Denning Law Journal 2026 Vol 34 p 115-152

ENERGY GEOPOLITICS OF THE ARCTIC: LEGAL IMPLICATIONS IN THE AGE OF CLIMATE CHANGE

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ABSTRACT

Climate change has accelerated the melting of ice in the Arctic region, leading to the reconfiguration of the Arctic geographical "space." Consequently, the Arctic region has witnessed a flurry of economic and military activities, with profound implications for Indigenous communities' rights to sustainable development. This article examines the energy security calculations of the Arctic states to understand the emerging energy geopolitics in the Arctic region. The article elucidates that energy geopolitics is reconfiguring the Arctic region as a "space" for power projection, thereby exacerbating the deterioration of the Arctic environment and raising concerns for the livelihoods of Indigenous communities. It demonstrates that energy geopolitics within a patchy regulatory framework of the Arctic is detrimental to the Indigenous peoples' human rights.

Keywords: energy geopolitics, great powers, Indigenous communities, climate change, development-security, legality

INTRODUCTION

The United Nations (UN) 2030 Agenda for Sustainable Development notes:

> a warming climatic system is expected to impact the availability of basic necessities like freshwater, food security, and energy, while efforts to redress

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> climate change, both through adaptation and mitigation, will similarly inform and shape the global development agenda.[1]

"Development" and "security" are "interlinked" as the growing interconnection between the politico-economic-legal landscape is now a common concern in global, regional, national and local policymaking. There are two sides to the impact of climate change and its implications for "development-security."[2] First, from a top-down perspective, the depletion of resources will create acute problems for a nation-state's energy security, crucial for development, consequently driving nations towards competitive practices in resource exploitation. Second, from a bottom-up perspective, inter-state competition will have ramifications for local communities' adaptation and mitigation policies, diluting their legal rights to enact environmentally sustainable approaches. Ultimately, this will impact their livelihoods, developmental opportunities, and economic security.

The Arctic region, described as "one of the last frontiers still free from full-on exploitation of its resources by humans" and "among the most pristine environments remaining on Earth, with unique species and complex ecological networks," has acquired importance in energy security calculations of dominant powers due to its wealth of oil, gas, rare metals and fishing resources.[3] "Energy geopolitics" can be defined as "the influence of geographical factors, such as the distribution of centres of supply and demand, on state and non-state actions to ensure adequate, affordable and reliable supply of energy."[4]

A steady stream of onshore and offshore hydrocarbon exploration by Canada, Russia, and America has led to the discovery of more than 400 oil and gas fields north of the Arctic Circle. Despite environmental and climate impacts, the Biden administration gave formal approval in March 2023 to an oil and gas drilling project that would take place inside the petroleum reserve, which is located about 200 miles north of the Arctic Circle and is known as the country's largest single

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[1] "Climate Change" The United Nations Sustainable Development Goals (December 2022).

[2] Maria Stern and Joakim Öjendal, "Mapping the Security-Development Nexus: Conflict, Complexity, Cacophony, Convergence?" (2010) 42(1) *Security Dialogue,* 5–29.

[3] Mark Rowe, "Arctic nations are squaring up to exploit the region's rich nature resources" *Geographical* (12 August 2022), https://geographical.co.uk/geopolitics/the-world-is-gearing-up-to-mine-the-arctic (accessed 4 April 2025).

[4] Mathieu Blondeel, et al, "The geopolitics of energy system transformation: A review" (2021) 15(7) *Geography Compass*, 1–22.

expanse of pristine land.[5] Norway's "controversial" decision in January 2024 to approve deep-sea mining spanning a massive 281,200 square kilometres of its Arctic waters has raised concerns about irreversible damage to marine ecosystems. "To overcome severe shortages in current supply chains, mining the ocean bed is becoming a strategically and commercially attractive prospect for states looking to get ahead in the geopolitical race of raw materials."[6] China and India do not have any territory in the Arctic, but their great power ambitions are supplanted by strategic inroads into the Arctic region. Mark Rowe accurately notes, "The Arctic appears to be on the cusp of extraordinary and irrevocable change."[7]

This "irrevocable change" has implications for the well-being and sustainable development of Indigenous polar communities. Sustainable development in the Arctic can be defined as "*development that improves health, well-being and security of Arctic communities and residents while conserving ecosystem structures, functions and resources.*"[8] Great power energy geopolitics, combined with climate change, has led to the transformation of ecosystems to which Indigenous and local cultures struggle to adapt. Traditional livelihoods such as hunting, berry picking and reindeer hunting are economically important and hold cultural and spiritual significance. If protection and conservation of traditional livelihoods are not considered, "it is hard to see how we will advance sustainable development in the region."[9]

This article interrogates the emerging energy geopolitics of the Arctic region and its impact on climate change governance and the legal implications. It considers the relationship between climate change and sustainability in the polar region, the Arctic Council and its mandate for legal governance of local communities, and the onset of great-power energy geopolitics to secure reliable access to natural resources and ensure energy security. This article illuminates the

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[5] Lisa Friedman, "Biden Administration Approves Huge Alaska Oil Project" *The New York Times* (12 March 2023), https://www.theguardian.com/us-news/2023/mar/13/alaska-willow-project-approved-oil-gas-biden (accessed 9 July 2025).

[6] Mared Gwyn Jones, "Norway's controversial approval of deep-sea mining divides European Parliament" *Euronews* (17 January 2024), https://www.euronews.com/my-europe/2024/01/17/norways-controversial-approval-of-deep-sea-mining-divides-european-parliament (accessed 2 June 2025).

[7] Above n 3.

[8] Tatiana S. Degai and Andrey N. Petrov, "Rethinking Arctic sustainable development agenda through indigenizing UN sustainable development goals" (2021) 28(6) *International Journal of Sustainable Development & World Ecology*, 518–523.

[9] Timo Koivurova, "Why The Arctic Needs The UN Sustainable Development Goals" *WWF*, https://www.arcticwwf.org/the-circle/stories/why-the-arctic-needs-the-un-sustainable-development-goals/ (accessed 6 May 2025).

global-local effects of the ongoing Arctic energy geopolitics by elaborating on the ways great power interests increasingly conflict with the international law governing the Arctic. Ultimately, the article highlights that Indigenous peoples' traditional livelihood and right to sustainable development are on tenterhooks.

Climate Change, Sustainability and Governance in the Arctic – A Polar Focus

The Arctic region lies between 66.5°N and the North Pole. It includes the partly ice-covered Arctic Ocean, and the land areas of the surrounding eight Arctic states: Canada, Denmark (including the Faroe Islands and Greenland), Finland, Iceland, Norway, the Russian Federation, Sweden, and the US (Alaska), as well as their shallow sub-regional seas (Figure 1).

The Arctic provides livelihoods to four million people, most of whom live in northern Scandinavia and Russia. There are more than 40 Indigenous peoples in the Arctic, representing about 10 per cent of the Arctic's total population. The Inuit are the most widespread, occupying coastlines from Arctic Russia to Canada to Greenland. The Alaskan Native population are estimated to comprise 15 per cent of the state population. In Greenland, Indigenous people make up about 88 per cent of the population.[10]

Arctic Indigenous communities have a specific connection and have integrated into the land that they have inhabited. Other features that are specific to these communities include distinct languages, cultures, and traditional livelihoods such as reindeer herding, fishing, and hunting. The connection with the land is discernible in the observations of the Sámi peoples from northern Finland, who expound, "Language, humans and livelihoods are tied together: livelihood helps preserve culture, but both are dependent on the land and its well-being."[11] The "cultural environment" is significant in an Arctic context as it refers to the symbiosis between Indigenous peoples' historical-cultural traditions and land-use.[12]

The impacts of climate change are felt most severely in vulnerable regions worldwide, especially in the Arctic. The Intergovernmental Panel on Climate Change (IPCC) Special Report notes that "warming greater than the global annual average is being experienced in many land regions and seasons, including two or

[10] WWF, "Arctic Communities," https://www.arcticwwf.org/our-priorities/arctic-communities/ (accessed 20 May 2025).

[11] Siida Museum in Inari (Finland) Exhibition, "These lands are our children," quoted in M. Payva Almonte, "Vulnerability in the Arctic in the Context of Climate Change" *The Arctic Institute* (2 May 2023).

[12] Ibid.



