FINABEL
THE EUROPEAN LAND FORCE
COMMANDERS ORGANISATION

SEPTEMBER 2025

NATO's Renewed Arctic Commitment: Strategic Adaptation to Climate Change, Russian Ambitions and Chinese Expansion

Giustiniano Cesare Vasey
Defence & Security Research Department

RESEARCH REPORT

FINABEL
THE EUROPEAN LAND FORCE
COMMANDERS ORGANISATION

Defence & Security Research Department

Written by: **Giustiniano Cesare Vasey**
Supervised by: **Kevin Whitehead & Elise Alsteens**
Edited by: **Theodora Posta**

FINABEL's Research Reports are concise, research-driven publications designed to keep Europe's defence community informed about the latest strategic, military, and geopolitical developments. Released three times per week, these short-form papers offer timely analysis on emerging trends affecting European land forces. Each Research Report is produced by the researchers of FINABEL's Permanent Secretariat, in the goal of supporting decision-making across the European defence landscape.

RESEARCH REPORT

Introduction

The Arctic's security environment is undergoing rapid, but profound transformations. The extreme and multiplying effects of climate change in the region are setting the scene for the re-emergence and re-militarization of the Russian north, along with a growing Chinese influence. In fact, the High North is emerging as a theatre of critical geopolitical importance. According to the Arctic Monitoring and Assessment Programme (AMAP), the region can be delimited as "the terrestrial and marine areas north of the Arctic Circle (66°32′N), and north of 62°N in Asia and 60°N in North America", modified to include further areas of North America and the North Atlantic (2017, p. 4), as shown in Figure 1.

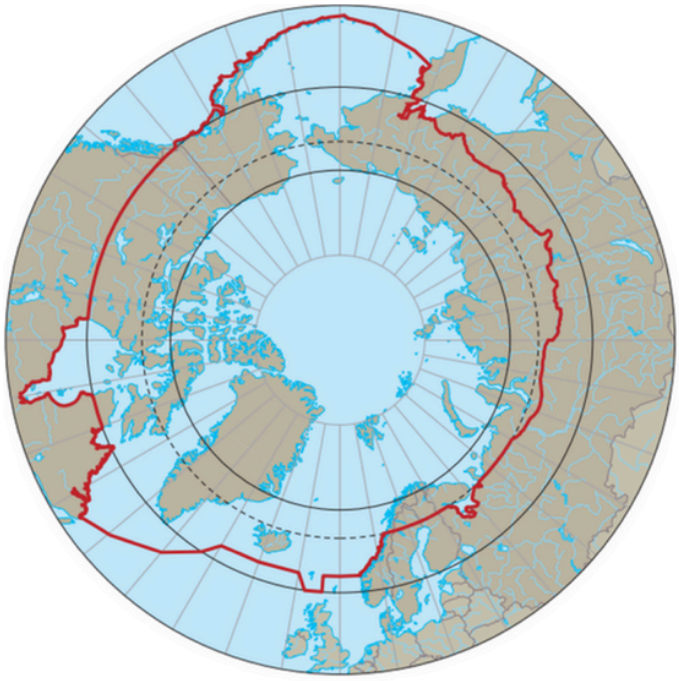


Figure 1. The Arctic [Arctic Monitoring and Assessment Program 2017, p.4],

Climate change has been affecting the Arctic like no other region in the world. During the last four decades, the region has been warming four times faster than the global average (Rantanen et al., 2022). The focus of this paper is set on how these rapid environmental developments are changing the security environment of the High North. In particular, it showcases how Russia's reinforced militarization and China's growing involvement are shaping NATO's revived commitment in the Arctic. The discussion will start by first presenting NATO's historical role in the region, followed by an assessment of the consequences brought NATO's historical role in the region, followed by an assessment of the consequences brought along by climate change. Thirdly, the attention will be dedicated to Russia's and China's ambitions in the High North. Lastly, the discussion will conclude with an analysis of NATO's expanding policies in Arctic, in response to the new threats mentioned up until that point.

1. NATO's historical involvement in the High North

NATO has always been, to a substantial degree, an Arctic Alliance. Meteorological data collected in the High North has allowed the prediction of weather conditions further south with much greater certainty, a key advantage in military operations (Bykova, 2024a). Once the Cold War intensified, the Arctic assumed an

even more vital role in the bipolar competition between NATO and the Soviet bloc. Both sides soon realized that rapid nuclear attacks could be carried out through the North Pole. First, by long-range bombers, followed by intercontinental ballistic missiles (ICBMs), and then submarine launched ballistic missiles (SLBMs) (Townsend & Kendall-Taylor, 2021).

