EU-Greenland strategic partnership on critical minerals, the EU and NATO should cooperate to facilitate common investment and development of REE resources.¹⁵
- **Expand scientific cooperation.** Due to climate change, like-minded stakeholders should strengthen collaborative research efforts to improve understanding of the climate-related changes in the region. European nations are already shifting research efforts to the North American Arctic; data-sharing and access can enhance modeling. Cooperation with Russia and China should be considered where possible and necessary, particularly on environmental matters, crisis response, and search and rescue.
- **Enhance cohesion.** Demonstration of unity and resolve is foundational to building resilience. Working together facilitates risk management and each nation

must work towards the reduction of risks by being prepared for horizontal or vertical escalation.

COUNTERING HYBRID WARFARE

Findings

Attacks on critical infrastructure such as sabotage and external interference in communications and energy infrastructure have become an undeniable reality in the High North. These incidents highlight vulnerabilities of key security architecture. Recent examples include damaging communication cables between Norway's mainland and archipelago Svalbard in January 2022 and between Finland and Estonia in October of 2023.¹⁶ Moreover, on the same day in October, the Baltic connector gas pipeline was targeted, mirroring similar disruptions of the Nord Stream 1 and 2 pipelines the year prior.¹⁷ These instances underline the susceptibility of critical infrastructure and the need for multilateral action by like-minded Arctic nations and stakeholders. NATO has responded by enhancing presence in the Baltic Sea and North Sea and establishing a Maritime Centre for Security of Critical Undersea Infrastructure.¹⁸

In the digital sphere, nations face increased cyber interference and espionage. Following the announcement of Finland's and Sweden's intention to join NATO, cyber security attacks multiplied, targeting public and private institutions and infrastructure.¹⁹ In response, Nordic countries ramped up defensive and response capabilities and are seeking to deepen regional cooperation in cyber defense with Baltic states.²⁰ NATO has taken critical steps with the 2016 *Cyber Defence Pledge* and 2023 *Cyber Defence Conference*, and it established an *Integrated Cyber Defence Centre* in 2024.²¹ Safeguarding the High North's ability to communicate and exchange data is of the utmost importance for ensuring Arctic security.

Recommendations

- **Develop hybrid deterrence.** Arctic stakeholders should focus on deterring hybrid warfare as much as building resiliency. New approaches should emphasize the ability to deter hybrid and nonkinetic operations through improvements in infrastructure, societal resilience, redundancies, improved awareness and monitoring, and clear signaling of capabilities. Like-minded

ed Arctic nations should establish a baseline doctrinal and policy approach that includes both physical and technical aspects to credibly deterring hybrid threats. Emerging technology should be engaged to attribute hybrid attacks, and High North stakeholder nations must have the political will to call out threats once discovered.

- **Protect critical infrastructure.** The multifaceted requirement to protect critical infrastructure requires expanding defense industrial bases, developing redundancy or alternate infrastructure, protecting exposed assets such as undersea cables, and cataloging critical infrastructure to identify vulnerabilities. Multilateral cooperation to achieve enhanced domain awareness is essential to protecting data and communications cables. Unmanned systems may facilitate undersea domain awareness and solutions should be explored through innovative programs like NATO's DIANA and the EU's IRIS² project.²²
- **Increase hybrid threat awareness.** Viewing hybrid warfare as a holistic threat within a broader campaign rather than as singular events will ensure appropriate resource allocation. Policymakers and society in like-minded Arctic nations should be educated on hybrid threats to better confront and deter them. Achieving information resilience is increasingly challenging in modern society. This requires a multitier approach, including
 - Educating publics (including youth) on mis/dis-information and hybrid threats
 - Countering lawfare through strategic messaging
 - Incentivizing youth civic participation
- **Strengthen cyber protection teams.** Arctic stakeholders should prioritize defensive and offensive protection, enabling teams to hunt forward to detect threats as a first line of defense.
- **Counter foreign influence.** Governments in these nations should work together to regulate and monitor foreign investment, attendance at universities, and

research. Deliberate screening of investments should take place, and information about nefarious actors should be shared across borders.

