

From Arctic exceptionalism to military-driven geopolitics: Cooperation and conflict after Russia's invasion of the Ukraine

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Abstract

Since February 2022, evolving political dynamics in the Arctic have increasingly challenged the academic credibility of the concept of Arctic exceptionalism. Russia's invasion of the Ukraine has significantly reshaped the region's geopolitical landscape, resulting in a marked decline in cooperation between Russia and the Western Arctic states. This erosion of collaboration has substantially hindered Russia's ability to advance its economic, military, and diplomatic ambitions in the Arctic, although certain initiatives, particularly energy-related, have continued under the revised conditions. Western sanctions have delayed and obstructed critical Russian infrastructure projects in the region, revealing a pronounced dependence on foreign technology. In the security sphere, NATO's enlargement through the inclusion of Finland and Sweden has shifted the regional balance of power. This empirical political development is fundamentally at odds with the trajectory that might be anticipated if international relations in the region adhered to the functional logic of Arctic exceptionalism. However, despite rising tensions, the prospect of military actions in the Arctic remains low, it is constrained by logistical limitations, economic interdependence, and the prevailing balance of power.

Key words: Arctic exceptionalism, geopolitical transformation, Russia

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Introduction

The pre-war National Security Strategy of the Russian Federation (2021^[11]) defines the Arctic as a key region in the protection of national security. According to the document, Foundations of the Russian Federation State Policy in the Arctic for the Period up to 2035 (2020^[20]), Russia's main objectives in the region are to ensure Russia's sovereignty over the Arctic Zone of

the Russian Federation (AZRF), to develop the Northern Sea Route (NSR) as a key transport route, to increase military capabilities in the region to protect national interests, to promote sustainable development of the region, including environmental protection, and to increase economic potential through the extraction of oil, gas and other raw materials. The reasons for

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this policy, apart from geopolitics, are obvious. The Arctic is warming at more than twice the global rate, leading to melting ice and new opportunities for the exploitation of resources, trade, and tourism. The United States and Russia are reinforcing their military presences in the Arctic, while China, identifying as a "near-Arctic state," seeks influence.

Despite lacking formal supranational governance, the Arctic remains free of interstate violence, a phenomenon often explained by "Arctic exceptionalism" (Crawford 2021). This concept views the Arctic as a zone of peace and cooperation, even amid external conflicts involving Arctic states. The full-scale Russian invasion of the Ukraine in 2022, which is justified by several narratives (Fridrichová 2023), presents a litmus test of this concept. This act, the most aggressive of Russian foreign policy since 1991, surpasses previous actions such as the 2008 war in Georgia, the illegal annexation of Crimea (2014), the Donbas conflict of 2014 to 2015, and military intervention in Syria, against the background of the Arab Spring and current Africa engagement. Arctic exceptionalism can only retain its validity for future research if it endures this challenge.

This paper asserts that Russian aggression against the Ukraine has fundamentally altered the security dynamics of the the Arctic. The premise of Arctic exceptionalism no longer underpins relations among Arctic states. The conflict in Eastern Europe has spilled into the Arctic, significantly reducing cooperation between Russia and the West across all domains. Western Arctic states have altered their cooperative stance, suspending diplomatic engagement with Russia in the Arctic Council, leading to fragmented governance of the region. Economic sanctions have severely disrupted Arctic projects critical to Moscow's economic interests. Furthermore, NATO's expansion to include two militarily capable Nordic/Arctic states has significantly weakened Russia's strategic

position in the region. Last but not least NATO's perception of Russia as an adversary has also prompted a redefinition of its Arctic policies. These developments not only starkly contradict the notion of Arctic exceptionalism but also Russian strategic interests.

The impact of the Russo-Ukrainian war on the Arctic security is increasingly being evaluated through academic research and the presented paper has the ambition to contribute to the ongoing academic discussion. Vlček et al. (2024) argue that since Russia's annexation of Crimea in 2014, geopolitical tensions and military rivalries among Arctic states have intensified. While increased militarization and coalition-building indicate growing confrontational behaviour, the rivalry marker shows enhanced cooperation, suggesting that the conditions for imminent international armed conflict are not met. Stokke (2024) examines why the concept of Arctic exceptionalism persisted as an analytical framework following Russia's annexation of Crimea (2014), despite its previously noted limitations (Käpylä and Mikkola 2015). Stokke emphasizes that the Arctic Council, lacking a security mandate and focusing on environmental and scientific issues, has enabled cooperation on climate and biodiversity monitoring despite geopolitical tensions. Devyatkin (2023) acknowledges the severe challenges to Arctic exceptionalism but notes that limited cooperation, such as in scientific research carried out in the Arctic, remains possible. However, growing militarization and heightened political tensions make a return to the previous level of peaceful cooperation unlikely unless relations between Western Arctic states and Russia improve. Braňka (2022) argues that the invasion exposed Arctic exceptionalism as a concept increasingly disconnected from reality, shattering the illusion that the Arctic could remain insulated from global political tensions. Cooperation within the Arctic Council, once symbolic of peaceful dispute resolution, was suspended

after the invasion, reflecting the intrusion of broader geopolitical dynamics into the region.

The presented paper defends its argument through the following structure. First, it introduces Arctic exceptionalism as an analytical framework that emerged after the end of the Cold War. The data section describes Russia's growing isolation in the Arctic Council after February 2022, the economic repercussions of the West's cessation of cooperation with Russia on

Arctic development projects, the adverse security impacts of NATO's Arctic expansion from Moscow's perspective, and NATO's evolving perception of Russia as an opponent. The discussion analyses what these findings indicate about the viability of Arctic exceptionalism as an empirically relevant academic concept. Finally, the implications of these developments for Russia in the broader international political arena are explored. The conclusion summarizes the key findings of the analysis.

Arctic exceptionalism as an analytical framework

Arctic exceptionalism is a specific concept of the Arctic as a region with allegedly unique political, environmental and security dynamics. This perception is based on the notion that the Arctic is politically 'exceptional' due to its geographical isolation and extreme natural conditions. Therefore, it is isolated from the existing security agenda found in other geopolitical regions as the Arctic states emphasise cooperation rather than conflict and power rivalry. It is further argued that a specific framework for 'governance' in the Arctic has emerged. According to proponents of this approach, the Arctic is supposed to be an area with a low level of militarisation where states deliberately avoid conflict, which contrasts sharply with other natural resource-rich regions. In addition, many Arctic states promote a specific ethical framework aimed to protect Arctic ecosystems, even at the expense of economic interests. This approach is based on an understanding of the Arctic as a world natural heritage area that requires special protection. To understand its nuances, attention must be paid to its genesis.

During the Cold War, the Arctic was a focal point of the geopolitical rivalry between the United States and the Soviet Union, driven not only by their shared Arctic borders but also by the region's strategic importance. Its extreme natural condi-

tions and crucial strategic routes made it ideal for certain specific types of military and intelligence activities. The Arctic served as a key access area for nuclear submarines carrying intercontinental ballistic missiles (ICBMs) and strategic bombers, with any nuclear exchange likely routed over the North Pole. Both sides heavily militarized the region, deploying early warning systems and conducting extensive military operations (Eifler 2021). Although the degree of militarization decreased after the Cold War, complete demilitarization never took place as a consequence of the Arctic's enduring strategic importance.

The trend toward a reduction of militarization began in the late 1980s during the Soviet Union's period of perestroika. In his 1987 Murmansk speech, Mikhail Gorbachev called for the Arctic to become a 'zone of peace', proposing measures to reduce military tensions and foster cooperation among Arctic states on security and environmental issues. This initiative led to steps such as a limit on Soviet naval exercises, though strategic assets such as the Northern Fleet based on the Kola Peninsula remained operational. These changes, driven by a Soviet desire to gain resources for economic transformation through a reduction in tensions between the East and West, introduced greater transparency and enabled diplomatic negotiations. After the

collapse of the Soviet Union in 1991, Arctic militarization further declined in the 1990s, driven by Russia's political and economic crisis which led to widespread reductions in its military capabilities and not only in the Arctic (Flake 2014). Western states also reduced Arctic military investment, a benefit of the post-Cold War peace dividend.