Soviet industrialization and militarization plans through the first half of the twentieth century had made the Russian north the most developed Arctic region in the world. By the 1960s, over five-hundred industrial settlements were present in the area (Bruno & Kalemeneva, 2023). The Kola peninsula, positioned east of Norway and home to the Russian Northern Fleet, hosted an impressive nuclear arsenal, along with warships, icebreakers, submarines and ballistic weapons (Bykova, 2024a). In response to the Soviet's capabilities, NATO allies invested billions into air defence and anti-submarine warfare. In particular, the US and Canada jointly installed sophisticated military installations into North America's remote Arctic. These included the North Warning System (WAS) and the Distant Early Warning (DEW). This array of warning radars was organized under the North American Air Defense Command (NORAD) (Townsend & Kendall-Taylor, 2021), which worked in conjunction with NATO (Bykova, 2024a).

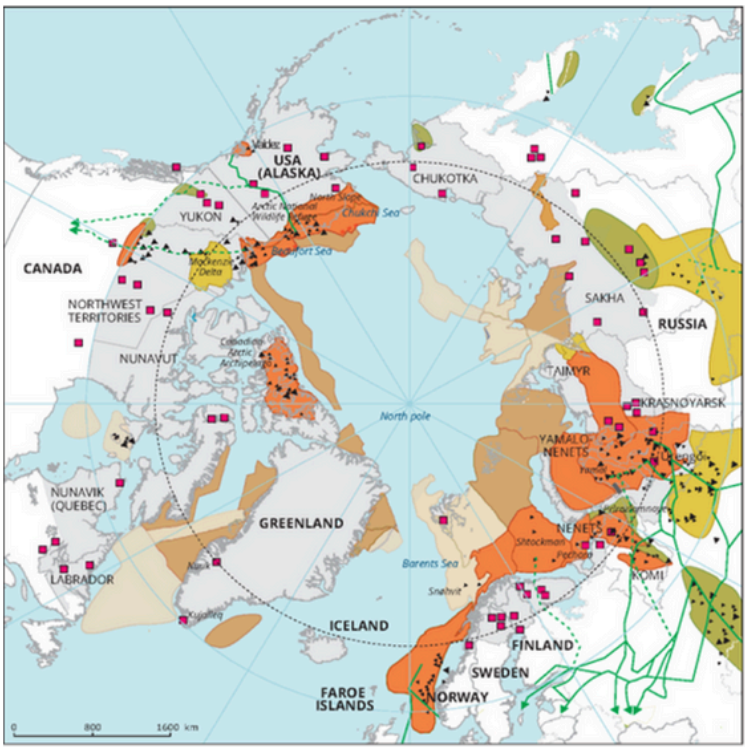
The Arctic areas under most pressure in the NATO-Soviet confrontation were those belonging to Norway, including its Svalbard islands, and the Greenland-Iceland-UK (GIUK) Gap. Norway, the northern flank of the Alliance in Europe at the time, represented the first line of defence against the Russian forces stationed in the Kola peninsula. Additionally, the remote and freezing conditions made the area extremely difficult to defend against an attack (Strauss & Wegge, 2024). NATO's northernmost command, the Allied Forces Northern Europe (AFNORTH), was established in Kolsås, near Oslo (Strauss & Wegge, 2024), along with other installations in Bodø and Vardø (Bykova, 2024a). The Norwegian Svalbard archipelago, despite its strategic importance, was not militarized, due to the 1920 Svalbard Treaty guidelines, to avoid escalating the confrontation with the Soviets (Bykova, 2024a). The second paramount pressure point during the Cold War was the GIUK Gap, considered by both sides a strategic gateway. Due to the formidable Soviet submarine fleet, capable of launching nuclear warheads, NATO's efforts were focused on retaining the gap as a defensive line, while also adding strategic pressure to Soviet defence calculations (Childs, 2022).