Figure 1. Circumpolar Arctic Region

three times higher in the Arctic."[13] Between 1979 and 2019, the sea ice cover in September, when the ice-covered areas reach their annual minimum, has decreased by 44 per cent. Furthermore, current estimates suggest the Arctic Ocean could largely be ice-free before 2050. Changing sea ice, precipitation patterns, rising temperatures, and thawing permafrost affect the food security and well-being of Arctic communities and the infrastructure in the region. As Malgorzata Smieszek et al. note:

> The availability of traditional foods such as whales, walrus, and seals is adversely affected by changes in the ocean and thinning and receding of sea

[13] Ibid.

ice, which no longer provides a reliable medium for dogsleds and snowmobiles used for hunting and transportation.[14]

The scientific outlook is unanimous that the Arctic region, along with coral reefs and mountain glaciers, is one of the uniquely threatened ecological and human systems. Therefore, the accelerating climate change has repercussions for the human rights of Indigenous peoples, such as the right to life, health, culture, property, means of subsistence, and historical socio-cultural-economic heritage.[15]

The biophysical changes, coupled with the forces of political and economic interests of great powers, have accelerated the opening of new shipping routes, oil and gas developments, and access to minerals and fisheries. The geopolitical linkages between the Arctic and international law have become more pronounced in recent years. The combined impacts of anthropogenic climate change and the political and economic forces of geopolitics have catapulted the Arctic region to the centre of the sustainable governance challenge.

The Arctic region governance is a "complex field" involving various actors and legal regimes operating in institutional, social, strategic, environmental sustainability, and national security contexts. The maritime Arctic, including the Central Arctic Ocean (CAO), is governed by an international legal framework based on the United Nations Convention on the Law of the Sea (UNCLOS). The 1982 UNCLOS established rules for the seabed, water column, and every sea and ocean surface worldwide. The Arctic region falls under the sovereign authority of the eight Arctic states and their indigenous peoples and northern communities. The Arctic governance shifted towards devolution in the late 1970s as the Indigenous peoples in Alaska, northern Canada, and Greenland secured substantial new rights to land, including sub-surface rights to minerals and other resources. Further developments in this direction were the establishment of the Arctic Environment Protection Strategy (AEPS) in 1991. The AEPS worked on areas of common interest, ranging from environmental monitoring to ecological protection. While the eight Arctic states worked collaboratively on this mechanism, the AEPS negotiations involved three Indigenous peoples' organisations – the Sámi Council, the Inuit Circumpolar Conference, and the Association of Indigenous Minorities of the North, Serbia and Far East of the Russian Federation. Subsequently, in 1993, the parties to AEPS decided to promote sustainable development and environmental

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[14] Malgorzata Smieszek, et al, "The state and challenges of Arctic governance in an era of transformation" (2021) 4(12) *One Earth*, 1666–1670.

[15] Above n 9; United Nations, *International Covenant on Economic, Social and Cultural Rights* (adopted 16 December 1966, entered into force 3 January 1976) 993 UNTS 3, adopted by UNGA Res 2200A (XXI).

protection. In 1996, the Canadian government brought all parties together to establish an intergovernmental forum called the Arctic Council. The 1996 Ottawa Declaration identifies Arctic Council Members as the Eight Arctic States and Six Permanent Participants (PP) from six organisations representing Indigenous peoples. The aim of the council is to promote coordination and interaction among the Arctic States and Arctic indigenous communities on particular issues such as sustainable development and environmental protection.

However, the AEPS and the Arctic Council lack the legal authority of a treaty or a convention. Their prime focus remains on discussing and promoting sustainable development, environmental protection agreements, and information sharing. The creation of the PP category devotes explicit attention to the interests and wishes of Arctic Indigenous peoples, as both states and indigenous communities must discuss and tackle long-term and short-term sensitive topics related to the Arctic environment. The Council established six notable working groups to further this mechanism, including the Sustainable Development Working Group, the Arctic Contaminants Action Program, and the Arctic Monitoring and Assessment Programme. In this context, "Arctic governance and indigenous rights are closely entwined."[16]

The Arctic Council allows external observers to attend ministerial meetings and participate in working groups and task force activities. Nevertheless, the observers must respect the sovereign rights of the eight Arctic states and adhere to the established rules of engagement. Observer requests are considered every two years at the Arctic Council ministerial meeting, and decisions are unanimous. The Arctic Council consists of 38 Observers, thirteen of which are non-arctic states, including China, India, Singapore, Japan, and South Korea, whilst the rest are intergovernmental, interparliamentary, and non-governmental organisations (Figure 2).[17]

The dynamics in the Arctic region are changing. Some Arctic states favour a more active role for the North Atlantic Treaty Organisation (NATO) in the region. Recently, China declared itself a "near-Arctic state" and plans to establish a "polar silk road," whilst the European Union (EU) announced in 2019 that its Arctic vision is that of a "global Arctic" wherein it espoused that the issues in the region are global in nature and would be more effectively addressed through both regional or multilateral cooperation such as the Arctic Council and the UN system.[18]

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[16] Klaus Dodds and Jamie Woodward, *The Arctic: A Very Short Introduction* (Oxford: Oxford University Press, 2021), pp. 110–114.

[17] Arctic Council, "Arctic Council," https://arctic-council.org/ (accessed 20 May 2025); Above n 14, at 1669.

[18] Above n 16, pp. 115–117.

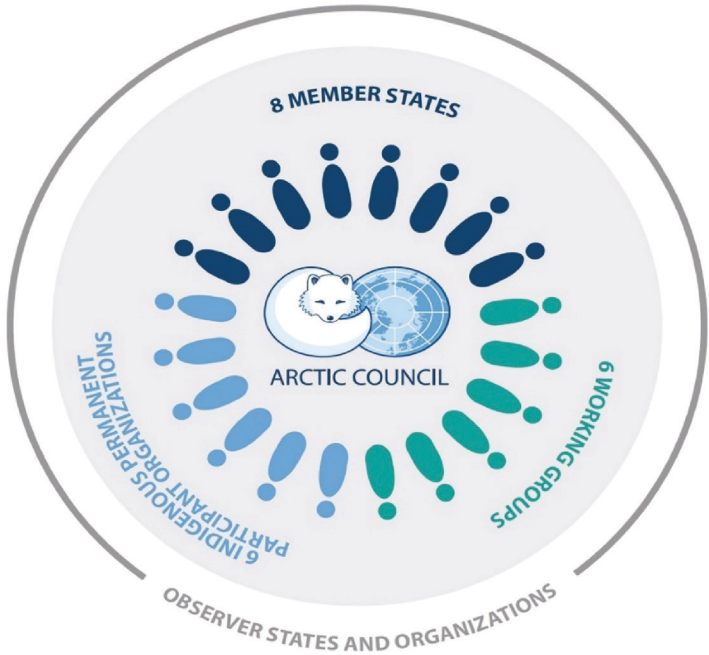


Figure 2. The Arctic Council

Whilst the eight Arctic states remain the primary arbiters of the Arctic region along with the polar communities, ongoing climate change, the growth of technology and economics, and the intensifying great power contention have pitted the "circumpolar Arctic" against the "global Arctic."[19] Climate change has induced biophysical changes in the region, leading to a flurry of maritime activities, including commercial fishing, control of northern sea routes, and strategic investment in energy development. The following section examines the emerging great power contention in the Arctic in the context of "energy geopolitics," its impact on Arctic ecology, and the ensuing implications for the sustainable livelihoods of Indigenous polar communities and their human rights.

Energy Geopolitics of the Arctic Region

In defining classical geopolitics, Phil Kelly observes, "Geopolitics is the study of the impact or influence of certain geographic features, positions and locations of

[19] Ibid.

the regions, states, and resources, plus topography, climate, distance, states' size and shape, demography, and the like, upon states' foreign policies and actions as an aid to statecraft."[20] According to this definition, "geography" and "statecraft" are interconnected. Therefore, the realist logic remains at its core because control of "space" and influence over that "space" is about power accumulation and projection. As Zhengyu Wu notes, "Like realist theories, classical geopolitics exhibits an unequivocally materialistic tendency characterised by power politics."[21] Furthermore, for realists, the "great powers" are the most important actors in international relations. Similarly, for classical geopolitics, "great powers" are the most important actors and are defined by "geographic locations and strategic orientations as well as by territorial size and material resources."[22] Thus, great powers are identified as "maritime or sea powers, continental or land powers and land-sea hybrid powers," so the role of strategically located regions in "determining patterns of global political power" becomes pivotal.[23] Classical geopolitics' main analytical focal points are the variables of "natural environment" and "technology" and their effect on great powers' relationships in international relations.[24]

In the late 19th Century, Alfred Mahan's emphasis on interconnectedness between force, economics, and geography catapulted the importance of "geography" in international relations. Mahan's key insight on "sea power" and its role in the emergence and growth of the British Empire underscored the early ideas of America's geographical and political importance in the world as an island lying offshore the Eurasian landmass.[25] The geopolitical situation of the early 20th Century, which signified the rise of tensions between European great powers, led Halford Mackinder to focus on the functional value of the Eurasian continent. Mackinder considered the Heartland a Pivot of all transformations within the World Island. Heartland was in the most advantageous geopolitical setting due to its resources and location, which would allow the actor that dominated the Eurasian Heartland to sustain conditions for developing military and industrial power. The Heartland was impregnable to attacks by sea powers yet could sustain

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[20] Phil Kelly, *Classical Geopolitics: A New Analytical Model* (Stanford, California: Stanford University Press, 2016), p. 23.