STRENGTHENING DETERRENCE

Findings

Russian and Chinese cooperation in the security realm is increasing. The Chinese Coast Guard and Russian FSB Border Guard Service signed a memorandum of understanding in 2023 that includes collaboration within Arctic waters.²³ More frequent exercises between Russian and Chinese forces demonstrate a growing level of interoperability.²⁴ *The US National Defense Strategy*²⁵ 2022 and the *Arctic Strategy* 2024 highlight the importance of integrated deterrence. NATO updated its defense and deterrence strategy, adopting new regional plans, a new NATO force model, and improving integrated air and missile defense.²⁶ Deterrence is key to avoiding war, and the recommendations are offered with this in mind.

Recommendations

- **Engage in deterrence by denial, deterrence by cost-imposition, and deterrence by resilience.** New theories must be developed to reflect the modern landscape, finding a balance between deterrence options. Most importantly, deterrence can only be successful with clear capability, commitment, and communication.
- **Demonstrate Resolve and Unity.** Resolve and unity are critical; failure to credibly demonstrate both will enable malign actors. Like-minded nations should increase information-sharing, technical innovation of equipment, and regional adaptability. It is vital to credibly convey the capabilities and commitment of the Alliance in order to effectively deter adversaries.
- **Integrate forces.** Training and exercising together ensures interoperability and interchangeability. The Nordic air cooperation--approximately the same size as the Royal Air Force--is a superb example of how

to maximize capabilities of smaller but highly capable nations. National exercises can become multilateral or Allied exercises. Including coast guards, interagency communities, and civil society is an important component of comprehensive deterrence.

- **Recapitalize key capabilities.** Following the Cold War, many Arctic-capable assets were retired and not replaced. It is imperative to recapitalize capabilities, including submarine fleets and shipbuilding programs. Implementing ICE Pact will be transformational in generating icebreaking capabilities for the Alliance.²⁷
- **Enhance tech and military capabilities.** New technologies should be examined for potential application in the Arctic, prioritizing technology best suited for the difficult operating environment. For example, satellite capabilities can be enhanced to provide enhanced command and control; hybrid terminals can be configured to receive information.
- **Cooperate closely with the EU.** In areas of overlapping interest, Allies should strengthen cooperation with the EU. For example, resilience, countering hybrid and cyber threats, military mobility, defense capabilities development, defense industry and research, and exercises all provide opportunities for coordination.
- **Strengthen the Defense Industrial Base.** Most Western nations have a decimated industrial base and lack of a skilled workforce. Investing in these will improve abilities to bring enhanced capabilities to the theater, strengthen societal resilience, and act as a deterrent to adversaries.
- **Expand force rotations.** Posture matters. Rotating forces in the Arctic creates both a deterrent effect and enhanced capabilities to operate in a notoriously challenging environment. Like-minded Arctic nations and stakeholders should consider a permanent Arctic presence using the Joint Expeditionary Force and an expansion of the current Icelandic Air Policing mission. A standing NATO maritime group for the High North may be necessary in a blue Arctic. The Arctic region's geographic expanse, limited infrastructure, and remote population centers make it critical to work together to ensure capability.

- **Integrate strategic communications efforts.** The deterrence effects of capabilities and commitment are wasted if they are not effectively communicated. Strategic communications must be integrated to successfully promote the capabilities and resolve of like-minded Arctic stakeholders.

- **Include additional like-minded nations.** Deterrence is global. With the hyper connectedness of the global security landscape, it is important to understand how the Arctic intersects with global interests. No longer is the Arctic immune from broader security challenges; it should be viewed as part of the global chessboard. As a consequence, there is an opportunity to increase cooperation with partners in Asia (particularly Japan, South Korea, and Singapore), as well as with European Arctic stakeholders.