Once the Cold War came to an end and the Soviet bloc dismembered, the Arctic region experienced a considerable lowering of tensions and competition. Gorbachev's 1987 speech in Murmansk foresaw the "desecuritization" of the Arctic, so to make it a "zone of peace" (Åtland, 2008, p. 289). Indeed, the two decades that followed were characterized by what commentators have called 'Arctic exceptionalism', marking a period of peaceful cooperation (Devyatkin, 2023). In 1996, this attitude culminated into the creation of the Arctic Council (AC), an international forum composed of the eight Arctic countries and further permanent participants representing indigenous populations (Arctic Council, n.d.). In the latter half of the 2000s, these exceptional circumstances of cooperation will be set aside once again, with the emergence of a renewed aggressive security environment.

2. Climate change: a threat-multiplying factor

Climate change represents an impactful, intervening variable for the security environment of the Arctic. As already mentioned, the current global environmental crisis has amplified effects in the region, having raised the temperature four times faster than anywhere else since 1979, a phenomenon called 'Arctic amplification' (Rantanen et al., 2022). This drastic change in temperature holds many irreversible natural consequences: erosion of coastlines, permafrost thawing, wildfires, rising sea levels and the disappearance of sea ice. In particular, the extent of Arctic summer sea ice has been shrinking by thirteen per cent each decade, increasingly becoming thinner and younger. Additionally, if global warming is not curtailed to 1.5° C, summer ice will disappear completely in a matter of decades (WWF, n.d.). The environmental impact of greenhouse gases for Arctic ecosystems is painfully disastrous.

However, these circumstances of ice melting and warming Arctic temperatures hold fundamental geo-economic consequences. According to a 2009 study, the Arctic hosts about thirty per cent of the world's undiscovered gas and thirteen per cent of the world's undiscovered oil (Gautier et al., 2009). Considerable amounts of valuable minerals have also been found in the region. These include diamonds, gold, tin, nickel, copper, platinum, cobalt, ore, coal apatite, lead-zinc and rare-earth elements (Baudu, 2022; Rosenthal, 2012). Until very recently, these copious resources remained untapped, due to their inaccessible locations or unprofitable conditions for extraction (Bourne, 2016; Petrick et al., 2017), as shown in Figure 2. Similarly, sea routes in the Arctic were, mostly, not viable due to the presence of thick ice. Climate change is rapidly modifying such circumstances. Baudu in the first parts of the article sates "These changes have been leading to significant geo-economic implications. First, combined with recent technological advances, sea-ice melting allows for easier access to natural resources for commercial exploitation -including hydrocarbons, minerals crucial to the green energy transition and abundant fisheries".



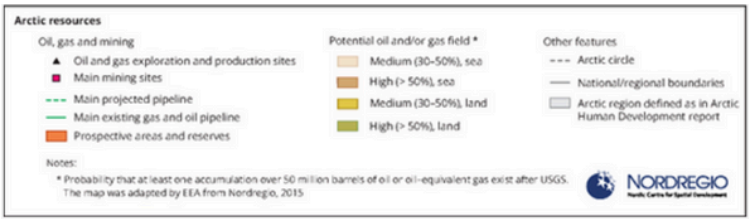


Figure 2 Artic Resources (Nordregio, adapted by European Environment Agency, 2017)

Global warming is making the Arctic's resources growingly accessible and attractive to nearby states. During the last two decades, the energy race in the Arctic has picked up unprecedented speed, particularly for Russia and its strategic partner, China (Vakulenko, 2025). Concurrently, environmental changes are making Arctic waters gradually more navigable, fostering a growing volume of trade with shorter shipping times. The best Arctic channel is the Northern Sea Route (NRS), which circumnavigates Eurasia. Longer summers have enabled an increasing volume of cargo to pass though the icy cold waters, reaching the record amount of 37.9 million tons in 2024 (Chaudhury, 2025).

The sweeping effects of climate change, which are allowing better access to vast resources and trade routes, have sparked strong geopolitical competition. Indeed, the unfolding events in the Arctic, though apparently economic in nature, must also be understood through military and political lenses. (Vakulenko, 2025). Seven out of eight Arctic countries are now NATO members, towered by the USA. On the other side there is Russia, which holds the largest share of Arctic coastline and is growing exceptionally close to China. For these reasons, NATO has recognized climate change as a "threat multiplier" in the Arctic, due to its "ability to influence drivers for future conflict" (NATO Allied Command Transformation, 2021, p.16).