With the Arctic no longer seen as a primary military zone, focus shifted to economic, scientific and environmental cooperation, including exploitation of the region's energy resources, the development of fisheries, opening up new maritime transport routes and scientific cooperation. Science diplomacy plays a key role in fostering cooperation, particularly through scientific infrastructure, organizational memberships and research initiatives (Everett and Halašková 2022). These opportunities attracted the interest of non-Arctic states, particularly China, which has significant energy needs and a vested interest in lowering international trade costs (Garamone 2024). In 1996, the Arctic Council was established to promote cooperation on environmental protection and sustainable development, explicitly excluding military matters from its agenda. Even after the deterioration of relations between the West and Russia against the backdrop of the Kosovo crisis in 1999, the general belief persisted that extreme forms of interstate conflict in the Arctic could be permanently avoided.

However, the resurgence of Russia under Vladimir Putin renewed interest in the region. Russia began to modernize the old Soviet bases, construct new military facilities, and expand its military presence to bolster its position as a great power, a central pillar of Putin's global strategy. Despite events such as attempts by Russia in 2001 and 2007 to expand its Exclusive Economic Zone in the Arctic and the symbolic planting of a flag on the Arctic Ocean seabed, Western Arctic states maintained strong cooperation with Moscow.

Not even the Russo-Georgian War of 2008, the illegal annexation of Crimea (2014), or the outbreak of war in the Donbas in 2014 prompted significant changes in Western Arctic policy toward Russia. Nevertheless, debates emerged among scholars about the sustainability of Arctic exceptionalism as an analytical framework, particularly considering Russia's increasingly assertive foreign policy. While the concept remained an influential analytical tool, its future viability was increasingly questioned. As Devyatkin (2023) observes, from the 1990s onwards, mounting geopolitical pressures began to erode this vision. Initially, the Arctic policy of Dmitry Medvedev appeared to align with the cooperative approach of Gorbachev, as was seen in agreements with other Arctic states. With the rise to power of Vladimir Putin, the focus shifted toward the defence of national interests and a reduced emphasis on multilateralism. The annexation of Crimea in 2014 was a red light, straining diplomatic relations between Russia and the West, and the invasion of the Ukraine in 2022 effectively ended the idealized view of the Arctic as a zone of peace.

It is clear from the above that the concept of Arctic exceptionalism is based on liberal theories of international relations. Liberalism provides a comprehensive framework for the understanding of Arctic cooperation, emphasizing the importance of institutions, interdependence, and normative commitments. Liberal IR theories emphasize the importance of economic and institutional ties between states (Keohane 1984). Cooperation evolved beyond military concerns to include economic and technological exchanges, such as Western trade with the Soviet Union in energy resources and technology. Mechanisms such as the Helsinki Process and OSCE activities fostered dialogue and stability, with the Arctic perceived as both a military and economic opportunity. Central to this approach is the role of international organizations such as the Arctic

Council, which facilitate negotiation and ensure transparency and fairness in governance. In the Arctic, states are driven by shared interests such as environmental protection and security of sea routes, fostering a strong sense of interdependence. Liberal theory also highlights the role of norms and legal mechanisms that promote peaceful coexistence and shared governance, underpinning cooperative efforts in the region (Heininen 2010). Furthermore, global challenges such as biodiversity conservation and adaptation to climate change necessitate collective action, making economic and environmental interconnectedness a cornerstone of liberalist cooperation. Liberalism acknowledges that cooperation is contingent on shared norms, institutional robustness, and interdependence, but Arctic exceptionalism often oversimplifies these dynamics. It assumes a harmonious and universal commitment to cooperation without adequately addressing the persistent geopolitical frictions and power asymmetries that challenge liberal frameworks (Byers 2017).

From the perspective of international relations theory, the concept of Arctic exceptionalism fails to account for the role of systemic factors, particularly the anarchy inherent in the international system, that can undermine cooperation, especially during periods of crisis. This critique aligns with realist approaches in IR theory, which draw extensively on historical evidence from the Cold War to substantiate such claims. The Arctic was heavily militarized during the Cold War, driven by transactional logic, yet no armed confrontation occurred between the U.S. and the USSR in the region. This mirrors developments in Europe, where intense militarization coexisted with decades of peace and, at times, meaningful cooperation between the blocs during periods such as *détente*. Realism explains the Cold War cooperation between the United States and the Soviet Union primarily through the balance of power, existence of nuclear weapons and a

mutual interest in maintaining stability. During the *détente* of the 1970s, major agreements such as the Strategic Arms Limitation Treaty (SALT I) and the Helsinki Final Act of 1975 reflected the desire of both superpowers to reduce the risk of nuclear conflict and stabilize their coexistence. Realists argue that this cooperation stemmed from the destructive potential of war and the military balance, which incentivized both sides to prevent escalation (Waltz 1979). The strategic importance of the Arctic further underscored this dynamic. Rich in natural resources and critical for military operations, the Arctic became a focal point for Cold War competition, including the deployment of submarines equipped with nuclear weapons. Deterrence theory, rooted in realism, highlights that the threat of mutually assured destruction (MAD) mitigated the risks from potential conflicts between nuclear great powers. Surveillance and espionage activities, such as radar installations and submarine detection operations, were widespread, yet arms control agreements and communication mechanisms helped to avoid escalation. Realists maintain that Arctic cooperation is driven by considerations related to power, such as securing access to resources or strategic routes, rather than altruistic goals (Byers 2017). However, the security dilemma persists (Åtland 2014). To sum up, according to realism, Arctic cooperation is pragmatically motivated by cost-benefit calculations rather than liberal notions of peace and common shared values. States primarily pursue their own interests, emphasizing power and influence over any desire for global public good (Heininen 2010).

In addition, the concept of Arctic exceptionalism often portrays it as a unified and homogenous entity, from an international security perspective, neglecting its geopolitical diversity. Shvets and Hossain (2022) argue that the Arctic is not a singular security region but is shaped by internal divergences among Arctic states and

the competing interests of global powers. These dynamics underscore the geopolitical complexity of the region, with disputes largely confined to specific areas while others remain hubs of international cooperation. Key disputes include overlapping claims to the continental shelf, such as Russia's request to the United Nations to extend its continental shelf to the North Pole, conflicting with claims from Canada and Denmark (Hoogensen Gjørsv and Hodgson 2019). The exploitation of natural resources such as oil and gas further exacerbates tensions. The dispute over the Northwest Passage exemplifies this complexity: Canada considers it to be within its internal waters, while the United States views it as an international waterway (Bailes 2013). Russia's distinct approach adds another layer of tension. Unlike other Arctic powers, Russia's policies are marked by significant military expansion, including the establishment of military bases and bolstering of Arctic infrastructure, underscoring its strategic ambitions. These actions, particularly regarding the Northern Sea Route, heighten concerns among Western states, notably the United States, over regional stability and freedom of international navigation (Greaves 2016).

Finally, Arctic exceptionalism is also founded on a misinterpretation of interna-

tional relations data about patterns of interactions between states. While conflicts naturally exist within the international system, the majority are not resolved through armed conflicts. Rather, peaceful cooperation predominates, which aligns with the United Nations Charter requirement for nonviolent dispute resolution. Even in the Middle East, which a layperson might consider to be an example of a conflict-ridden region, most disputes are resolved through the quills of diplomats, rather than through blood and iron. Consequently, the prevalence of cooperation in the Arctic should not be misconstrued as evidence of the region's unique status as cooperation prevails in all geographic regions.