DEFENDING THE NORTHERN FLANK

Findings

The geographical center of gravity of NATO has shifted northward. With renewed focus, NATO held *Steadfast Defender 24* in January, its largest post-Cold War exercise, involving +90,000 military personnel.²⁸ This included *Nordic Response 2024*, with +20,000 soldiers, 50 ships, 110 aircraft from 14 countries exercising in the challenging High North. National, bilateral, and multilateral exercises are a critical step in enhancing capabilities.²⁹ Nordic states have collaborated to protect airspace and sovereign territory as detailed in *Vision 2030*.³⁰ Sweden and Finland must be integrated quickly into all aspects of the Alliance, from exercises and operations to command and control. Doing so will enable NATO to provide a credible collective defense of all Allies.

Recommendations

- **Emphasize technological solutions and resource strategies appropriately.** Innovation is key. Western technology and capabilities are still dominant in many domains, but China has a robust industrial base, with resourcing aligned for global aspirations. Western nations are behind in industrial capacity and workforce capabilities. Nations must prioritize technological

solutions while funding strategies appropriately to enhance industrial base and workforce capacity.

- **Meet presence with presence.** Presence is necessary to promote safety, security, and the international rules-based order. Allied assets must be present in a manner that highlights capabilities and strength of the force.
- **Provide the right logistical support and infrastructure.** The Arctic is a difficult area to operate in. Each subregion has distinct characteristics that affect protocols; tactics, training, and procedures (TTPs); and operations. It is a demanding environment with extreme cold, prolonged darkness or daylight, and harsh weather. Those operating in the region must have tailored and relevant logistical support and infrastructure to prevail.
- **Align command and control (C2).** A clear command-and-control structure established before the onset of active conflict helps risk mitigation and management. NATO and nations should continue to stress C2 structures to optimize for any future scenario.
- **Beware of creating a security dilemma.** New capabilities are undoubtedly needed to improve the Arctic defense posture, but leaders should seek to avoid triggering an arms race. This may be achieved by focusing on defensive capabilities, improving critical challenges like domain awareness and ISR first, and ensuring dialogue.
- **Avoid Arctic escalation.** It is important to avoid unnecessary competition in the Arctic. This requires transparency and clear communication of intent, particularly for exercises, infrastructure development, and operations. Focus should be on posture and deterrence, but with an eye on stability.
- **Include the potential for spillover in Arctic operational planning.** While the likelihood of conflict beginning in the Arctic is low, it is well positioned for spillover conflict due to the proximity to Russia's strategic forces and Northern Fleet. Tensions may quickly spread across the Baltic Sea into the North.
- **Convey steadfast resolve.** While capabilities and interoperability are critical, ultimately resolve and pre-

paredness will determine the outcome of any conflict. It is crucial that NATO demonstrates unity, commitment, and unwavering resolve to the Washington Treaty of 1949, including Article 5.

CONCLUSION

Like-minded Arctic nations and stakeholders must foster a long-term commitment to strengthen comprehensive security and defensive capabilities. This approach will enhance resilience in people-to-people ties, allowing them to withstand political challenges and counter strategic competitors. Active engagement in transatlantic initiatives across all sectors of society is a key component to enabling this objective. Instead of the term "soft power," participants used the term "smart power" to describe such efforts. By investing in both human connections and physical infrastructure, like-minded Arctic nations and stakeholders can build a more robust and resilient transatlantic partnership for the future.

It is vital to remain vigilant, advance integrated deterrence, and strengthen collective defense. With the accession of Sweden and Finland, NATO's Eastern Flank stretches from the High North to the Baltic Sea to the Black Sea. This interconnectedness has altered the security dimension of the High North. NATO's three core tasks of collective defense, crisis management, and cooperative security should be at the forefront of those operating in the Arctic region. Climate change is increasing access and like-minded Arctic nations and stakeholders must be well positioned to defend sovereignty rights in this strategically important region.