3. A new security environment: Russia and China

Since the mid-2000s, Russia has been strongly investing in its Arctic region and coastlines. The primary reasons are, fundamentally, economical ones. The exploitation of the region's abundant resources effectively helped the Russian Federation consolidate its domestic stability and international status as an aspiring great power, after the difficulties of the 1990s (Rumer, Sokolsky, & Stronski, 2021). More than eighty per cent of Russia's natural gas production and twenty per cent of its crude oil come from its Arctic regions. It is important to keep in mind that Russia is the world's largest gas exporter and among the top three exporters of crude oil. Additionally, the retreating ice and the opening of the NRS offer the Kremlin a great opportunity to ship fossil fuels via sea to Asia (International Energy Agency, 2022).

These economic developments in the Russian Arctic have also been coupled with a stark re-militarization of the region. In order to safeguard its key economic interests, Moscow has shaped its military priorities accordingly. Apart from securing its second-strike capabilities in the Kola Peninsula, and guaranteeing its fleet's operability in the North Atlantic, Russia has developed a third growing interest for the military protection of its economic investments and commercial assets in the Arctic (Rumer, Sokolsky, & Stronski, 2021). The current re-militarization is centred on an east-west axis, in order to secure the growing potential of the NSR. This marks a difference with the Soviet era, where the attention was placed on a longitudinal axis,

crossing the North Pole in case of nuclear exchanges (Kjellén, 2022). Since 2005, the Kremlin has reopened tens of Soviet-era military bases, modernized and reorganized its navy, and constructed new hypersonic missiles to avoid detection. Overall, Russia has consolidated its military dominance in the Arctic. As illustrated in Figure 3, the number of Russian bases outnumber NATO's by a third in the High North, with new ports, air strips, infrastructure and vessels being built (Gronholt-Pedersen & Fouche, 2022). For example, as of today, the Kremlin's icebreaker fleet outnumbers the one of any other nation and is the only one equipped with nuclear-powered ships (World Nuclear News, 2025). While these ships have limited military use, they are pivotal to ensure transportation and presence in the High North (Gronholt-Pedersen & Fouche, 2022). Ultimately, the Arctic is critical to the Kremlin both economically and for its national security, which are evidently intertwined. On one side, the Arctic's resources and geography are fundamental drivers of economic growth, and on the other side, the restoration and expansion of military infrastructure is essential for Russia's security and defence (Townsend & Kendall-Taylor, 2021).

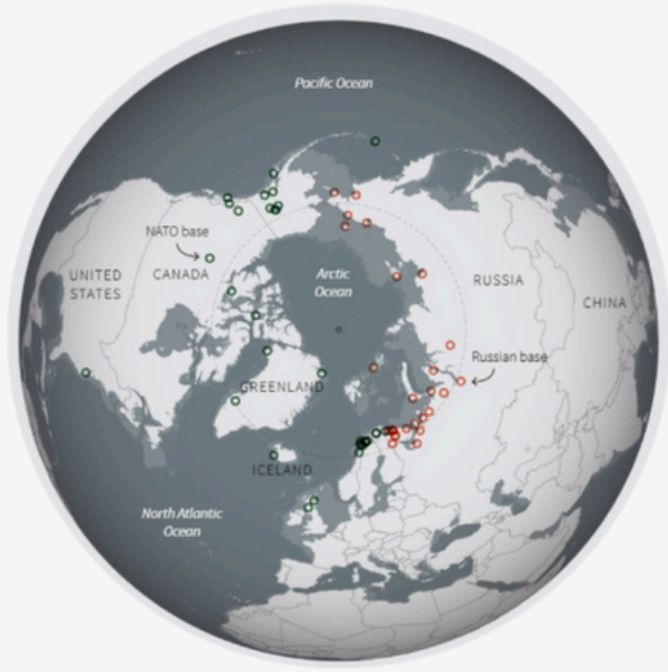


Figure 3 Russian and NATO military bases in the Arctic [V.M. Kawoosa in Gronholt-Pedersen & Fouche, 2022]

While Russia was dedicated to the re-militarization of its Artic, the People's Republic of China (PRC), started to manifest interest for the High North. During the early 2010s, China moved its first substantial steps towards consolidating its own Arctic policy. In 2013, China was granted observer status in the AC (Dagaev, 2025). Two years later, the Chinese Communist Party (CCP) identified the polar regions as one of China's new strategic frontiers, considering them "ripe with opportunities and open to all states with the capacity to exploit them" (Xinhua, 2015, as cited in Brady, 2017, p. 60). China asserts traditional and non-traditional security interests in the Polar regions, which touch upon its economic, military and strategic domains.