[21] Zhenyu Wu, "Classical geopolitics, realism and the balance of power theory" (2017) 41(6) *Journal of Strategic Studies*, 786–823.

[22] Ibid.

[23] Klaus Dodds and Chin. Yuan Woon, "Classical Geopolitics Revisited" *Oxford Research Encyclopaedia of International Studies* (11 January 2018).

[24] Above n 21, at 792.

[25] Alfred Thayer Mahan, *The Influence of Sea Power upon History, 1660–1783* (Boston: Little, Brown, 1890).

a large population. The Pivot, as a conception, underscores a spatial function whose parameters have constantly changed.[26] Consequently, the detractor of Mackinder, Nicholas Spykman was convinced that Mackinder overestimated the geopolitical significance of the Heartland. For Spykman, the Rimland was of greater civilisational significance, and therefore Mackinder's Pivot depended upon it. Thus, Spykman asserted that control over the Rimland was the key to world domination.[27] The operational logic of Heartland and Rimland was evident during the Cold War in the United States-Soviet Union strategies of building alliances through the North Atlantic Treaty Organisation (NATO) and the Warsaw Pact, and in the concomitant competition in military technology modernisation, as both strived to maintain control over the Eurasian landmass.[28]

Classical geopolitics holds that both the role of "great powers" and favourable "technological conditions" determine the nature of global interactions. Energy resources combined with technological transitions thus acquire significance within a geopolitical context, as these alter the scale of great power geopolitics. The availability of natural resources and energy technology transitions are critical for the energy security considerations of great powers.[29] In this context, the Arctic region has become increasingly important in contemporary energy geopolitics.

Energy geopolitics focuses on the "intersection of energy, security, and international politics."[30] The classical geopolitical dimension to energy resources can be traced back to the 1973–74 Organisation of Petroleum Exporting Countries (OPEC) oil crisis, which made apparent the role of energy as a "lifeblood" of modern economies, sustaining daily life and socio-economic development.[31] Central to energy geopolitics are the questions of domestic policies, the landscape of supply chains, trade patterns, and socioeconomic and sustainability factors surrounding extraction and processing. "Ownership of plentiful fossil fuels, not

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[26] Halford John Mackinder, "The Geographical Pivot of History" (1904) 23(4) *The Geographical Pivot*, 421–437.

[27] Nicholas J. Spykman, *The Geography of the Peace* (New York: Harcourt Brace & Co, 1944).

[28] Eldar Ismailov and Vladimer Papava, *Rethinking Central Eurasia* (Washington D.C.: The Central Asia-Caucasus Institute, 2010), 89.

[29] Yu Yang, et al, "Geopolitics of the energy transitions" (2023) 33 *Journal of Geographical Sciences*, 683–704; Manfred Hafner and Simone Tagliapietra (eds), *The Geopolitics of the Global Energy Transition* (Cham, Switzerland: Springer, 2020).

[30] Belfer Centre for Science and International Affairs, Harvard Kennedy School, "Geopolitics of Energy Project," https://www.belfercenter.org/programs/geopolitics-energy-project (accessed 9 June 2025).

[31] Caroline Kuzemko, et al, "Rethinking Energy Geopolitics: Towards a Geopolitics Economy of Global Energy Transformation" (2024) *Geopolitics*, 1–35, 4–5.

surprisingly, has tended to give a huge boost to the economic development, military might and geopolitical influence," right from imperial Britain that had control over global coal and oil reserves to contemporary major powers like the United States and Russia that have acted militarily to secure their oil supplies.[32]

The Arctic region attains criticality in the era of the energy transition. Fossil fuels remain important through fracking, deep-sea drilling and other advances in exploration and utilisation, albeit the emphasis on decarbonisation by 2050 has also shifted the focus to new global value chains for key minerals used in solar panels, wind turbines and batteries – minerals such as neodymium, praseodymium, terbium and dysprosium.[33] The total economic value of Arctic resources is estimated at $290 billion per year in terms of food, mineral extraction, oil production, tourism, hunting, existence values and climate regulation.[34] While the exclusive economic zones (EEZs) of the Arctic Eight countries safeguard their rights to Arctic resources, melting ice and the emerging space beyond the Arctic Eight EEZs have reshaped control dynamics in this "space."[35]

The following two sections outline the energy geopolitics of the Arctic region by examining the energy policies of the Arctic Eight countries and those of new great powers such as China, India, and the EU. The evaluation below examines the impact of "great power" energy geopolitics in the Arctic on the sustainable livelihoods of Indigenous peoples and their land rights.

The Arctic Eight's Energy Competition and the Impact on Indigenous Polar Communities

The eight Arctic states with sovereign rights over Arctic territory are Canada, Denmark (including the Faroe Islands and Greenland), Finland, Iceland, Norway, the Russian Federation, Sweden, and the US (Alaska). This section aims to briefly delineate the emerging strategic competition among the Arctic Eight in the context of global warming, receding ice, and resource exploitation, and to examine how energy geopolitics and control over the emerging Arctic "space" have become contentious. It also provides an overview of the Arctic Eight's policies towards

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[32] Above n 29, p. vi.

[33] University of Oxford, "Decarbonising the Energy System by 2050 Could Save Trillions – Oxford Study" (14 September 2022), https://www.ox.ac.uk/news/2022-09-14-decarbonising-energy-system-2050-could-save-trillions-oxford-study (accessed 4 May 2025).

[34] Tanya O'Garra, "Economic value of ecosystem services, minerals and oil in a melting Arctic: A preliminary assessment" (2017) 24 *Ecosystem Services*, 180–186, 185.

[35] Above n 3.

Indigenous peoples amid changing energy security considerations, and assesses whether these policies are proving detrimental to Indigenous peoples' economic, social and cultural rights.

1) Canada's Arctic Policy – Canada's "Arctic and Northern Policy Framework," launched in September 2019, underscores the "whole-of-government co-development process" supported by Indigenous representatives and six territorial and provincial governments to define and develop a long-term vision for the Arctic. The interconnected goals that this Framework seeks to build and support are the health and resilience of Indigenous peoples, strong infrastructure to close gaps with other regions of Canada, sustainable and diversified inclusive local and regional economies, resilient and healthy ecosystems, and mutually respectful relationships between Indigenous and non-Indigenous peoples. Canada's Arctic strategy, therefore, is overwhelmingly focused on human and social development and indigenous rights. Not surprisingly, the Framework includes 25 Indigenous partners representing First Nations, Inuit and Métis.[36]

Nevertheless, the strategic dimension is also integral to Canada's Arctic Framework. One of the Framework goals is to ensure that the "rules-based international order in the Arctic responds effectively to new challenges and opportunities."[37] Explicit to this aim is the objective of the Government of Canada to pursue through 2030 a commitment to "a safe, secure, and well defended" Arctic and North as "a continued expression of Canada's enduring sovereignty" over its lands and waters.[38] Canada's Arctic and Northern governments/communities are deemed to be at the heart of security in the region. This enhanced defensive posture of Canada is considered appropriate in relation to the Framework's citation of "growing international interest and competition in the Canadian Arctic from state and non-state actors who seek to share in the region's rich natural resources and strategic position."[39] Central to this claim is the dispute over the Northwest Passage, over which Canada remains committed to exercising its sovereignty (Figure 3).[40]

Global warming has extended the ice-free periods, thus exposing the Northwest Passage with its lucrative shipping routes and undersea national resources.

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[36] Government of Canada, "Canada's Arctic and Northern Policy Framework" (12 April 2023), https://www.rcaanc-cirnac.gc.ca/eng/1562782976772/1562783551358 (accessed 15 March 2025).

[37] Ibid.

[38] Ibid.

[39] Ibid.

[40] Arctic Portal, "Northwest Passage" (8 February 2011), https://arcticportal.org/ap-library/news/343-northwest-passage (accessed 30 May 2025).



Figure 3. The Northwest Passage

The United States contends Canada's claim over the strait as "historic internal waters" and instead interprets it to be an "international strait" as per the UNCLOS that can be crossed freely by all vessels, thereby upholding the principle of "freedom of navigation" on which the US power and strength are built.[41] The main disagreement between the United States and Canada over the Northwest Passage is closely entwined with the prospect of new resource discoveries critical to their energy security. Though the relations between these two Arctic neighbours have remained largely cordial in other aspects of economy and security, as Suzanne Lalonde notes,

> Ambiguities in the legal rules, including the very definition of an international strait, have allowed both states to craft solid, reasonable, and persuasive arguments in support of their position.[42]

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[41] Andrea Charron, "The Northwest Passage in Context" (2005–06) 6(4) *Canadian Military Journal*, 41–48; Kristofer Bergh, "The Arctic Policies of Canada and the United States: Domestic Motivations and International Context" (July 2012) *SIPRI Insights on Peace and Security.*

[42] Suzanne Lalonde, "The U.S.-Canada Northwest Passage Disagreement: Why Agreeing to Disagree Is More Important Than Ever" in K Sopher et.al (eds), *The Arctic and the World Order* (Washington D.C.: Brookings Institution Press, 2020), 267–293.