To sum up, the concept of Arctic exceptionalism thus rests on the implicit assumption that the conflict dynamics of other geopolitically contested regions do not spill over into the Arctic. From this point of view, the logic of Arctic exceptionalism posits that the region is structurally and normatively insulated from the wider architecture of international security, particularly from the patterns of great power competition, escalation, and proxy warfare characteristic of regions such as the post-Soviet space, the Middle East, or the Indo-Pacific.

Politics in the Arctic after the Russian invasion of the Ukraine in February 2022

Isolation of Russia in the Arctic Council

In 2021, Russia assumed the chairmanship of the Arctic Council, identifying four primary priorities: enhancement of human development in the Arctic, including the Indigenous communities; protection of the environment, with an emphasis on climate issues; promotion of socio-economic growth; and strengthening the Arctic Council itself (Arctic Council 2024^[3]). How-

ever, following Russia's invasion of the Ukraine in February 2022, cooperation between Russia and Western countries within the Council, an institution without security or military dimensions, shifted dramatically. Western nations unanimously condemned Russia's aggression and, by March, suspended all Arctic Council activities that involved Russian participation.

Collaborative efforts on joint projects, including environmental monitoring, were significantly curtailed (Koivurova and Shibata 2023, Obydenkova 2024). Similarly, initiatives focused on biodiversity conservation, such as Arctic species migration and climate change adaptation, were disrupted. Several months after these measures, the Council determined that projects could only proceed without direct Russian involvement (Stokke 2024). Russia also halted its contributions to marine ecosystem research, particularly regarding pollution monitoring and human impact assessments, leading to critical gaps in long-term data collection. Cooperation only persisted under existing international agreements, such as the Climate Agreement. Western nations sought to maintain a limited functionality of the Arctic Council by concentrating on issues such as climate change and biodiversity conservation. However, operations within the Arctic Coast Guard Forum, which focuses on navigational safety and search-and-rescue missions, were significantly reduced (Andreeva and Rottem 2024).

The most profound constraint on Arctic biodiversity and bird migration initiatives after February 2022 stems from the collective decision by the seven other Arctic States (A7) to pause official cooperation with Russia within the Arctic Council (AC). This action, implemented in March 2022, led to the suspension of high-level meetings and significantly impacted the Council's work on both the political and scientific levels (Canova and Pic 2023). Effective conservation work by groups like the Conservation of Arctic Flora and Fauna (CAFF) – especially for migratory birds – was challenged by the inability to conduct joint research or share seamless data across all eight Arctic territories.

Nevertheless, under the subsequent Norwegian Chairship (2023–2025), a partial and gradual resumption of environmental and scientific work was achieved. Norway prioritized reviving the Council's critical

functions, placing Climate and Environment at the core of its agenda, specifically aiming to enhance cooperation on Arctic biodiversity conservation. A key procedural step occurred in August 2023, when all Arctic nations, including Russia, agreed to allow the AC's working groups (like CAFF) to resume activities based on written procedures. While the full scope of cooperation remained constrained by the ongoing halt of political meetings, this measure allowed essential projects to be moved toward completion and ensured that the mechanism for addressing circumpolar environmental threats, though operating in a limited capacity, was kept alive (Arctic Council 2024^[4]).

A significant project that was suspended involved enhancements to oil spill prevention and response in the Arctic, a critical concern due to the growing risks associated with oil and gas extraction (Lasserre and Baudu 2022). The Russian authorities expressed dissatisfaction with these developments, emphasizing that the Arctic Council was intended to be an apolitical forum addressing regional challenges rather than global political disputes (Sukhankin and Lackenbauer 2023).

During Norway's chairmanship of the Arctic Council (2023–2024), cooperation with Russia remained constrained due to the ongoing invasion of the Ukraine. Western states, including Norway, focused on technical and non-political priorities such as environmental protection and sustainable development, significantly reducing Russian participation. Many projects were suspended or redesigned to exclude Russian involvement (Heikkilä 2024). Despite challenges, Norway pursued high-level diplomacy to sustain dialogue within the Council. While Russia criticized the politicization of the forum, Norway emphasized the importance of Arctic environmental protection, climate research, and the development of new cooperative mechanisms. Russia ceased its funding to the Council, citing concerns over disrupted col-

laboration and the implications for "soft security" in the Arctic. In September 2023, Russia withdrew from the Barents Euro-Arctic Council and also threatened withdrawal from the Arctic Council (Spence 2024, Heikkilä 2024).

Since early 2025, cooperation between Western states and Russia within the Arctic Council has effectively been suspended. While Russia retains formal membership, its participation in working groups and official proceedings has ceased, leading to institutional fragmentation. In response, Western members, primarily the Arctic-7, have intensified alternative regional and bilateral mechanisms, in practice marginalising Russia from governance. Although limited scientific exchanges persist, data flows are diminished and highly constrained. Russia's continued involvement is widely viewed by Western actors as incompatible with the normative foundations of Arctic cooperation in the post-Ukraine context (Johansson and Callaghan 2025).

In response, after 2022, Russia implemented a series of the below-specified

strategic actions to assert greater control over the Arctic and adapt to the evolving geopolitical dynamics. The revised Naval Doctrine of July 2022 designated the Arctic and Northern Sea Route (NSR) as pivotal zones of national interest. It explicitly condemned NATO's activities in the region and articulated plans to bolster Russia's military presence. In February 2023, Russia updated its Arctic Strategy, removing references to multilateral cooperation frameworks, such as the Arctic Council, and emphasizing a focus on national interests and self-reliance. Despite this shift, the strategy allowed for limited bilateral cooperation in specific areas. Similarly, the Foreign Policy Concept, released in March 2023, excluded any mention of collaboration within multilateral formats, signalling Russia's increasing preference for unilateral approaches to Arctic governance. Collectively, these developments underscore Russia's pivot away from international collaboration, instead prioritizing its expanding military and economic objectives in the Arctic region (Boulègue 2024).

Restriction of economic cooperation

The Arctic holds significant economic importance for Russia within key sectors such as mineral extraction, energy, and transport. Russia's wealth of natural resources is central to its economy, contributing approximately 10% of GDP and 20% of exports (Likhacheva and Stepanova 2021). This primary sector makes up about 60% of the GDP generated in the Russian Arctic, with the region producing 70% of Russia's oil and 90% of its natural gas (Glomsrød et al. 2021, pp. 85–87). These resources are essential to Russia's status as a leading energy exporter, underpinning its revenues and broader economic strategy. Additionally, the Northern Sea Route is gaining prominence as a critical transport corridor, also integral to Russia's Arctic

strategy. The exploitation of Arctic resources is portrayed by Russian political leaders as a cornerstone of national modernization (Medvedev 2008). However, the harsh conditions and underdeveloped infrastructure of the Arctic means that large-scale resource projects heavily rely on state support, including tax incentives and substantial public investment in infrastructure.

Before its open aggression against the Ukraine in 2022, Russia encountered significant challenges in Arctic development, complicating project implementation. A key issue was the inefficiency of Russia's Arctic development strategy, which prioritized short-term commercial gains over the long-term integration of the Arctic into

the national economic framework. This lack of a coherent, comprehensive approach left much of the Russian Arctic potential unrealized. The extreme climatic and natural conditions posed additional obstacles, significantly increasing project costs and timelines. The Arctic's vast and harsh environment necessitated specialized technology and infrastructure, which were often inadequate. For example, underdeveloped transport, communication, and information infrastructure hindered not only resource extraction but also regional logistics and mobility. Delays in building icebreakers and, more recently, cancellation of a contract to build two innovative icebreakers, together with upgrading the Northern Sea Route further underscored the slow pace of progress. Environmental risks, such as potential oil spills, soil contamination, and ecosystem degradation, were exacerbated by melting permafrost, raising both costs and concerns over Russia's international reputation as an Arctic power. Socio-economic inequalities in the Arctic were also pronounced. Quality of life in the region lagged behind the national average, prompting migration and demographic decline. Inadequate infrastructure and services exacerbated these issues, hampering workforce development. Moreover, the reliance of Russia on foreign countries for technology and investment posed a significant challenge. Complex projects, such as Arctic shelf mining, were heavily dependent on foreign technology, and the sanctions imposed after 2014 further disrupted international partnerships, directly impacting the execution of technology-intensive projects (Likhacheva and Stepanova 2021).