While the cooperation between Russia and China in the Arctic may continue to evolve, there are opportunities to keep a proverbial Arctic "ice curtain" from developing. Like all nations, Russia will continue to act in its national interests, as will China. Russia, as the junior partner, may become threatened by China's long-term objectives for the Arctic. When Russia's and China's Arctic interests diverge, their cooperation may dissipate. Meanwhile, like-minded Arctic nations and stakeholders should remain mindful that none of the preexisting forums for the Arctic region fully address the wide array of indigenous, international, inter-ministerial/agency, industry and scientific (4IS) issues facing the Arctic Region. As a result, extensive collab-

oration, communication, and cooperation are required to make informed decisions pertaining to the safety, security, and stewardship of the Arctic region, with the goal of shifting the region back towards one of cooperation rather than one of competition or even worse, conflict. Above all, the Alliance must demonstrate the capabilities and commitment to collective defense of the High North.

A NOTE ON COURSE METHODOLOGY AND STRUCTURE

The High North Security Dialogue (HNSD) utilized a rigorous academic approach that incorporated background readings, briefings from subject matter experts, focused plenary discussions, and seminars to exchange perspectives. This year's goals were to:

- Examine High North security challenges and opportunities, assessing the impact of an emerging Sino-Russian partnership and evaluating climate-driven regional trends;
- Analyze integrated deterrence, collective defense, and cooperative security in the High North as NATO's center of gravity shifts northward with the accession of Finland and Sweden;
- Enable dialogue and strengthen cooperative networks to advance mutual understanding and capacity for addressing regional security challenges; and
- Develop actionable policy recommendations in order to address the implications of an emerging Sino-Russian partnership and to recommend measures to build resilience, advance transatlantic cooperation, counter hybrid warfare, strengthen deterrence, and defend NATO's Northern Flank.

HNSD began with keynote addresses from senior US and German officials. The keynote remarks were foundational, providing insightful expertise to consider when developing policy considerations. In order to achieve the course objectives, HNSD organized plenary and seminar sessions around focused themes.

Day 1: Understanding the Evolving Strategic Environment

The dialogue first explored the development of a so-called ice curtain along NATO's Northern Flank, reflecting on

the strategic significance of the circumpolar Arctic, new US Department of Defense Arctic Strategy, and evolving Russian and Chinese relationship. The cohort discussed strategic approaches to the Arctic and sought to better understand opportunities for international cooperation in the Arctic. Further, HNSD highlighted the increasing interconnectedness between the Arctic and global strategic environment.

Day 2: The Arctic as a New Frontier of Strategic Competition

The Arctic is deeply affected by broader climate, geopolitical, and economic trends. The region is increasingly important for energy security, with significant potential for oil, gas, and renewable resources. Possessing significant fisheries and large deposits of minerals, the Arctic is attracting global attention. Arctic communities are directly impacted by both the pursuit of natural resources and environmental change, such as unprecedented permafrost thaw, coastal erosion, and changes to the fragile ecosystem. The participants considered economic challenges and opportunities, particularly as they impact energy security and human security. HNSD further examined innovative new technologies and their potential applications to a region well known for extreme weather, polar anomalies, limited infrastructure, and vast, remote territories. With this backdrop, HNSD discussed transatlantic cooperation between like-minded Arctic states and stakeholders to overcome challenges and advance common objectives.

Day 3: The Emerging Ice Curtain

During the peace dividend years following the fall of the Soviet Union in 1989, the High North enjoyed three decades of unprecedented cooperation and general adherence to international norms and customs. Yet the war in Ukraine marked the end of the "High North, Low Tension" era, when circumpolar cooperation was frozen in response to Russian aggression. The Arctic Council currently has limited functionality, given the cessation of senior-level dialogue. Russia has increasingly turned to China to replace Western investment and technology necessary to develop its Arctic zone. The Alliance now includes seven of the eight Arctic nations and about half of the Arctic territory. NATO is seeking to strengthen deterrence in response to Russia's aggression, and the regional security dilemma is becoming more pronounced, with few mechanisms remaining to mitigate or lessen the evolving security dilemma. Day 3 discussions examined the security environment

and proposed measures to strengthen deterrence and defense in the region while exploring opportunities to mitigate a spiraling security dilemma that may have unintended consequences of escalation. It also included experiential learning about the climate changes driving regional trends.