Whilst sustainable development and Indigenous peoples' rights are central to Canada's Arctic Framework, economic development in the Arctic is expected to proceed despite environmental risks, thereby adversely affecting Indigenous communities' way of life. The Northwest Territories (NWT) mainland, NWT Arctic Islands and Beaufort Sea regions hold large oil and gas reserves estimated at 16.4 trillion cubic feet (Tcf) of natural gas, 1227.8 million barrels of crude oil, and 53.3 million barrels of natural gas liquids (NGLs).[43] The US filed its extended continental shelf claim with the United Nations agency in December 2023, which includes a large chunk of the Beaufort Sea floor that Canada also seeks to control.[44] Unless this impasse is resolved, Canada and the United States will continue to witness geopolitical friction in Arctic waters over offshore drilling rights.[45]

2) The United States' Arctic Policy – In October 2022, the publication of "The United States' National Strategy for the Arctic Region" consolidated the US Arctic strategy. It encapsulates four pillars of robust US presence in the region to mitigate threats to the US homeland and to defend US sovereign territory (security), to improve scientific understanding and conserve Arctic ecosystems (environmental protection), to pursue sustainable economic development across the Arctic region (sustainable development), and to sustain institutions for Arctic cooperation, including the Arctic Council (international cooperation and governance). Like Canada, the US Arctic policy also emphasises a commitment to a "Whole of Government, Evidence-Based Approach," which includes decision-making with Alaska Native Tribes, communities, corporations, and local communities.[46]

Each of these four pillars emphasises the US presence in the High North and the Arctic. For enhanced security, the Biden administration revitalised the Arctic Executive Steering Committee (AESC), anchored in the White House, and renewed the US Arctic Research Commission (USARC). Furthermore, an Arctic division at the Pentagon was established in September 2022. Iris Ferguson, Deputy Assistant Secretary of Defence for Arctic and Global Resilience, sees the Arctic as

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[43] Government of Canada, "*Energy Briefing Note – Assessment of Discovered Conventional Petroleum Resources in the Northwest Territories and Beaufort Sea*" (November 2014).

[44] Bob Weber, "Canada pledges to work with U.S. over competing claims to Arctic sea floor" *CBC News*,(2 January 2024), https://www.cbc.ca/news/canada/north/canada-work-with-us-artic-sea-floor-claims-1.7073547 (accessed 16 May 2025).

[45] Leyland Cecco, "Mike Pompeo rejects Canada's claims to Northwest Passage as 'illegitimate'" *The Guardian* (7 May 2019).

[46] The White House, *National Strategy for the Arctic Region* (October 2022), https://bidenwhitehouse.archives.gov/wp-content/uploads/2022/10/National-Strategy-for-the-Arctic-Region.pdf (accessed 18 May 2024).

a "potential venue for great power competition."[47] Therefore, expanding the role and budget of the US Coast Guard (USCG) icebreaker fleet in coordination with European partners, is highlighted as a central goal to deter Russian and Chinese aggression in the region. New icebreakers will be delivered to the USCG in 2026 or 2027.[48] The US Air Force locates Arctic at the intersection of two strategically important spaces for US forces, the North America (US Northern Command) and the Indo-Pacific (US Indo-Pacific Command). The presence of F-22 Raptors at the Joint Base Elmendorf-Richardson and F-35s at Eielson Air Force Base in Alaska represent, "the largest concentration of fifth-gen, combat coded airpower in the world."[49] The increased presence is the result of a changed situation and threat perception. "The Arctic is no longer a fortress wall, and our oceans are no longer protective moats," the commander of North American Aerospace Defense (NORAD), General Terrence O'Shaughnessy, reported to Congress in March 2020.[50]

The Arctic region remains strategically important for US energy security. The National Strategy maintains a dual importance for fossil fuels and the transition towards renewable energy. In this sense, the critical minerals for green energy remain crucial. Greenland's critical mineral wealth, which underscores the logic behind Trump's bid for the island, highlights this acceleration of transition towards renewable energy.[51] However, dependence on fossil fuel extraction is also not negated. Though a "Responsible Arctic Investment" has been given precedence to improve the livelihoods of Indigenous communities, the US wants to expand opportunities for development in all energy sectors.[52] The controversial Willow oil project in the Beaufort and Chukchi Seas has been approved as part of the limited strategy to expand the US offshore drilling sector in the Arctic. The development of oil and natural gas drilling in the Arctic Ocean is expected to result in spills and carbon emissions endangering wildlife. The Willow oil project will release the equivalent of 277 million tonnes of carbon dioxide into the atmosphere, which is about 4 per cent of US annual emissions, thus proving to be a setback for the goal

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[47] Kenneth. R. Rosen, "A Battle for the Arctic Is Underway. And the U.S. Is Already Behand" *POLITICO* (18 December 2022).

[48] Michael Paul, "U.S. Arctic Security Policy" German Institute for International and Security Affairs (SWP Comment No 40 July 2023).

[49] Howard Altman, "The Intricacies Of F-35s Operations Over The Frigid Alaskan Frontier" *The War Zone* (11 August 2022).

[50] Above n 48.

[51] Prithvi Gupta, "Greenland and the US: Will Trump's Arctic vision prevail?" *Observer Research Foundation* (1 March 2025).

[52] Above n 46, p. 13.

of net-zero emissions by 2050.[53] Control and management of the Arctic "space" for military and economic security underscores the US geopolitical strategy in the Arctic region, irrespective of the negative impact on Indigenous peoples' "development-security," consequently infringing their legal rights.

3) Russia's Arctic Policy – The Arctic region is featured in "The Concept of the Foreign Policy of the Russian Federation," published in March 2023. The Concept has a separate section on "The Arctic" under the regional imperatives of Russian foreign policy. The Concept notes that,

> Russia is seeking to preserve peace and stability, enhance environmental sustainability, reduce threats to national security in the Arctic, create favourable international conditions for the social and economic development of the Arctic zone of the Russian Federation (including to protect the original habitat and traditional livelihood of the indigenous people living there), as well as to advance the Northern Sea Route as a competitive national transport corridor making possible its international use for transportations between Europe and Asia.[54]

The Concept in this regard clearly enumerates Russia "counteracting the unfriendly states' policy" that limits its ability to exercise sovereign rights in the Arctic zone of the Russian Federation and also establishes mutually beneficial cooperation with the non-Arctic states, particularly those who are interested in "developing infrastructure" of the Northern Sea Route (NSR).[55] The strategic doctrine also places an emphasis on regulating maritime issues via the UNCLOS, including the protection of the maritime environment.[56] The Concept does not mention the role of the Arctic Council or the coastal Arctic "five" (Canada, Denmark, Norway, Russia, and the US). The Arctic Council under the Russian chairmanship was unanimously suspended due to the Russian invasion of Ukraine, only to resume with the transfer of the chairmanship to a NATO state, Norway, in

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[53] Above n 5; Noah Gordon, "The Willow Project and the Race to the Pump the 'Last Barrel of Oil" *Carnegie Endowment for International Peace* (16 March 2023); WWF, "How would offshore oil and gas drilling in the Arctic impact wildlife?" (14 April 2021), https://www.arcticwwf.org/newsroom/features/how-would-offshore-oil-and-gas-drilling-in-the-arctic-impact-wildlife/ (accessed 4 June 2025).

[54] The Ministry of Foreign Affairs of the Russian Federation, *The Concept of the Foreign Policy of the Russian Federation* (31 March 2023), https://mid.ru/en/foreign_policy/fundamental_documents/1860586/ (accessed 4 June 2025).

[55] Ibid.

[56] Ibid.