Russia's reliance on foreign technology is evident in both raw material extraction and transport infrastructure tailored for the Arctic. Western companies, including Exxon Mobil, Shell, and Total, have not only contributed capital but also the essential expertise and technology required for operations in extreme climatic condi-

tions. For instance, a 2011 agreement between Exxon Mobil and Russia's Rosneft led to the establishment of a research institute in St. Petersburg to develop advanced Arctic technology (Flenley 2015). This dependence is particularly illustrated by Arctic shelf production, as it requires specialized equipment such as deep-water drilling rigs, pumps, and compressor systems, none of which Russia can produce domestically. Similarly, the shipping and icebreaker industries reveal gaps. While Russia maintains a large icebreaker fleet, certain western components and technology used in their construction and operation are imported. Likewise, natural gas liquefaction (LNG) projects such as Yamal LNG rely heavily on foreign technology. For instance, gas transport is dependent on ships constructed in South Korea and China. Automation systems and software, vital for managing upstream processes, are also predominantly foreign-sourced. This reliance on external innovation and patents highlights Russia's limited capacity to develop indigenous technologies. Even before the Ukraine war, Russia recognized that such dependence not only inflated Arctic project costs but also rendered the country vulnerable to sanctions, which could restrict access to critical resources (Likhacheva and Stepanova 2021).

Another area of Russia's technological dependence lies in transportation and navigation infrastructure for Arctic waters. In its efforts to develop the Northern Sea Route (NSR) as a significant international trade corridor, Russia has relied heavily on Western expertise. Foreign technology is integral to the modernization of port infrastructure and navigation systems. Many ports along the NSR remain in poor condition and require extensive upgrades, with significant reliance on foreign expertise for ship repair and technical support facilities. Advanced communication and ice forecasting technology is critical for safe navigation in Arctic conditions. For instance, synthetic aperture radar (SAR) tech-

nology is indispensable for monitoring sea ice and charting safe shipping routes. Similarly, key satellite communication systems, such as the Iridium network, which is used by Russians in Arctic, is of Western origin. The domestic Russian analogy, for example, Geonet remains underdeveloped, limiting the long-distance data transmission needed for digital navigation and meteorological services. This reliance on Western technology inflates operational costs, reduces the NSR's overall efficiency and makes Russia vulnerable. Despite Russia's stated efforts to develop domestic technology and reduce dependency on foreign suppliers, achieving full technological independence remains a significant challenge (Buixadé Farré et al. 2014, Dudin et al. 2016). Without substantial investment in the indigenous infrastructure and technological capacity, Russia's dependence on foreign expertise continues to hinder its Arctic ambitions. Russia strives to be the best in this area as well, but it turns out the same as always.

According to Lasserre and Baudu (2022), Russia's invasion of the Ukraine in February 2022 had profound implications for its cooperation with the West over Arctic oil and gas. Technology critical for Arctic resource extraction became key targets for the sanctions imposed following the invasion. These sanctions included bans on the export of specialized equipment for deep-sea drilling, floating platforms, and offshore processing for extreme Arctic conditions, areas where Russian companies lack the capacity to independently develop alternatives. The Arctic LNG 2 project, a collaboration between Russia's Novatek and France's TotalEnergies, has been significantly impacted. This project was crucial for the expansion of Russia's LNG exports, but Western partners withdrew following sanctions, slowing progress and creating complications (Yermakov 2024). Similarly, sanctions have affected Yamal LNG, although its production grew from 0.3 mil-

lion tonnes in 2017 to 21 million tonnes in 2022. After 2022 sanctions have prevented the use of European financing, insurance, and technologies, which complicates not only day-to-day operations but also the expansion of capacity and the modernization of facilities. As a result, maintenance costs have increased, export flexibility has decreased, and the project's development has slowed down (Moe 2024).

The Shtokman project, once one of the largest planned upstream Arctic gas ventures in the Barents Sea, also faced setbacks. Partnered with France's TotalEnergies and Norway's Statoil (now Equinor), it was halted in 2012 due to economic challenges. Sanctions further condemned attempts to restart it. Flegontov and Kuznetsov (2024) argue that given the high capital expenditure, pressure from sanctions, and market uncertainty, the project's medium-term revival is unlikely. Sanctions have also impeded the development of the Northern Sea Route as a key maritime corridor linking Europe and Asia. Western companies initially involved in infrastructure and navigation technology development withdrew, leaving Russia struggling to modernize and expand its control over the region (Koivurova et al. 2022, Yermakov 2024, Heikkilä 2024).

Efforts to source Arctic development technology from non-Western states, such as China, face challenges. While China has shown increasing interest in Arctic projects, particularly in energy and transport, its technology for deep-sea and extreme-environment mining do not yet match Western standards, potentially reducing project efficiency and safety (Lasserre and Baudu 2022).

Nevertheless, in the aftermath of Western sanctions imposed in response to its invasion of the Ukraine, Russia has reinvigorated its 'pivot to the East' strategy, aiming to offset the loss of European markets by increasing exports of gas to China. Nonetheless, bilateral cooperation on Arctic gas development is advancing

with heightened caution from the Chinese side, driven by concerns over potential secondary sanctions. Although Russia seeks to project an image of parity within the partnership, its strategic dependence on China in the energy domain has markedly intensified. The Power of Siberia 2 gas pipeline has emerged as a central component of Russia's mitigation strategy, with individual collaborative projects experiencing varying degrees of disruption due to Western sanctions (Korppoo and Wang 2024).

As of 2025, Western sanctions on Russian Arctic infrastructure projects remain

in force and, in some sectors, have intensified. These measures continue to restrict access to critical technology, financing, and maritime services, particularly affecting LNG and energy logistics. Russian firms such as NOVATEK and Gazprom face persistent delays in project implementation due to the limited availability of Western liquefaction equipment and increasing reliance on Chinese or domestic substitutes. The cumulative effect of sanctions has significantly hindered Russia's capacity to develop large-scale Arctic energy infrastructure.

Nordic NATO Enlargement

Since the end of the Cold War, the relationships of Finland and Sweden with the North Atlantic Treaty Organization (NATO) has evolved significantly in response to Europe's changing security environment. Although neutral, both countries gradually increased their cooperation with NATO. In 1994, they joined the Partnership for Peace programme and later became "Enhanced Opportunity Partners", allowing participation in NATO military exercises and peacekeeping missions (NATO, n.d.^[15]). During the 1990s, Finland and Sweden contributed troops to NATO peacekeeping operations in Bosnia and Croatia, often under Danish command. After the events of September 11, 2001, cooperation with NATO further deepened. Finland and Sweden contributed to international peacekeeping missions, including NATO-led operations in Afghanistan under the International Security Assistance Force (ISAF) (Palosaari 2013). After 2014, amid heightened concerns about Russian military activity in the Baltic Sea, NATO strengthened its regional defence cooperation with both nations. This included enhanced information sharing and joint military exercises. Geographically, Finland and Sweden hold strategic significance,

not only in the Arctic but also for Baltic regional security, with their extensive coastlines and proximity to key maritime routes. Historically, their non-membership of NATO has created security gaps, complicating coordinated Western responses to Russian policies in the region.