China is the largest shipping nation in the world, the largest trader in goods and the largest importer of oil. Most of this cargo travels by sea, which has to pass through several choke points such as Malacca, Lombok,

Bali and Miyako, including the Suez and Panama Canals, which grant access to Western markets. Avoiding such restrictions is one of the reasons why Beijing is keen to invest in the NSR, described by Chinese maritime experts as a "golden route" (CCTV, 2011, as cited in Brady, 2017, p. 63). Additionally, China wants access to the Arctic's vast resources, especially energy sources and minerals. Lastly, the Polar regions are fundamental for the PRC's scientifical and technological research for navigational systems, space programs and weather forecasting (Brady, 2017). Consequently, in 2018, the Chinese government published their first ever White Paper on Arctic policy, defining the PRC as a "near-Arctic state" and "an important stakeholder in Arctic affairs". In the same paper, Beijing integrates the Belt and Road Initiative with the "Polar Silk Road", so to develop better Arctic shipping routes (The State Council Information Office of the People's Republic of China, 2018).

It is important to note that the Sino-Russian cooperation in the High North does present limitations. Notably, there is an asymmetry of interest between the two countries, as the Arctic is more relevant to Russia than it is to China. For Russia, the region represents much more than economic interest, as it is also a matter of national security. In fact, Moscow considers the NSR an exclusive Russian asset, while China covertly supports the view of an Arctic as a global common. That is one of the reasons why the Kremlin has often viewed China's influence expansion in the region with caution (Townsend & Kendall-Taylor, 2021). At the same time, Beijing has been attentive to not deploy military assets in the region without Russian approval (Boulègue, 2025). Lastly, China is not willing to alienate its relations with other Arctic countries by aligning too closely with the Kremlin (Dagaev, 2025).

Despite the friction points that have arisen in the Arctic Sino-Russian cooperation, the two countries are actively attempting to downplay their differences (Townsend & Kendall-Taylor, 2021), as cooperation in High North represents a "low-hanging fruit" for both (Østhagen, as cited in Adler, 2025). Surely, the Sino-Russian tandem is increasingly consolidating as a threat-multiplier against NATO, in the Arctic (Boulègue, 2025), transforming the security environment of a region previously considered de-securitized and alien to geopolitical competition.

4. NATO's renewed Arctic commitment

Given the profound transformations that have taken place in the Arctic, with the re-emergence of the Russian North and Chinese expansion, driven by the exceptional effects of climate change, NATO has attempted to adapt its Arctic posture. The first security disturbances started after 2007. Founding members, Norway and Iceland, called for greater NATO involvement in the region, underlining Russia's growing military activity in the High North. The rest of the Allies did not agree with such suggestions, either to not antagonize Moscow, or because they considered the area as a peripheral distraction (Østhagen, Sharp, & Hilde, 2018). In 2014, following Russia's annexation of Crimea, relations worsened leading to the cancelation of joint NATO-Russia military exercises. Nevertheless, the members of the AC maintained good relations, as cooperation continued and the Arctic remained substantially unchanged when compared to the rising tensions in Europe (Bykova, 2024b).

The situation changed completely once Russia launched its full-scale invasion of Ukraine in February 2022. At that point, Arctic exceptionalism was definitively out of the picture. The war in Ukraine spilled over in the High North, severing relations between the Arctic states and Russia, which was barred from the AC in March 2022 (Dyck, 2024). Additionally, in May, two further members of the AC, Sweden and Finland, applied to join NATO after decades of maintaining neutral posture (Bykova, 2024b). In June, the NATO Strategic Concept made explicit mention of China and the High North. In particular, it stressed Russia's disruption capabilities and military build-up in the Arctic, including the risks for the growing strategic partnership with China, and their joint attempts "to undercut the rules-based international order" (NATO, 2022, p. 4-5). In August 2022, Secretary General Jens Stoltenberg unequivocally emphasized the necessity for NATO to "step up" in the High North. In line with what is argued in this paper, he underlined the importance of climate change as a driver of global competition in the Arctic, as well as how the Russian and Chinese authoritarian governments are scaling up their activities in the region, "willing to use military intimidation or aggression to achieve their aims" (Stoltenberg, 2022). Stoltenberg's statement occurred while visiting Canada's Arctic facilities, a country that had faced criticism for neglecting the strategic value of its Arctic regions. After 2022, Canada changed its perspective, increasing its involvement with the Alliance in the High North through exercises and information sharing (Bykova, 2024b).