May 2023. Russia has also suspended its annual contribution to the budget of the Arctic Council "until the resumption of real work in this format with the participation of all member countries."[57] The absence of Russia has raised questions about the Arctic Council as a "circumpolar" forum and its relevance to protecting the environment, conserving resources, and supporting Indigenous peoples' sustainable livelihoods.[58]

Russia's military presence exceeds that of NATO and the United States. According to the data compiled by the International Institute for Strategic Studies (IISS) and Reuters, Russia's bases inside the Arctic Circle outnumber NATO's by about a third; Russia has upgraded the Northern Fleet responsible for operations and defence in the Arctic waters; has constructed new and upgraded Soviet-era airstrips along its northern coast that allows Russia to operate from its northernmost base to the North Pole and back; has more ground-force bases than NATO within the Arctic Circle; has eight nuclear submarines based in the Arctic Kola Peninsula; and Russia's icebreaker fleet outnumbers those of other nations thus bolstering its Arctic presence.[59] Russia considers the Arctic region as its "heartland." Putin has noted that the region is "a concentration of practically all aspects of national security — military, political, economic, technological, environmental and that of resources."[60]

Russia's Arctic contains "tremendous" reserves of hydrocarbons and is thus crucial for its energy security. The estimated mineral reserves for Russia's Arctic continental shelf include 85 trillion cubic meters (Tcm) of natural gas and 17 billion tonnes of crude oil. However, most of the reserves are located far from consuming markets, both at home and abroad. The warming Arctic has given Russia a new strategic opportunity in the form of the NSR (Figure 4) through which Russia can export its output to consumers using very large oil tankers and liquefied natural gas (LNG) carriers.[61]

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[57] Reuters, "Russia suspends annual payments to Arctic Council, RIA agency reports" (14 February 2024), https://www.reuters.com/world/russia-suspends-annual-payments-arctic-council-ria-agency-reports-2024-02-14/ (accessed 5 June 2025).

[58] Brett Simpson, "The Rise and Sudden Fall of the Arctic Council" *Foreign Policy* (31 May 2023).

[59] Jacob Gronholt-Pedersen and Gwladys Fouche, "Dark Arctic: NATO allies wake up to Russian supremacy in the region" *Reuters* (16 November 2022), https://www.reuters.com/graphics/ARCTIC-SECURITY/zgvobmblrpd/ (accessed June 4, 2024)

[60] Above n 47.

[61] Vitaly Yermakov and Anastasia Yermakova, "The Northern Sea Route: A state priority in Russia's strategy of delivering Arctic hydrocarbons to global markets" (November 2021) Oxford Energy Institute, *Energy Insight 105*, 4; L.G, "What is the Northern Sea Route?" *The Economist* (24 September 2018).



Figure 4. The Northern Sea Route

The NSR is a shortcut between Europe and Asia and is much more profitable than the current preferred shipping route from the Atlantic to Asia via the Suez Canal and the Indian Ocean. The Russian goal is to increase the NSR shipping turnover from 32 million tonnes per year (mtpa) in 2020 to 90 mtpa in 2030 and to 130 mtpa by 2035. The majority share of shipments via the NSR would represent exports of hydrocarbons. As many Russian oil and gas projects are located in Russia's Arctic, transportation via the NSR is more viable than traditional transportation by pipeline or rail.[62]

The current Arctic policy of Russia claims the NSR as its continental shelf as per the UNCLOS designation of the "coastal states" rights under Article 234. Russia asserts that Article 234 creates the basis of the requirements for preliminary notification of the intent to pass via the NSR by any foreign ship and compulsory piloting and icebreaker support services, for which Russia assesses charges. However, as with Canada, these requirements have been challenged by the United States under the "freedom of navigation" argument, asserting the right of innocent passage, especially for warships.[63]

Whilst the legal tussle over the NSR continues, NSR's operability in the environmental context has implications. World Wildlife Fund (WWF) notes that

[62] Above n 61 at 4.
[63] Ibid, at 3.

more vessels in Arctic waters will increase risks to ecosystems and wildlife from heavy fuel oil (HFO) spills, lead to air and underwater noise pollution, and break up the remaining ice. "These developments will lead to food shortages and jeopardize livelihoods, cultures and human health in the Arctic, especially in Indigenous communities."[64] Though in its Arctic strategy, Russia adheres to Article 234 of UNCLOS, which also specifies the duty of the coastal states to implement "regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone,"[65] Russia's Arctic trajectory of resource-based economic development and intensification of industrial activity in the NSR will accelerate the impact on fragile tundra and forest tundra ecosystems directly impacting the land use and the food supply of Indigenous peoples.[66]

4) Norway's Arctic Policy – "The Norwegian Government's Arctic Policy," published in January 2021, notes that "Norway's Arctic policy revolves around security, stability and interest-based international cooperation. For us, foreign and domestic policy converge in the Arctic."[67] The Policy explicitly recognises the dangers of climate change and the stressors on international cooperation in the Arctic and the High North. Therefore, it focuses on the international picture and the development of North Norway to safeguard Norwegian interests in the region. It also stresses the importance of the Arctic as an area rich in natural resources that should contribute to Norway's economy and social development, and thus is of "national importance."[68] The seven pillars of the Norwegian Arctic Policy are ensuring security, promoting cooperation and respect for international law, environmental conservation and transition to a low-carbon society, sustainable development, promoting job and value creation, being at the forefront of cutting-edge technological development, and lastly preserving the identity and culture of Indigenous communities, particularly the Sami and Kven/Norwegian Finn cultures.[69]

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[64] WWF, "Shipping: Why Are We Concerned," https://www.arcticwwf.org/threats/shipping/ (accessed 2 June 2025).

[65] United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3 (UNCLOS).

[66] Diana Dushkova, et al., "Environmental & Human Impact of the Northern Sea Route & Industrial Development in Russia's Arctic Zone" (2017) *Arctic Yearbook*.

[67] Ministry of Foreign Affairs, Government of Norway, *The Norwegian Government's Arctic Policy* (26 January 2021), https://www.regjeringen.no/en/dokumenter/arctic_policy/id2830120/(accessed 30 June 2025).

[68] Ibid.

[69] Ibid.

Norway adheres to the principles of UNCLOS as a rule of law and encourages negotiations in multilateral forums such as the Arctic Council, the Barents Euro-Arctic Council, the Council of the Baltic Sea States, the Northern Dimension and the EU's cross-border programmes. As one of the "coastal states" in the Arctic, Norway claims rights over its continental shelf, which extends as far as 200 nautical miles from the mainland, Svalbard and Jan Mayen (Figure 5).[70] Norway's Arctic Policy identifies growing challenges to Arctic security stemming from the deterioration of Russia's relations with the West following the Crimean and Ukrainian crises. Amid growing Russian military activity, Norway has strengthened its military presence in the Arctic region with F-35 fighter jets, P-8 maritime patrol aircraft, and new submarines. NATO is described as "the cornerstone of Norway's security," and the "Alliance's area of responsibility extends right up to the North Pole."[71]

As with other Arctic states, energy security is Norway's primary concern. It is estimated that the Barents Sea may contain two-thirds of the oil and gas yet to be discovered off Norway.[72] Furthermore, the seafloor in Norway's proposed mining area (between the Norwegian Sea and Svalbard) is rich in polymetallic nodules containing high concentrations of copper, nickel, cobalt, and other sought-after metals.[73] Despite intense environmental criticism, in June 2024, Norway opened vast areas of the Arctic for its "first seabed mineral licensing round," putting forward 386 blocks.[74] Central to Norway's strategy is increasing its exports of rare earth minerals and hydrocarbons to Europe, as it has become Europe's leading energy supplier following the Russian invasion of Ukraine.

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[70] IILSS – International Institute for Law of the Sea Studies, "Norway maritime claims about outer limits of the territorial sea around mainland Norway, Svalbard and Jan Mayen and extent of the territorial sea around mainland Norway (2003)" (1 May 2021), https://iilss.net/norway-maritime-claims-about-outer-limits-of-the-territorial-sea-around-mainland-norway-svalbard-and-jan-mayen-and-extent-of-the-territorial-sea-around-mainland-norway2003/ (accessed June 30, 2025).

[71] Above n 67.

[72] Nerijus Adomaitis and Gwladys Fouche, "Norway plans to offer record number of Arctic oil, gas exploration blocks" *Reuters* (24 January 2023), https://www.reuters.com/business/energy/norway-offers-up-92-new-oil-gas-exploration-blocks-2023-01-24/ (accessed 29 June 2025).

[73] Malte Humpert, "Norway Aims to Open Arctic Waters to Deep-Sea Mining" *High North News*, https://www.highnorthnews.com/en/norway-aims-open-arctic-waters-deep-sea-mining (accessed 29 June 2025).

[74] Staff Writer, "Norway to award Arctic seabed mining blocks in 2025" *Mining.Com* (26 June 2024), https://www.mining.com/norway-to-award-arctic-seabed-mining-blocks-in-2025/ (accessed 26 June 2025).