Finland and Sweden have, for different reasons, prioritized a policy of neutrality, that shapes their approach to international security cooperation. Public opinion in both countries viewed neutrality as a fundamental principle, often questioning its compatibility with EU membership (Kite 2006). As a result, there was significant public and political opposition to NATO membership. In the early 1990s, only about one-fifth of the population of either country supported joining the Alliance (Kanniainen 2022). Prior to Russia's invasion of the Ukraine in February 2022, NATO accession of these Arctic states was not a priority and was not on the table, despite the changing security landscape following Russia's illegal annexation of Crimea in 2014. This event marked a shift in the Swedish and Finnish security discourse, heightening concerns over Moscow's potential influence in the Baltic Sea region. Consequently, both nations placed

greater emphasis on NATO cooperation, particularly in areas such as cybersecurity and countering of disinformation campaigns. Finland policy towards NATO sought to balance neutrality with enhanced security cooperation, aiming to maintain stability in an increasingly volatile geopolitical environment.

In terms of military transformation, Finland and Sweden have pursued notably different approaches. Sweden, in alignment with NATO member states, shifted towards a smaller military, abandoning compulsory military service in 2009. However, there was a significant change in this posture following Russia's annexation of Crimea in 2014. In response, Sweden implemented substantial military reforms, aimed at bolstering its defence capabilities towards potential Russian threats, particularly in the Baltic Sea and Arctic regions. In particular, Sweden has expanded its northern defence capabilities, adopting strategies tailored towards potential Arctic conflict. Defence spending has increased, allowing investment in advanced equipment for operations in extreme climatic conditions and the enhancement of the northern infrastructure, including military bases. Reforms have also focused on increasing troop numbers and modernizing equipment, with the primary goal of ensuring compatibility with NATO and strengthening their defence against Russian aggression. Additionally, Sweden has actively participated in large-scale NATO exercises such as Steadfast Defender 2021, enhancing its ability to conduct joint operations with members of the Alliance and reinforcing its integration into the broader Western security framework (Andersson 2018, Sukhankin et al. 2023).

In contrast to Sweden, Finland has maintained a strong emphasis on territorial defence, including a preservation of compulsory military service that produces a huge number of reserve soldiers. Following Russia's annexation of Crimea in 2014, Finland implemented significant

military reforms to enhance its defensive capabilities, particularly towards potential Russian aggression, including in the Arctic region. These reforms involved the expansion of military units in northern areas and the upgrade of equipment to operate effectively in extreme climatic conditions, demonstrating a strategic focus on preparedness for northern conflicts (Sukhankin et al. 2023). Finland has also increased its participation in NATO military exercises and strengthened intelligence cooperation in the Baltic Sea and Arctic regions. Additionally, investments in hybrid warfare capabilities, particularly in cybersecurity, have risen to counter Russian disinformation campaigns and cyber threats, marking a critical shift in Finnish defence priorities (Järvenpää 2015).

Following Russia's invasion of the Ukraine, Sweden's and Finland's attitude towards defence underwent a profound transformation, particularly in regards to NATO membership. Before 2022, Swedish support for membership of NATO was limited, while Finnish support consistently ranged between 20–30%. However, after February 2022, support surged to 53% in Finland and by June 2022 had reached 79%, which enabled them to formally apply for NATO membership on 18 May 2022 (Kanniainen 2022, pp. 285–286). Support in Sweden also grew from 42% in January 2022 to 51% in March 2022, which enabled them to make the decision to join at the same time as Finland (Forsberg 2023, pp. 91–92). Finland successfully joined NATO in 2023, while Sweden's accession was delayed until 2024 due to Turkish objections related to terrorism and arms trafficking. In response to regional security challenges, Sweden bolstered its military presence in the Arctic and Baltic regions and expanded its participation in NATO exercises, focusing on the alignment of its armed forces with alliance standards. Sweden also prioritized cybersecurity, intensifying measures to combat Russian hybrid threats and disinformation

campaigns. Meanwhile, Finland's integration into NATO was marked by swift political and public consensus, enabling enhanced military modernization, particularly for Arctic operations. Finland intensified its Arctic presence, upgraded its cold-weather military capabilities, and implemented strategies to counter Russian cyber and disinformation threats. Joint NATO exercises (Nordic Response 2024^[17], Dynamic Front 2024^[6], Atlantic Trident 2025^[5]) significantly improved the interoperability of Finnish forces with their alliance counterparts, enhancing their readiness for potential regional conflicts.

Following the announcement of the intention of Finland and Sweden to join NATO, Russia reacted with practical measures aimed at hindering or delaying their accession. Initially, Russian rhetoric adopted a moderate tone, deploying narratives similar to those used during previous rounds of NATO expansion. On May 16, 2022, President Vladimir Putin remarked: "Russia has no problems with Finland and Sweden that could lead to their joining NATO. So, in that sense, there is no direct threat to us from the enlargement to include these countries. But the expansion of military infrastructure into this territory will certainly provoke our reaction" (Putin 2022^[18]). Foreign Minister Sergey Lavrov downplayed the development, noting that "Finland and Sweden joining NATO does not make much difference. These countries have been participating in NATO military exercises for many years. The alliance takes their territories into account in its military planning for the East" (Interfax^[10] 2022). However, Russia's tone soon shifted, becoming more assertive. President Putin later warned that the deployment of NATO weaponry on Finnish or Swedish territory would provoke "appropriate countermeasures" from Russia. This included suggestions of the deployment of additional nuclear weapons in the Kaliningrad region (Sukhankin et al. 2023, pp. 3–4). Former President Dmitry Medvedev further

underscored the gravity of the situation, stating that NATO's expansion represented a fundamental change in the military balance, potentially justifying the deployment of nuclear weapons in the Baltic Sea region (Black et al. 2024). In addition to its military responses, Russia leveraged propaganda and disinformation campaigns. These efforts emphasized narratives of "Russophobia" in Scandinavia, portraying Sweden and Finland as having been manipulated by NATO and the United States. The propaganda also highlighted alleged economic challenges in both countries and attributed the militarization of the Arctic to NATO membership (Sukhankin et al. 2023, pp. 12–15). Such campaigns sought to undermine public and political support for NATO in the region while reinforcing Russia's position as a victim of Western aggression.

In addition to rhetorical responses, Russia implemented tangible military measures in reaction to the accession of Finland and Sweden to NATO. These included intense activities in the Arctic, notably the reorganization of the Northern Fleet under a new military structure. As noted by Pesu and Iso-Markku (2024), this reorganization was a direct response to the integration of the Nordic states into NATO. Among these measures were the Finval-2023 military exercises, which involved operations in the Barents, Kara, and East Siberian Seas. Practical actions also included an increase in the number of military exercises and the repositioning of equipment closer to the Finnish and Swedish borders (Black et al. 2024). Russia is increasing its focus on exercises related to the defence of its bases on the Kola Peninsula (Åtland et al. 2024). In the Baltic Sea region, which is of strategic importance to Russia, large-scale naval and air exercises were conducted to demonstrate their readiness for potential conflicts (Kunz 2024). Concurrently, the Russian government heightened its rhetoric, warning against NATO troop deployments on Finn-

ish and Swedish territories. In addition, disinformation campaigns targeting the internal stability of Finland and Sweden were launched in the Russian media, aiming to undermine confidence in the security guarantees from NATO and destabilize the domestic environment. Despite these actions, Russia's overall response was less assertive than anticipated. Primarily they rather relied on warnings of potential military measures near the border and low intensity hybrid operations than direct action (Forsberg 2023, p. 93). However, there is still insufficient evidence to determine whether Moscow influenced the hesitation in Ankara and Budapest over the Nordic enlargement of NATO.