Day 4: Securing the Northern Flank

The final day of HNSD focused on the future of the High North, with unique insights from senior security practitioners on securing NATO's Northern Flank. Panelists provided an overview of the security environment. Discussions focused on the potential for hybrid warfare in the High North, particularly given the prevalence of critical infrastructure such as subsea data and power cables and the extensive oil, gas, and renewable energy infrastructure. Multidomain awareness and polar communications continue to present challenges for forces operating in the region. Participants presented recommendations on building resilience, advancing transatlantic cooperation, countering hybrid warfare, strengthening deterrence, and defending the Northern Flank.

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Endnotes

- 01 "The Future of the High North," NATO OTAN Allied Command Transformation (website), May 12, 2023, <https://www.act.nato.int/>.
- 02 Thomas Nielsen, "FSB Signs Maritime Security Cooperation with China in Murmansk," Barents Observer, April 25, 2023, <https://thebarentsobserver.com/>.
- 03 Vladimir Putin, Address to Russian Security Council (Meeting of the Security Council on State Policy in the Arctic, Moscow, April 22, 2014), <http://en.kremlin.ru/>.
- 04 Ronald Purver, "Arctic Security: The Murmansk Initiative and Its Impact," *Current Research on Peace and Violence* 11, no. 4 (1988), <https://www.jstor.org/>.
- 05 Lingling Wei, "China Declared Its Russia Friendship Had 'No Limits.' It's Having Second Thoughts," *Wall Street Journal*, March 3, 2022, <https://www.wsj.com/>.
- 06 Jessica Rogers, Matt Korda, and Hans M. Kristensen, "The Long View: Strategic Arms Control after the New START Treaty," *Bulletin of the Atomic Scientists* 78, no. 6 (2022), <https://doi.org/>.
- 07 Lloyd J. Austin III, *2024 Department of Defense Arctic Strategy* (Washington, DC: Department of Defense [DoD], June 2024), <https://www.hsdl.org/>.
- 08 Mika Rantanen et al., "The Arctic Has Warmed Nearly Four Times Faster than the Globe since 1979," *Communications Earth & Environment* 3, no. 168 (2022), <https://doi.org/10.1038/s43247-022-00498-3>.
- 09 Richard L. Thoman et al., "2023 Arctic Report Card" (Washington, DC: National Oceanic and Atmospheric Administration, December 12, 2023), <https://www.climate.gov/>.
- 10 "Arctic Indigenous Peoples," Arctic Centre, University of Lapland (website), accessed September 26, 2024, <https://www.arcticcentre.org/>.
- 11 "A Strategic Compass for a Stronger EU Security and Defence in the Next Decade," European Council, March 21, 2022, <https://www.consilium.europa.eu/>; and "NATO and European Union Leadership Sign Third Joint Declaration," North Atlantic Treaty Organization (NATO) (website), January 10, 2023, <https://www.nato.int/>.
- 12 "US-EU Joint Statement of the Trade and Technological Council" (Washington, DC: The White House, April 5, 2024), <https://www.whitehouse.gov/>.
- 13 Pavlo Krasnomovets, "Russere i Norge gikk til valg," *Aftenposten*, March 20, 2024 (updated April 24, 2024), <https://www.aftenposten.no/>.
- 14 "Erasmus +: EU Program for Education, Training, Youth and Sport," European Commission (website), accessed November 4, 2024, <https://erasmus-plus.ec.europa.eu/>; and Fulbright: A Global Network of Changemakers. <https://www.fulbrightprogram.org/>.
- 15 Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials and Amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020, Document 02024R1252-20240503, European Union, EUR-Lex, <http://data.europa.eu/>; and "EU and Greenland Sign Strategic Partnership on Sustainable Raw Materials Value Chains" (Brussels: European Commission, November 30, 2023), <https://ec.europa.eu/>.
- 16 Niels Nagelhus Schia, Lars Gjesvik, and Ida Rodningen, "The Subsea Cable Cut at Svalbard January 2022: What Happened, What Were the Consequences, and How Were They Managed?," Policy Brief 1/2023, Norwegian Institute of International Affairs, <https://www.nupi.no/>; Havard Guldahl and Inghild Eriksen, "This is What the Damaged Svalbard Cable Looked Like When It Came up from the Depths," NRK Norwegian Broadcasting Corporation, updated May 27, 2024, <https://www.nrk.no/>; and Mark Trevelyan, "Russian Firm Says Baltic Telecoms Cable Was Severed as Chinese Ship Passed Over," Reuters, November 7, 2023, <https://www.reuters.com/>.
- 17 Jon Henley and Jillian Ambrose, "Undersea Pipeline Damage Appears to be Deliberate, Says Finland," *Guardian*, October 10, 2023, <https://www.theguardian.com/>; and Philip Oltermann, Peter Beaumont, and Dan Sabbagh, "European Leaders Blame Sabotage as Gas Pours into Baltic from Nord Stream Pipelines," *Guardian*, September 28, 2022, <https://www.theguardian.com/>.