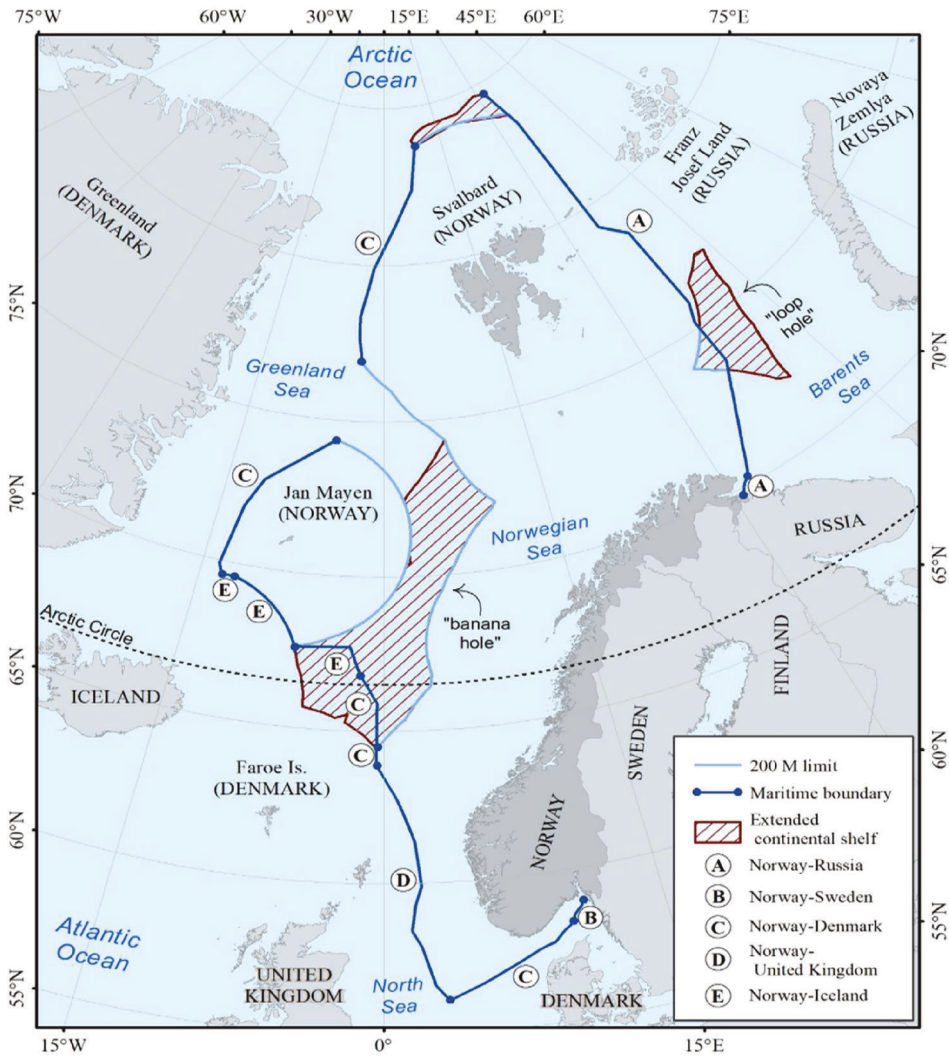


Figure 5. Norway's Maritime Claims in the Arctic

WWF has argued that Norway's decision breaches national law and runs counter to the government's environmental recommendations for adequate and inclusive environmental impact assessment. Researchers are unanimous that the deep seas remain among the planet's least explored and understood zones, and that even exploring the deep seabed can have catastrophic consequences for marine life and vital ecosystems, damaging fish stocks. Notwithstanding the warnings,

geopolitical calculations have taken precedence in Norway's Arctic Policy. With the potential shortages of minerals like copper and nickel in the coming decades, Svalbard is likely to become a "space" of contention as the US and Russia also lay claim to some of the waters surrounding the archipelago.[75] In energy transition, copper is a central component since it is a highly efficient electrical conductor in solar and wind energy installations. Copper mining in Repparfjord in the northern Norwegian region of Finnmark has impacted the local ecology, disastrously affecting the fish stocks and reindeer herding that comprise the subsistence and culture of the region's Indigenous Sámi people.[76] Norway's energy economics in the Arctic raise critical questions about Indigenous peoples' sustainable development and their rights to Arctic lands.

5) Finland's Arctic Policy – "Finland's Strategy for Arctic Policy," published in June 2021, sets four priority areas in climate change mitigation and adaptation, promoting the well-being and rights of the Indigenous Sámi people, advancing research and know-how on the Arctic, and infrastructure and logistics.[77] The Strategy also identifies "heightened tensions" and "increased military activity" and notes that "the security of the Arctic region is closely linked to the security situation in the Baltic Sea area and the rest of Europe, which has been marked by increasing tensions in the 2010s."[78] Russian and Chinese military presence in the region is identified as a threat. The Strategy, therefore, proposes establishing a separate Arctic Summit to address emerging security matters beyond the Arctic Council's mandate. The Finnish defence forces are identified as highly capable due to Arctic expertise, i.e. their ability to operate in extreme temperatures and "snow-how."[79] After its accession to NATO in April 2023, Finland's military support is considered vital to security in the area linking the Baltic Sea, the Arctic, and the High North. Finland's membership strengthens NATO's strategic presence in the Euro-Atlantic Area, including the High North.[80]

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[75] Above n 73.

[76] Society for Threatened Peoples, "Norway: Planned copper mines threaten the Sámi culture," https://www.gfbv.ch/en/publications/case-studies/planned-copper-mines-threaten-the-sami-culture/#:~:text=However%2C%20residues%20from%20the%20mines,the%20region's%20Indigenous%20S%C3%A1mi%20people (accessed 24 June 2025).

[77] Nina Brander and Emma Borg (eds), *Finland's Strategy for Arctic Policy*, Finnish Government (18 June 2021), https://library.arcticportal.org/2813/1/Finlands_Strategy_for_Arctic_Policy.pdf (accessed 22 June 2025).

[78] Ibid, p. 18.

[79] Ibid, p. 19.

[80] Janne Kuusela, "No.25: As a New Arctic Ally, Finland Contributes to Arctic Security and Defence" *Wilson Center* (1 March 2024).

As Finland lacks gas and oil reserves, its perspective on fossil fuel extraction and hydrocarbon development is antithetical to that of Norway and Russia. Therefore, it supports the new EU Arctic Policy, which calls for "a greener, peaceful, and prosperous Arctic." Nina Brander, Senior Specialist for the Finnish Prime Minister's Office, stressed that extracting Arctic fossil fuels would run counter to the EU Arctic Policy and put the Paris target of limiting global warming to 2°C out of reach.[81] Finland's Strategy for the Arctic region explains, "In Finland's view, the opening up of new fossil reserves in Arctic conditions is incompatible with attaining the targets of the Paris Agreement and associated with economic uncertainties and risks."[82] However, Finland has ample mineral reserves in the country's north, including iron, nickel, and zinc. The Finnish Arctic Strategy advocates "sustainable mining" that supports the green energy transition, which would be more profitable for the Finnish economy. The Strategy notes the growing need for expertise in building "Arctic wind farms" onshore and offshore.[83]

However, mining and wind power require a large amount of land that disturbs traditional activities such as reindeer herding. Huge areas of land have been excavated to dig out minerals or erect 100-meter-tall windmills. In identifying the threat specifically posed by the wind power to Sámi lands, Anne Ollila, Director of the Reindeer Herder's Association, declared at Arctic Spirit (Finland's main conference on the region held every two years since 2013) that, "This is green colonialism." Furthermore, the ongoing transition could create "stranded communities" if they are not equipped with the skills to participate in green sectors.[84] The receding sea ice and opening up of waterways in the Arctic have compelled Finland to gain access to the potential flow of goods along the Northern Sea Route; therefore, both Norway and Finland have announced plans to build a railway that would connect Finland, through Norway, to its deep-water ports in the Barents Sea.[85] Whilst Finland is most vocal in safeguarding the rights of Indigenous polar communities and is ostensibly committed to the Paris Agreement goals, the changing geography of the Arctic has compelled it to ensure its energy security is not compromised.

6) Sweden's Arctic Policy – "Sweden's Strategy for the Arctic Region," issued in October 2020, establishes that "Sweden will contribute, as one of the eight Arctic countries, to peaceful, stable and sustainable development in the Arctic."

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[81] Mia Bennett, "At Arctic Spirit, Finland promotes green energy, but not without debate" *Cryopolitics* (19 November 2021).

[82] Above n 77, p. 26.

[83] Above n 77, pp. 48–50.

[84] Above n 81.

[85] Reid Standish, "Finland's race for Arctic riches" *POLITICO* (28 March 2018).