From a military standpoint, Sweden and Finland are highly advanced European states with armed forces well-prepared for operations in the harsh Arctic environment. In 2023, Sweden allocated approximately 1.5% of its GDP to military spending, equating to around USD 8.75 billion per annum. The Swedish government has announced plans to raise this to 2% of GDP by 2025 (SIPRI 2023^[21]). Sweden's military numbers approximately 22,000 active personnel and 11,000 reservists, with plans for a gradual expansion. Since 2014, its defence strategy has increasingly prioritized territorial defence, with Russia identified as a potential adversary. Since 2022 Sweden has outlined significant acquisitions of heavy military equipment. Sweden's air force operates JAS 39 Gripen fighter jets, among the most advanced in Europe, and plans to procure additional units. Their naval fleet focuses on Gotland-class submarines, designed for Baltic Sea operations. Furthermore, Sweden is enhancing its capacity to operate in extreme Arctic conditions by investing in infrastructure for military units stationed in the country's northern regions. These investments and strategic adjustments reflect Sweden's response to Russia's growing military presence in the Arctic and Baltic Sea (Sukhankin et al. 2023).

Finland maintains a military of approximately 19,000 active soldiers and nearly 280,000 reservists, making it one of the largest reserve forces in Europe relative to its population. In response to shifting geopolitical dynamics, Finland has increased its defence budget to over 2% of GDP, equivalent to approximately USD 5.8 billion per annum. Prior to 2022, Finland had already started to upgrade its military capabilities, including the acquisition of F-35 multi-role fighter aircraft (in 2021, the first delivery is expected in 2026) and advanced radar systems, enhancing its operational capacity in Arctic and northern regions. These investments aim to counter potential threats from Russia and improve their interoperability with NATO. In addition, Finland has prioritized cyber and hybrid defence to address emerging security challenges. Its Arctic-focused capabilities, such as operations in extreme weather and anti-submarine warfare, are vital for regional stability and are shared through partnerships in NORDEFCO and other collaborative frameworks (Germanovich et al. 2021). Both Finland and Sweden have quickly intensified their participation in NATO military exercises (Steadfast Defender and others), benefiting from decades of close cooperation that have resulted in a high level of interoperability with NATO structures (Lintott-Dansk 2024). Following its accession to NATO in April 2023, Finland hosted several major military exercises, including one of the largest to take place over the Arctic Circle in May 2023, that involved 6,500 Finnish troops and 1,000 personnel from the US, UK, Norway, and Sweden. Sweden also participated in the large-scale Arctic Challenge 2023 exercise, which involved the air forces of nearly all NATO Arctic member states (Edvardsen 2023, Hughes 2024).

Following its accession to NATO, Finland has fundamentally modified its defence planning to align with the NATO Defence Planning Process (NDPP). This integration entails a commitment to devel-

op their national military capabilities in accordance with NATO's collective defence requirements, ensure full interoperability with allied forces, and participate in joint operations beyond Finnish territory. The implementation of these goals is a long-term process that requires significant additional financial resources. Within the NDPP's four-year planning cycle, new NATO defence capability targets will be approved in June 2025. One of Finland's key priorities is to strengthen the strategic mobility of its forces, enabling rapid deployment both on Finnish territory and across allied domains. To support this, major investments are planned in military infrastructure, logistical corridors, and forward deployment capabilities. The Finnish Army continues to modernize its artillery, with the K9 Thunder self-propelled howitzer (designated Moukari in Finland) forming the backbone of its heavy firepower. An initial order of 48 units was placed in 2017, under a €145 million agreement with South Korea, with deliveries due by 2020 following extensive modifications to suit Finnish conditions. A second procurement phase is underway for an additional 48 systems, further consolidating their NATO-standard artillery capability. Finland regularly deploys these systems during NATO exercises. The Finnish Air Force is also undergoing extensive modernization to enhance its airspace protection and support ground operations. The core of this modernization is the acquisition of 64 F-35A Lightning II multirole fighter jets, which will replace their aging fleet of F/A-18 Hornets. Alongside this, Finland is upgrading its air surveillance capabilities and integrating its systems into NATO's command and control structures. The introduction of the David's Sling air defence system, procured through a €320 million agreement signed in 2023, represents a major enhancement in missile defence capability. The Finnish Navy is undergoing a comprehensive upgrade aimed at enhancing defence in the Baltic Sea and ensuring

NATO interoperability. The flagship initiative is the Squadron 2020 programme, which will deliver four Pohjanmaa-class multi-role corvettes equipped with advanced air defence systems, anti-ship missiles, and sophisticated sensors. These vessels will provide a constant naval presence and expanded operational capability within both national and allied contexts. The ships are being built by Rauma Marine Constructions, with the Swedish company Saab AB supplying the combat systems. Full operational capability is expected by 2028, with a service life out to 2050. Complementary upgrades include the modernization of Katanpää-class mine counter-measure vessels, new anti-submarine sensors, the procurement of long-range anti-ship missiles and seabed surveillance systems to secure critical undersea infrastructure (Finish Ministry of Defence 2024^[8], Finish Government 2024^[7], IISS 2025^[9]).

In October 2024, Sweden published its defence strategy for 2025 to 2030 (Totalförsvaret 2025–2030), aiming to increase defence spending to 2.6% of GDP by 2028 and expand its armed forces to 127,300 personnel by 2035. This includes active soldiers, conscripts, reserves, and the Home Guard. The strategy, approved by parliament in December 2024, is a response to the worsened security environment and a growing need for long-term preparation for conventional warfare, self-sufficiency in critical capabilities, and alignment with NATO's requirements. Sweden is reorganizing its wartime military structure, including the creation of three mechanized brigades and one infantry brigade by 2030, with the Norrland Infantry Regiment in northern Sweden expected to reach full operational readiness by 2032. Air defence is a priority, with expansion of systems and integration into NATO's Integrated Air and Missile Defence (IAMD). The navy will receive four Luleå-class surface combatants equipped with advanced C2 and air defence systems, and new Blekinge-class submarines will

begin to replace the Gotland class after 2035. Efforts also include increased ammunition and materiel stockpiles and investments into domestic defence industries to reduce reliance on foreign suppliers. Sweden plans to train at least 10,000 conscripts per year by 2030, this increasing to 14,000 by 2035, and to provide comprehensive support infrastructure for allied troops stationed on its territory. It has committed to contributing to NATO through ground troops in Latvia (eFP), naval assets in Standing Naval Forces, and air patrol missions. The Swedish Armed Forces are made up of the army, navy, air force, and Home Guard. As of 2025, there are 14,850 active personnel, supported by 21,500 reservists and an equal number in voluntary defence organizations. The army operates 110 Leopard 2A5 tanks (Strv 122), 319 CV90 IFVs, and 26 Archer SPHs, with further modernizations underway. The air force can field 96 JAS 39 Gripen C/D jets and is acquiring the enhanced Gripen E variant, equipped with AESA radar and ad-

vanced EW capabilities. Integration with allied air forces is already robust. The air defence system includes Patriot PAC-3, IRIS-T SLM, and RBS 70 systems. The navy, operating primarily in the Baltic Sea, maintains a fleet of Visby-class stealth corvettes and Gotland-class submarines. Amphibious forces and the Home Guard enhance operational flexibility and resilience against hybrid threats. In addition to conventional forces, Sweden is expanding its cyber and space defence capabilities. The government is investing over \$100 million in the Esrange Space Center to support NATO and EU satellite operations. Sweden has also joined the Northlink initiative for secure defence communications. Defence modernization has been accelerated in response to the Russian war against the Ukraine, with approximately \$36 billion to be invested by 2035 in modern capabilities across all branches of the military (Regeringen 2024^[19], Swedish Government 2024^[22], IISS 2025^[9]).