In response to the changing security environment in the Arctic, in 2023, Denmark, Finland, Norway and Sweden signed the first Nordic Air Commander's Intent (NACI) (Shailesh, 2023), within the Nordic Airpower Concept (NAPC), so to merge their air defences along the framework of collective defence of NATO (Nordic Air Forces, 2025). The same year, Iceland saw a considerable increase of Allied military presence (Edvardsen, 2023), as the island holds a strategic location in the GIUK Gap. In 2024, NATO returned to the High North "in large scale" through its Nordic Response exercise, the largest so far, due to the new inclusion of Sweden and Finland. The exercise took place within the joint Steadfast Defender demonstration, the largest since the Cold War (Moregård, 2024). These facts aim at demonstrating how NATO has revived its commitment in the Artcic, in light of Russia's re-militarization and aggressive foreign policy, along with China's expanding influence in the Arctic and unprecedented partnership with the Kremlin. Great power competition has re-emerged in the High North, with NATO being called to react to the changing security environment.

Conclusions

This paper set out to emphasize NATO's revived commitment to the Arctic, a region which has been undergoing deep security transformations. The Alliance had always understood the importance of strategic locations, such as the GIUK Gap and the Norwegian territories in its norther Flank, bordering the former Soviet Union. However, with the end of the bipolar confrontation, the High North had turned into an area of low tensions and international cooperation, a phenomenon termed 'Arctic exceptionalism'.

These circumstances started to change when the devastating effects of climate change became evident in the region. In fact, the environmental disruptions caused by global warming, which disproportionally affect the

Arctic, due to the climatical effect of Artic amplification, set the stage for unprecedented competition in the region. Climate change is gradually making Arctic resources more accessible to Arctic countries, attracting near-Arctic ones. That is one of the reasons why it has been defined as a threat-multiplier. The resource race for the vast untapped resources of the High North saw the re-emergence of the Russian Arctic. During the last two decades, the Kremlin has been pursuing major development plans in its northern regions, and re-militarizing its arctic shorelines so to safeguard its economic interests, including the NRS. Simultaneously, China has used its growing partnership with Russia to advance its superpower ambitions in Arctic governance. Particularly, given the recent events in Ukraine, the two countries have gotten as close as ever, becoming key actors in the region.

NATO, especially after 2022, has recognized these new threats and strengthened its northern presence. Following the historic enlargement to include Sweden and Finland, NATO has demonstrated renewed commitment in addressing the threat multiplying effects of climate change, and the growing security hazards represented by an aggressive Russia and an expanding China. This climate of confrontation and uncertainty in the Arctic reflects the current circumstances in Europe and the international arena, shaken by the Russian aggression against Ukraine and the mounting Chinese superpower.

Bibliography

Adler, K. (2025, May 24). Tensions rise as superpowers scrap for a piece of the Arctic. BBC News. https://www.bbc.com/news/articles/cjwqn7z02plo

Arctic Council. (n.d.). About the Arctic Council. Arctic Council. Retrieved September 1, 2025, from https://arctic-council.org/about/

Arctic Monitoring and Assessment Programme. (2017). Snow, water, ice and permafrost in the Arctic (SWIPA) 2017 (pp. xiv–269). AMAP. https://www.amap.no/documents/doc/snow-water-ice-and-permafrost-in-the-arctic-swipa-2017/1610

Åtland, K. (2008). Mikhail Gorbachev, the Murmansk Initiative, and the desecuritization of interstate relations in the Arctic. Cooperation and Conflict, 43(3), 289–311. https://doi.org/10.1177/0010836708092838

Baudu, P. (2022, July 22). Navigating melting ice and eroding exceptionalism: Theory-driven policy pathways for NATO's High North commitment. IRIS. https://www.iris-france.org/en/168952-navigating-melting-ice-and-eroding-exceptionalism-theory-driven-policy-pathways-for-natos-high-north-commitment/#_ftnref29

Boulègue, M. (2025, July 8). Sino-Russian cooperation in the Arctic. Center for European Policy Analysis (CEPA). https://cepa.org/comprehensive-reports/sino-russian-cooperation-in-the-arctic/#identifier_22_41131

Bourne, J. K., Jr. (2016, March). In the Arctic's cold rush, there are no easy profits. National Geographic. https://web.archive.org/web/20160217055523/http://www.nationalgeographic.com/magazine/2016/03/new-arctic-thawing-rapidly-circle-work-oil/

Brady, A.-M. (2017). China's geostrategic interests in the polar regions. In China as a polar great power (pp. 60–113). Cambridge University Press.