The government's main priorities are the six thematic areas covering international collaboration, security and stability, climate and environment, polar research and monitoring, sustainable economic development, and securing good living conditions. The Strategy is central to the Swedish foreign and security policy, ensuring respect for international law, human rights, democracy, and gender equality. The Strategy commits the Swedish government to be a "leader" in implementing the Paris Agreement to limit global warming and also aspires to take a "leading role" in the global implementation of the 2030 Agenda – the global agenda for sustainable development.[86]

The sovereign jurisdiction of the five "coastal states" over the EEZ and continental shelves is recognised. The other laws that the Strategy abides by are UNCLOS and its bodies, including the Commission on the Limits of the Continental Shelf (CLCS), the International Seabed Authority (ISA), and the International Tribunal for the Law of the Sea (ITLOS). In Arctic governance, the multilateral "inclusive" approach is favoured via the Arctic Council, Barents cooperation, Nordic cooperation, and Sámi cooperation, and the greater need to engage with non-Arctic states and actors is also stressed, particularly with European observers and Asian countries participating in the Arctic Council's work.[87]

The Strategy, however, emphasises the security dimension of the Arctic region, with Sweden committed to upholding the "rule-based world order."[88] The accessibility of Arctic natural resources has boosted the military presence and economic interests of both the Arctic and the non-Arctic states. In this context, the Strategy calls for "Enhanced national capability" in the Swedish "neighbourhood" of "the Cap of the North, the Barents Sea, the Norwegian Sea and northern parts of the North Atlantic" along with the "the Baltic Sea and the North Sea."[89] With its accession to NATO in March 2024, Sweden has become a part of the Atlantic security mechanism. This aligns with the Strategy's outlook that "Transatlantic cooperation is fundamental to both American and European security. The North Atlantic will play an important role as a link for military support to Europe from North America in the event of a crisis."[90] The military dimension has achieved a greater status in the Swedish Arctic policy as Maksim Marchenkov observes, "this

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[86] Minister of Foreign Affairs, Government of Sweden, *Sweden's strategy for the Arctic Region* (October 2020), https://www.government.se/contentassets/85de9103bbbe4373b55eddd7f71608da/swedens-strategy-for-the-arctic-region-2020.pdf, (accessed 30 June 2025).

[87] Ibid, p. 14.

[88] Ibid, p. 22.

[89] Ibid, p. 24.

[90] Ibid.

policy document takes a more varied view of security issues, complementing the concept of 'hard' threats with responses to human security challenges (implementation of human capital and securing its component)."[91] The role of the EU as a strategic partner has also evolved, and Sweden intends to support the EU's plans to join the Arctic Council as an observer.[92]

Whilst Sweden remains committed to sustainable development and the EU's carbon-neutrality policy of achieving net-zero by 2045, Northern Sweden's economy mainly relies on forestry and mining.[93] Finland and Sweden depend on significant forest industries, producing approximately 50 per cent of Europe's virgin pulp, and Sweden is the second largest paper producer in Europe. 80 per cent of forest industry products are exported by Sweden, and the forest industry also plays an important role in the national energy balance because it is the largest producer and consumer of both heat and electricity.[94] Recently, Sweden has witnessed a growing conflict between Swedish foresters and environmental groups, as well as what Sweden calls Brussels's interference in its forest management.[95] Mining accounts for 11 per cent of all exports, and Sweden is an important source of iron, copper, zinc, lead and silver.[96] Some of the most significant mines in Sweden are located north of the Arctic Circle, including Kiruna, Malmbergert, and Rakkuri (Figure 6).[97]

The "interplay between the environmental and social dimension" was revealed in the deterioration of the environment due to mining and the loss of land used for traditional livelihood, such as herding.[98] There are questions about whether the present mechanisms are sufficient to "safeguard the environment, other livelihoods, and indigenous peoples' rights under mining development."[99] The current legal

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[91] Maskim L. Marchenkov, "Consistency and Adaptability: New Aspects of the Arctic Policy of Sweden" *Arctic and North* (2022) (47), 126–141.

[92] Ibid, at 138.

[93] Ibid, at 139.

[94] Satu Lipiäinen, et al., "Future of forest industry in carbon-neutral reality: Finnish and Swedish visions" (2022) (8) *Energy Reports*, 2588–2600, 2590.

[95] Louise Guillot, "Sweden to EU: Hands off our forests," *POLITICO* (7 December 2022).

[96] Heidi Tiainen, et al., "Governance of Sustainable Mining in Arctic Countries: Finland, Sweden, Greenland & Russia" in L Heininen et al, eds, *Arctic Yearbook 2015: Arctic Governance and Governing* (Akureyri, Iceland; Northern Research Forum, 2015), p. 135.

[97] "Sweden natural resources map," https://maps-sweden.com/maps-sweden-geography/sweden-natural-resources-map (accessed 28 June 2025).

[98] Anne Tolvanen et al., "Mining in the Arctic environment – A review from ecological, socioeconomic and legal perspectives" *Journal of Environmental Management* (2019) 233 *Journal of Environmental Management*, 832–844, 839.

[99] Ibid.

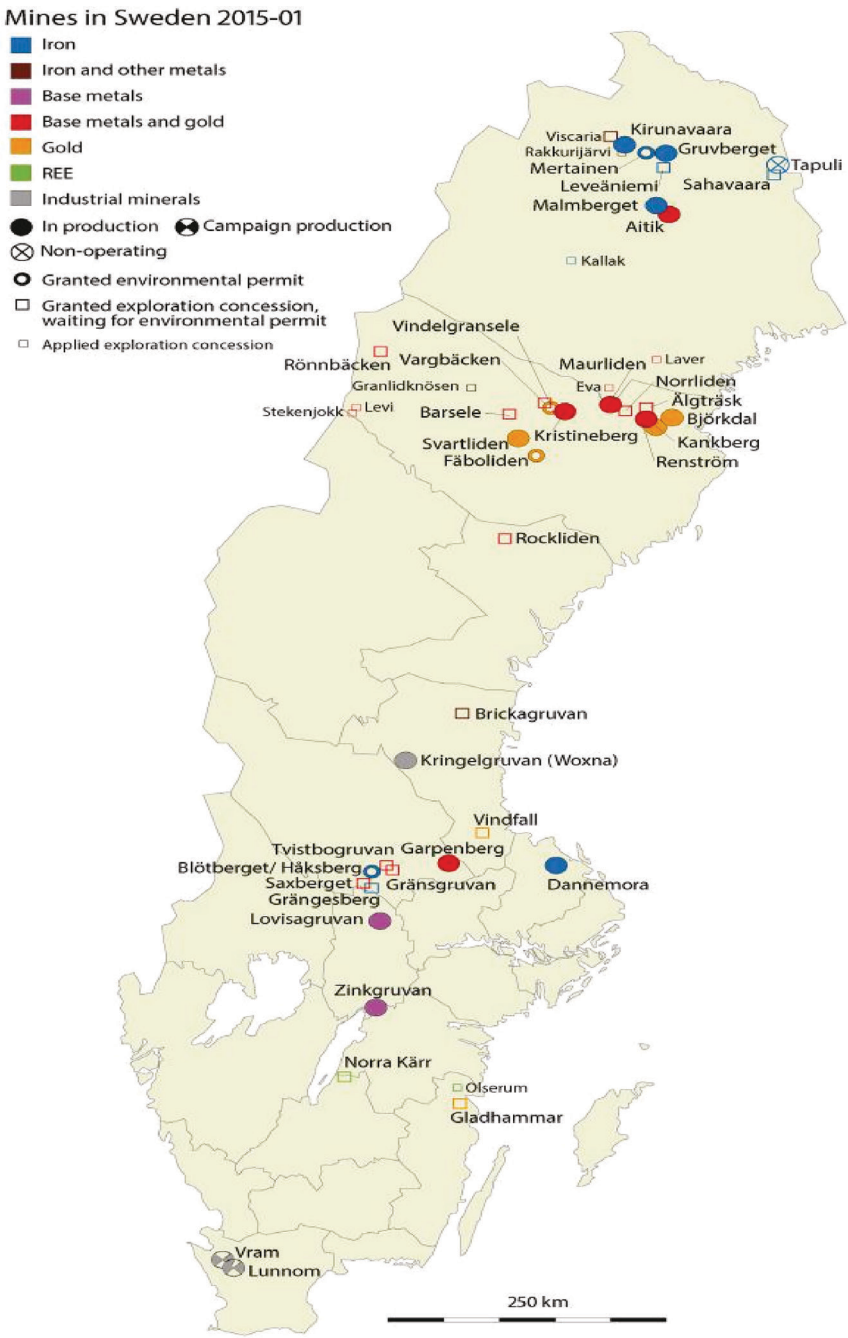


Figure 6. Map of Sweden Natural Resources

setup for mining activities in Sweden restricts the involvement of the indigenous people in decision-making.[100] Therefore, strong legal structures that consider the demands of indigenous rights are of utmost importance to ensure the "development-security" of the Indigenous peoples.