Changing Perceptions of Russia in the West

Following Russia's illegal annexation of Crimea and the outbreak of war in Donbas in 2014, military cooperation between NATO and Russia has been significantly restricted. The NATO-Russia Council ceased all practical collaboration, although high-level channels for political communication remained open (Allison 2017). Agreements related to military cooperation and information exchange were cancelled. NATO responded by increasing its military presence in Poland and the Baltic states through rotational deployments and new bases (Kamp and Reisinger 2022). Both NATO and Russia subsequently increased the frequency of military exercises in Europe and NATO member states substantially raised their defence budgets to counter potential Russian threats.

The perception of a growing conflict in the Arctic post February 2022 supports the view that the era of Arctic exceptionalism is ending. NATO's Strategic Concept, adopted in the summer of 2022, reflects these concerns. However, NATO had begun to prioritize Arctic security before Russia's invasion of the Ukraine, responding to Russia's modernization of air bases, radar systems, and the deployment of air defence systems and military-equipped icebreakers. Russia's focus on controlling the Northern Sea Route and its capability to block access from the Atlantic underscores its strategic intentions (Odgaard 2022, pp. 97–99). The Arctic had previously been a secondary focus for NATO strategies, as evidenced by the 2010 NATO Strategic Concept and the 2011 Alliance

Maritime Strategy, which failed to include an explicit Arctic focus (NATO 2011^[12]). However, by the 2021 Brussels Summit, NATO had recognized the High North as geopolitically significant, reflecting heightened concerns about Russia's military activity and China's growing interest in the region (NATO 2021^[13]). NATO emphasized a situational awareness and the defence of the North Atlantic as strategic priorities, addressing both environmental changes and critical infrastructure security. Analysts highlight that Arctic security also relates to broader issues such as climate change, economic access, and sea lane protection (Buchanan 2022, pp. 2–5). NATO strategists foresee the Arctic's growing security importance, urging the Alliance to adapt to climate change and new threats. Strategies include integration of climate change issues into defence policy, enhancement of monitoring technologies, and to ensure the security of emerging Arctic routes. While Russia remains a significant challenge due to its military build-up and cooperation with China, NATO stresses the importance of dialogue to prevent conflict and address environmental security concerns (NATO Allied Command Transformation 2021^[16]).

NATO's 2022 Strategic Concept identifies Russia as the primary and most direct threat to the security of the Alliance. The

document highlights Russian destabilization tactics, including military incursions, political coercion, hybrid threats, cyberattacks, and disinformation campaigns. It emphasizes that Russia's modernization of its armed forces, including its nuclear arsenal, poses a direct challenge to the security of NATO. In response, NATO is strengthening its deterrence strategies, enhancing readiness, modernizing military capabilities, and increasing cooperation among member states, while remaining open to dialogue under conditions that respect sovereignty and territorial integrity. In the Arctic, NATO faces challenges from Russia's militarization (Middleton 2025) and its collaboration with China. Russian activities, such as the expansion of military infrastructure and deployment of hypersonic weapons, directly threaten the security of NATO (NATO 2024^[14]). Climate change exacerbates these issues by opening up new sea routes and resource opportunities. Military exercises, such as Arctic Challenge 2023, improve NATO's capacity for Arctic operations and enhance interoperability among allies. Projects such as NORTHLINK focus on secure communications and infrastructure protection, ensuring NATO's is ready to counter emerging technologies such as unmanned systems (Conley and Arts 2023, Air and Space Forces 2023^[11]).

Discussion

Arctic management

Since 2022, cooperation within the Arctic Council between Russia and the Western Arctic states has significantly diminished, primarily due to the geopolitical tensions stemming from Russia's invasion of the Ukraine. While the Arctic Council is not directly involved in hard security, the conflict has spilled over from the military and security domains into other sectors, diminishing the effectiveness of the institu-

tion. This divergence undermines the academic relevance of the concept of Arctic exceptionalism.

Russia faces negative consequences from this policy shift. The "High North, low tension" approach, once used by Moscow to secure unilateral advantages, has been rendered ineffective. Political tensions have disrupted the neutral and technocratic character of the Arctic Council,

with Russia increasingly isolated in the forum. Moscow has argued that decisions made without its participation are illegitimate and warned of regional destabilization. Russian officials, including Ambassador Nikolai Korchunov, have suggested a possible need for alternative cooperative frameworks involving non-Arctic partners such as China and India, which could further weaken the structure of the Arctic Council (Sukhankin and Lackenbauer 2023). A potential Russian termination of the membership in the Arctic Council would have, undoubtedly, serious consequences, particularly for environmental cooperation. The absence of Russian data could impair climate modelling and hinder global responses to climate challenges. The ability of the Arctic Council to achieve its goals in sustainable development and environmental protection would be significantly weakened (Siem 2024). However, some experts suggest that cooperation could be restored through the involvement of non-state actors, such as researchers, NGOs, and indigenous communities, emphasizing "citizen diplomacy" and joint climate projects. Devyatkin (2022) highlights historical precedents, such as Cold War-era environmental agreements, as a basis for reviving dialogue despite high political tensions.

Despite these challenges, the Arctic Council has demonstrated resilience. According to Andreeva and Rottem (2024), the Council has adapted to the absence of

Russia by focusing on areas that do not require Russian involvement, such as environmental protection and climate research. Norway's presidency has been instrumental in maintaining continuity and engaging non-state actors, including indigenous communities and scientific institutions. This adaptability has ensured that the Arctic Council continues to function as a useful forum for Western Arctic states, despite its current limitations. Specifically, Norway declared its support for integrated ocean management, the development of marine research, safe navigation in the Arctic, the reduction of black carbon and methane emissions, the sustainable use of natural resources, the development of the blue economy, ensuring food security in the Arctic environment, helping communities adapt to climate change, and improving social conditions in Arctic settlements (Arctic Council 2023^[2]). The Norwegian Chairship successfully prioritized the resumption of critical work by the Arctic Council's working groups, securing a formal agreement in August 2023 that allowed expert-level cooperation – including on biodiversity and environment projects – to continue among all eight Arctic States based on written procedures. By focusing on maintaining the institution's core functions, Norway managed to keep the circumpolar scientific mechanism alive despite the ongoing halt of high-level political dialogue with Russia.

Economic cooperation

Economic developments also challenge the notion of Arctic exceptionalism. The conflict has spilled over from the military and security domains into the economic domain. For Russia, the Arctic has long been regarded as a critical region for economic development, energy security, international trade, and geopolitical strategy. Moscow has sought to capitalize on the

region's economic potential through cooperation with Western entities while simultaneously enhancing its military presence. Despite its increasingly assertive stance toward the West since 2007, Russia relied heavily on Western technology in key Arctic sectors and thus actively promoted Arctic cooperation, presenting itself as an advocate of Arctic exceptionalism.

The restriction on Western economic engagement with Russia in the Arctic undermines both the concept of Arctic exceptionalism and Russia's economic interests. Vladimir Putin's assertion that Western sanctions are not only intended to harm the Russian economy but also diminish its influence in the Arctic underscores this challenge. Although precise data on economic losses remain unavailable, sanctions are anticipated to significantly hinder Russia's

ability to develop Arctic energy projects. Over the medium term, these restrictions could cost Moscow tens of billions of U.S. dollars in annual revenue, depriving it of resources essential for financing its revisionist foreign policy. While Western Arctic states may also incur economic losses from reduced engagement, they view the risks posed by Russia's aggressive foreign policy as outweighing the potential benefits of continued cooperation.