-
- 18 “NATO Officially Launches New Maritime Centre for Security of Critical Undersea Infrastructure,” NATO Allied Maritime Command (website), May 28, 2024, <https://mc.nato.int/>.
- 19 Alexander Martin, “Finland Sees Fourfold Spike in Ransomware Attacks since Joining NATO, Senior Cyber Official,” Record, August 3, 2023, <https://therecord.media/>; and Kinjal Patel, “Sweden Continues To Be a Prime DDoS Target as They Join NATO,” NETSCOUT, May 2, 2024, <https://www.netscout.com/>.
- 20 “Nordic Council: Cyber Threats Should Be Tackled By Way of Closer Co-operation,” Nordic Co-operation (website), April 10, 2018, <https://www.norden.org/>.
- 21 “Cyber defence,” NATO (website), July 30, 2024, <https://www.nato.int/>.
- 22 “Defence Innovation Accelerator for the North Atlantic (DIANA),” NATO, accessed November 4, 2024, <https://www.diana.nato.int/>; and “IRIS²: Infrastructure for Resilience, Interconnectivity, and Security by Satellite,” European Union, March 2023, <http://www.euspa.europa.eu/>.
- 23 Thomas Nilsen, “FSB Signs Maritime Security Cooperation with China in Murmansk,” Barents Observer, April 25, 2023, <https://thebarentsobserver.com/>.
- 24 Vladimir Soldatkin and Antonov Dmitry, “Putin Casts Naval Exercise with China as Bid to Counter US in the Pacific,” Reuters, September 10, 2024, <https://www.reuters.com/>.
- 25 Lloyd J. Austin III, 2022 National Defense Strategy of the United States of America (Washington, DC: DoD, October 27, 2022), <https://media.defense.gov/>.
- 26 “Deterrence and defence,” NATO (website), July 1, 2024, <https://www.nato.int/>.
- 27 “Joint Statement on ICE Pact” (Washington, DC: The White House, July 11, 2024), <https://www.whitehouse.gov/>.
- 28 Jonathan Beale, “Sweden and Finland Join NATO’s Biggest Military Exercise in Decades,” British Broadcasting Corporation, March 11, 2024, <https://www.bbc.com/>.
- 29 “Steadfast Defender 24,” NATO (website), March 8, 2024, <https://www.nato.int/>.
- 30 Gerard O’Dwyer, “Nordic Nations Move to Link Air Forces into 250-Strong Aircraft Fleet,” Defense News, March 24, 2023, <https://www.defensenews.com/>; and “Joint Vision to Enhance Nordic Defence Cooperation,” Government Offices of Sweden (website), April 30, 2024, <https://www.government.se/>.