Bruno, A., & Kalemeneva, E. (2023). Creating the Soviet Arctic, 1917–1991. In A. Howkins & P. Roberts (Eds.), The Cambridge history of the polar regions (pp. 462–486). Cambridge University Press. https://www.cambridge.org/core/books/abs/cambridge-history-of-the-polar-regions/creating-the-soviet-arctic-19171991/A785946AAFBAAC4B456C638F3FF30FBA

Bykova, A. (2024a, May 28). NATO has always been an Arctic Alliance (Part I). The Arctic Institute. https://www.thearcticinstitute.org/nato-arctic-alliance-part-i/

Bykova, A. (2024b, June 11). NATO has always been an Arctic Alliance (Part II). The Arctic Institute. https://www.thearcticinstitute.org/nato-arctic-alliance-part-ii/

Chaudhury, D. R. (2025, January 10). Record volume of cargo shipped along the Northern Sea Route in 2024. The Economic Times. https://economictimes.indiatimes.com/news/economy/foreign-trade/record-volume-of-cargo-shipped-along-the-northern-sea-route-in-2024/articleshow/117124150.cms?from=mdr

Childs, N. (2022, April). Gauging the Gap: The Greenland–Iceland–United Kingdom Gap – A Strategic Assessment. International Institute for Strategic Studies. https://www.iiss.org/globalassets/media-library---content--migration/files/research-papers/2022/05/gauging-the-gap_the-greenlandicelandunited-kingdom-gap_a-strategic-assessment.pdf

Dagaev, A. (2025, February 18). Sino-Russian partnership. Carnegie Russia Eurasia Center, Carnegie Endowment for International Peace. https://carnegieendowment.org/russia-eurasia/politika/2025/02/russia-china-arctic-views?lang=en

Devyatkin, P. (2023). Arctic exceptionalism: a narrative of cooperation and conflict from Gorbachev to Medvedev and Putin. The Polar Journal, 13(2), 336–357. https://doi.org/10.1080/2154896X.2023.2258658

Dyck, C. (2024). On thin ice: The Arctic Council's uncertain future. Marine Policy, 163, 106060. https://doi.org/10.1016/j.marpol.2024.106060

Edvardsen, A. (2023, September 5). Stronger allied military presence in Iceland. High North News. https://www.highnorthnews.com/nb/sterkere-alliert-militaert-naervaer-pa-island

European Environment Agency. (2017, May 15). Arctic resources. https://www.eea.europa.eu/data-and-maps/figures/arctic-resources/arctic-resources

Gautier, D. L., Bird, K. J., Charpentier, R. R., Grantz, A., Houseknecht, D. W., Klett, T. R., Moore, T. E., Pitman, J. K., Schenk, C. J., Schuenemeyer, J. H., Sørensen, K., Tennyson, M. E., Valin, Z. C., & Wandrey, C. J. (2009). Assessment of undiscovered oil and gas in the Arctic. Science, 324(5931), 1175–1179. https://doi.org/10.1126/science.1169467

Gronholt-Pedersen, J., & Fouche, G. (2022, November 16). Dark Arctic: NATO allies wake up to Russian supremacy in the region. Reuters. https://www.reuters.com/graphics/ARCTIC-SECURITY/zgvobmblrpd/

International Energy Agency. (2022, March 21). Energy fact sheet: Why does Russian oil and gas matter? https://www.iea.org/articles/energy-fact-sheet-why-does-russian-oil-and-gas-matter

Kjellén, J. (2022). The Russian Northern Fleet and the (re)militarisation of the Arctic. Arctic Review on Law and Politics, 13, 34–52.

Knutsen, B. O., & Pedersen, M. N. (2024). How to understand climate change as a threat multiplier in the Arctic. Arctic Review on Law and Politics, 15, 153–176.