Security and Military aspects

Despite the war in the Ukraine, Russia's strategic objectives in the Arctic remain largely unchanged. These objectives include the protection of the nuclear triad, particularly the strategic submarines and air forces stationed on the Kola Peninsula. Key priorities also encompass securing the Northern Sea Route (NSR), protecting Arctic nuclear capabilities, and projecting power beyond the Arctic zone. A robust "Bastion Defence" system safeguards these objectives, ensuring control over the Barents and Norwegian Seas to protect the Northern Fleet submarines. Russia's naval and air capabilities, including upgraded frigates and strategic bombers, remain operational and relatively unaffected by the conflict. The militarization of key chokepoints along the NSR continues, as does the operation of Arctic infrastructure, although economic challenges have slowed modernization. Electronic warfare and surveillance capabilities remain intact, allowing Russia to monitor NATO activities and maintain its dominance in key areas such as the Kara Sea and NSR straits (Boulègue 2024).

However, Russia's invasion of the Ukraine has led to significant negative consequences for its Arctic strategy. NATO's policy in the Arctic has fundamentally shifted, with the alliance terminating coop-

eration with Russia, refocusing its strategic attention on the region, and increasingly perceiving the Arctic as critical to security against Russian aggression. Russia's pre-2022 advantage, derived from NATO's slower pace of engagement in the Arctic, has diminished. Military competition with NATO in the region is now significantly more difficult for Russia due to its weaker economy. The growing military interest of the West, including that of the U.S., further complicates Moscow's objectives (Wall and Wegge 2023).

The accession of Finland and Sweden to NATO, in response to Russia's aggression, has altered the regional balance of power. This development has undermined Russia's Bastion Defence strategy, as NATO gains proximity to key Russian installations in the Arctic. Finnish territory, with its 1,340 km shared border with Russia, provides NATO with a platform to deploy air and missile systems capable of targeting the Kola Peninsula. Sweden's subarctic regions enhance NATO's surveillance capabilities, enabling the alliance to monitor and potentially disrupt Russian operations in the Barents and Norwegian Seas. Key Northern Fleet bases, such as those at Gadzhiyev and Severomorsk, which house Delta IV and Borei-class submarines equipped with advanced SS-N-23

and SS-N-32 missiles, are now under increased pressure from NATO's expanded presence (Kristensen et al. 2024).

The geographic position of Finland and Sweden allows NATO to strengthen radar networks and intelligence operations in the Arctic. Finnish airfields in Lapland, such as Rovaniemi, and Swedish bases, such as Luleå Air Base, provide NATO with forward-operating positions for rapid deployments. This capability enhances NATO's ability to counter Russian forces, particularly in the Greenland-Iceland-UK (GIUK) Gap, a critical zone for North Atlantic defence (Wall and Wegge 2023). For Russia, NATO's Arctic expansion diminishes strategic depth and increases vulnerabilities along multiple axes, further isolating Moscow in the region.

Conclusion

What was initially characterized by great expectations has given way to a phase of profound disillusionment. The concept of Arctic exceptionalism has failed to withstand scrutiny as a relevant analytical framework for the understanding of contemporary Arctic geopolitics. Russia's full-scale invasion of the Ukraine in 2022 significantly altered the geopolitical dynamics of the Arctic, leading to a marked reduction in cooperation and the emerging securitization of the region in all relevant domains, particularly between the Western Arctic states and Russia. This shift directly contradicts the foundational premise of Arctic exceptionalism, which presumed that the region's governance would remain insulated from broader geopolitical tensions. Importantly, however, the reduction of cooperation has been asymmetrical; while relations with Russia have deteriorated, cooperation among Western Arctic states has been resilient, underpinned by shared democratic values and mutual security interests.

Furthermore, the war in the Ukraine has severely weakened Russia's Arctic capabilities. Arctic-specialized units, such as the 80th and 200th Motorized Rifle Brigades, have suffered heavy losses in personnel and equipment. Critical Arctic military resources, including T-80BVM tanks and Tor-M2DT anti-aircraft systems, have been destroyed, with limited funds for replenishment. Economic sanctions and logistical challenges have delayed modernization efforts and new infrastructure projects, weakening Russia's ability to adapt to the increased accessibility to the Arctic caused by melting ice. These setbacks amplify Russia's vulnerabilities in the Arctic and limit its strategic influence in the region (Wall and Wegge 2023).

The integration of Finland and Sweden into NATO has further consolidated this Western cohesion, creating a more unified and coordinated framework that addresses Arctic security challenges. Joint military exercises, the expansion of surveillance and early warning systems, a collaborative environmental and scientific initiatives exemplify the ongoing depth of cooperation among Western Arctic actors, even as Russia is increasingly excluded from these multilateral engagements.

For Russia, the political developments following its 2022 invasion of the Ukraine have been a strategic debacle. The Arctic, previously envisioned by Moscow as a domain where economic development, military dominance, and international cooperation could be effectively balanced, has instead become a theatre of growing isolation and strategic vulnerability. This isolation has impaired Russia's ability to derive economic and scientific benefits through international collaboration, reinforcing its dependence on its internal capabilities and

partnerships with non-Arctic actors such as China and India. However, these alternative partnerships lack the technological sophistication and economic background previously afforded by cooperation with Western states.

Yet, challenges to Arctic exceptionalism are not solely attributable to Russian behaviour. Political developments within the West, particularly during Donald Trump's second presidential term, pose a serious threat to transatlantic cohesion, broader Western unity and cooperation between Western democracies. His continued unilateralism, the repeated questioning of collective defence commitments, and transactional approach to allied relationships have eroded trust within key Western institutions, notably NATO. Trump's overt antagonism toward European allies, manifested in public criticism, economic coercion, and the undermining of U.S. security guarantees, has been particularly destabilizing.

One illustrative example was Trump's unsolicited, provocative and renewed proposal to purchase Greenland, a territory under Danish sovereignty. The Danish government unequivocally rejected the offer. This diplomatic episode was widely perceived as a demonstration of disrespect toward an ally. More broadly, it underscored the Trump administration's willingness to engage with partners from a coercive position, with little regard for domestic political legitimacy or historical alliances. Such actions have had wider implications for Western security cooperation. The persistent questioning of U.S. commitments has weakened transatlantic solidarity and intensified debates regarding Europe's strategic autonomy and the credibility of the American security umbrella. Moreover, Trump's rhetorical devaluation of core Western values, such as democratic governance, the rule of law, and multilateralism,

has undermined the normative foundation of long-term strategic partnerships, replacing them with a transactional logic ill-suited to the complex challenges of Arctic security.

Nevertheless, despite the rising geopolitical tensions, the prospect of armed conflict in the Arctic remains low. While there are several ongoing territorial disputes, including those over the Lomonosov Ridge, among Russia, Denmark, and Canada, the recently resolved status of Hans Island between Denmark and Canada (settled peacefully in 2022), and maritime boundary disagreement between Canada and the United States in the Beaufort Sea, these conflicts have thus far been managed through diplomatic and legal mechanisms, particularly under the auspices of the United Nations Convention on the Law of the Sea (UNCLOS). In addition to the normative preference for peaceful dispute resolution, structural constraints further mitigate the likelihood of military escalation. The Arctic's extreme climatic and geographic conditions, long periods of darkness, severe cold, pervasive ice coverage, and limited infrastructure, pose formidable logistical challenges to any extended military operation. Despite ongoing climate changes, much of the region remains inaccessible for large parts of the year, limiting the feasibility of extended combat engagements.

To sum up, Russia's strategic position in the Arctic has been weakened since the 2022 invasion of the Ukraine. Western sanctions have severely curtailed its access to critical technology and foreign investment, thereby stalling the development of essential infrastructure, including the logistics and supply chains required for operations in extreme Arctic conditions. Simultaneously, the accession of Finland and Sweden to NATO has fundamentally shifted the regional security balance in favour of the Alliance.

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