Moregård, E. (2024, April 25). Nordic Response 2024 – NATO returns to the North in large scale (FOI Memo 8504). Swedish Defence Research Agency (FOI). https://www.foi.se/rapportsammanfattning?reportNo=FOI%20Memo%208504

NATO Allied Command Transformation. (2021, April). Regional perspectives: Report on the Arctic (Strategic foresight analysis). https://www.act.nato.int/wp-content/uploads/2023/05/regional-perspectives-2021-04.pdf

NATO. (2021, June 14). Climate change and security action plan. https://www.nato.int/cps/en/natohq/official_texts_185174.htm

NATO. (2022, June 29). NATO 2022 strategic concept: Adopted by Heads of State and Government at the NATO Summit in Madrid. https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/290622-strategic-concept.pdf

Nordic Air Forces. (2025, March 3). Four Nordic air forces fighting as one. Forsvaret. https://www.forsvaret.no/en/news/articles/nordic-division

Østhagen, A., Sharp, G., & Hilde, P. S. (2018). At opposite poles: Canada's and Norway's approaches to security in the Arctic. The Polar Journal, 8(1), 163–181. https://fni.brage.unit.no/fni-xmlui/bitstream/handle/11250/2567709/2018-PolarJournal-Canada-Norway-NATO+FINAL+V2018+23.3.18+AO+GLS+PSH.pdf?sequence=2

Petrick, S., Riemann-Campe, K., Hoog, S., Growitsch, C., Schwind, H., Gerdes, R., & Rehdanz, K. (2017). Climate change, future Arctic Sea ice, and the competitiveness of European Arctic offshore oil and gas production on world markets. Ambio, 46(Suppl. 3), 410–422. https://doi.org/10.1007/s13280-017-0957-z

Rantanen, M., Karpechko, A. Y., Lipponen, A., Nordling, K., Hyvärinen, O., Ruosteenoja, K., Vihma, T., & Laaksonen, A. (2022). The Arctic has warmed nearly four times faster than the globe since 1979. Communications Earth & Environment, 3, 168. https://doi.org/10.1038/s43247-022-00498-3

Rosenthal, E. (2012, September 18). Race is on as ice melt reveals Arctic treasures. The New York Times. https://www.nytimes.com/2012/09/19/science/earth/arctic-resources-exposed-by-warming-set-off-competition.html

Rumer, E., Sokolsky, R., & Stronski, P. (2021, March 29). Russia in the Arctic—A critical examination. Carnegie Endowment for International Peace. https://carnegieendowment.org/research/2021/03/russia-in-the-arctica-critical-examination?lang=en

Shailesh, S. (2023, August 3). Unified Nordic Airforce – A mini-NATO in the making?CESCube. https://www.cescube.com/vp-unified-nordic-airforce-a-mini-nato-in-the-making

Stoltenberg, J. (2022, August 24). NATO is stepping up in the High North to keep our people safe. NATO. https://www.nato.int/cps/en/natohq/opinions_206894.htm

Strauss, L., & Wegge, N. (2024). Security and defense of NATO's northern flank: An introduction. In L. Strauss & N. Wegge (Eds.), Defending NATO's northern flank: Power projection and military operations. Routledge. The State Council Information Office of the People's Republic of China. (2018, January 26). China's Arctic Policy (White paper). http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm

Townsend, J., & Kendall-Taylor, A. (2021, March 30). Partners, competitors, or a little of both? Russia and China in the Arctic (Report). Center for a New American Security. https://www.cnas.org/publications/reports/partners-competitors-or-a-little-of-both

Vakulenko, S. (2025, July 17). Global energy competition in the Arctic: A reassessment. Carnegie Russia Eurasia Center, Carnegie Endowment for International Peace. https://carnegieendowment.org/research/2025/07/arctic-energy-projects-overview?lang=enù

World Nuclear News. (2025, April 1). Russia's icebreaker fleet set to grow. World Nuclear News. https://www.world-nuclear-news.org/articles/russias-icebreaker-fleet-set-to-grow

WWF Arctic. (n.d.). Climate change. WWF Arctic. Retrieved September 1, 2025, from https://www.arcticwwf.org/threats/climate-change/

F I N A B E L

THE EUROPEAN LAND FORCE
COMMANDERS ORGANISATION