7) Denmark's Arctic Policy – "The Arctic" is one of the most important areas in Denmark's "Foreign and Security Policy Strategy" of 2022 and 2023.[101] For years, Denmark has remained inclined towards "low tension" in the Arctic, with scepticism towards NATO's involvement in the region. However, this scepticism has receded as the strategy notes that today's Arctic "increasingly represents a geopolitical battlefield," reflecting the strategic ambiguities created by Russian and Chinese military (re)armament. In this context, Denmark has strengthened its relations with the US. Additionally, it has increased its military budget with a so-called "Arctic Capacity Package" to approximately DKK 1.6 billion to enforce its sovereignty and enhance surveillance in the Arctic through large sums earmarked for satellites, drones, and radars.[102]

Denmark's strategy has shifted towards granting Greenland and the Faroe Islands more autonomy in the Arctic decision-making. Denmark has yet to issue an updated Arctic strategy and is working with Greenland and the Faroes for a new one, as the last one expired in 2021. However, in February 2024, the Government of Greenland presented its first "Foreign, Security, and Defense Strategy 2024–2033." The strategy outlines Greenland's aim to hold a leading role in the Arctic Council and to address "the needs and concerns of the Arctic people." Greenland is proposing an Arctic North American Forum to strengthen ties with indigenous leadership and elected assemblies in Nunavut, Nunavik, the Northwest Territories and Yukon in Canada and their counterparts in Alaska.[103] As Greenlandic independence becomes a realistic prospect, Greenland is being integrated into the global economy; however, the melting sea ice in Greenland has

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[100] Aina Eriksson, "No green future without securing indigenous peoples' rights" *Stockholm Environment Institute* (30 July 2021).

[101] Ministry of Foreign Affairs (Denmark), "Foreign and Security Policy Strategy 2022," https://um.dk/udenrigspolitik/aktuelle-emner/udenrigs-og-sikkerhedspolitisk-strategi-2022 (accessed 26 June 2025); Ministry of Foreign Affairs (Denmark), "Foreign and Security Policy Strategy 2023," https://um.dk/en/foreign-policy/foreign-and-security-policy-2023 (accessed 26 June 2025).

[102] Marc Jacobsen, "Arctic Aspects in Denmark's New Foreign and Security Policy Strategy" *The Arctic Institute* (8 February 2002).

[103] Trine Jonassen, "Greenland's Arctic Strategy: 'It Is a Power Shift from Denmark" *High North News* https://www.highnorthnews.com/en/greenlands-arctic-strategy-it-power-shift-denmark, (accessed 26 June 2025).

led to a grave concern among the Inuit still living on subsistence lifestyles.[104] As Carina Ren, an expert in Arctic tourism at Denmark's Aalborg University, notes:

> Sea ice was more dangerous to travel across, they said, affecting their hunts. Conversely, melting ice is also exposing valuable minerals, with mining companies eyeing up Greenland's emerging land in what could be a boon for the economy, but not the natural environment.[105]

The Kingdom of Denmark's Arctic Policy is still transitioning, with more autonomy being granted to the Indigenous peoples in decision-making processes. However, at a strategic level, Denmark has prioritised national defence, regional armaments coordination, and joint operations with Finland, Iceland, Norway, Sweden and NATO. Furthermore, Denmark has challenged Russia and Canada over the energy-rich North Pole, arguing that the area surrounding it is connected to Greenland's continental shelf and thus falls within Danish autonomous territory (Figure 7).[106] In the ongoing strategic contest over the Arctic "space," the rights of polar communities to sustainable livelihoods remain on shaky ground.

8) Iceland's Arctic Policy – "Iceland's Policy on Matters Concerning the Arctic Region Parliamentary Resolution 25/151," published in October 2021, establishes Iceland's priorities in the Arctic region for the next ten years.[107] The Policy lists nineteen principles, including international cooperation on matters concerning the Arctic region, making sustainable development a guiding principle, a focus on climate change and putting environmental protection first in the Arctic, protecting the cultural heritage of Arctic inhabitants, bolstering Iceland's knowledge and expertise, and monitoring security development in cooperation with other Nordic nations and NATO allies. Iceland identifies as an "Arctic State," with territory and EEZs north of the Arctic Circle. The Policy also mentions the Arctic Council as the primary forum for cooperation and consultation on matters related to the

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[104] Thea de Gallier, "Sustainable and Traditional, or Global? Greenland's Inuit Claim the Right to Choose Their Future" *The Lead*, 1 February 2024, https://thelead.uk/sustainable-and-traditional-or-global-greenlands-inuit-claim-right-choose-their-future, (accessed 26 June 2025).

[105] Ibid.

[106] BBC News, "Denmark Challenges Russia and Canada over North Pole" (15 December 2014).

[107] Ministry of Foreign Affairs (Iceland), "Iceland's Policy on Matters Concerning the Arctic Region: Parliamentary Resolution 25/151" (October 2021), https://www.government.is/library/01-Ministries/Ministry-for-Foreign-Affairs/PDF-skjol/Arctic%20Policy_WEB.pdf (accessed 27 June 2025).

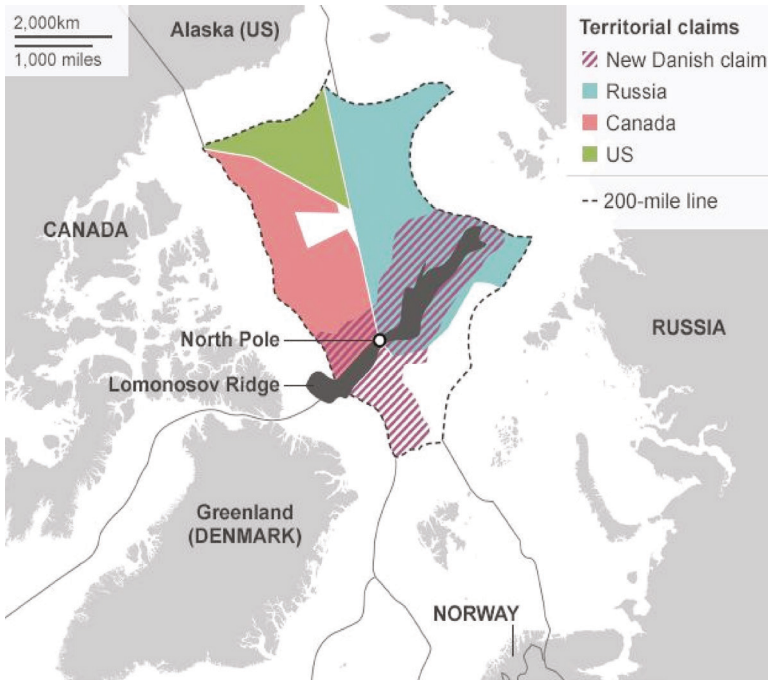


Figure 7. Denmark's Arctic Territorial Claims

region. "Iceland stands on equal footing with the other seven Arctic States and the representatives of the Indigenous Peoples of the region and participates actively in the Council's work."[108] UNCLOS is cited as the main international law. The policy notes that whilst the seven Arctic States have ratified it, the US backs the Convention without having ratified it. However, it is recommended that territorial disputes be settled in accordance with international law.[109]

Climate change and the reduction of greenhouse gas emissions are considered a priority, and by upholding its obligations under the Paris Agreement, Iceland aims to become carbon neutral by 2040. The Policy emphasises the need to reduce the use of fossil fuels and transition to renewable energy sources. With Iceland's experience in harnessing water, geothermal energy, and wind power, Iceland's energy policy until 2050 aims to make the country a "leader in sustainable energy production and energy transition."[110] Protecting Arctic ecosystems and marine life is a high priority

[108] Ibid, pp. 9–10.
[109] Ibid, p. 12.
[110] Ibid, p. 15.

in Iceland's Arctic Policy. The reduction of sea ice and the opening of shipping routes will lead to increased maritime traffic, thereby enabling the exploitation of resources and other economic activities in the Arctic region. Therefore, the policy notes, "Environmental protection and sustainability must always be the guiding principles." Iceland's support for Indigenous peoples' demands was echoed in its discussions with the Arctic States.[111] Not surprisingly, "Iceland has also gained the role of 'champion of justice' and spokesman of the problems of indigenous peoples, despite, paradoxically, it is the only Arctic country not to host any."[112]

Though Iceland remains without a standing military, it has emphasised a multilateral approach to security. Membership in NATO, the Defence Agreement with the US, and active collaboration with the Nordic Defence Cooperation (NORDEFCO) are stipulated to be the main pillars of the country's defences, especially in the context of growing Russian and Chinese interests in the region.[113] The increasing importance of Arctic geopolitics is evident in Iceland's policy as it seeks recognition as a "coastal state." With interests in managing fisheries, since Iceland is one of the world's largest "fishing nations" and has been involved in tense negotiations with regional organisations such as the EU and neighbouring states on the fishing quota, "Iceland after all wants to be part of the Arctic Six rather than be excluded by an Arctic Five."[114]

This section delimits the Arctic strategy of the Arctic Eight. It was evident that, though the Arctic Eight are keen on securing Indigenous peoples' rights, the effects of climate change have reinvigorated geostrategic concerns over access to natural resources that are central to energy security. Consequently, a marked rise in tensions is evident in the region's littoral states. The implications for polar communities' rights to sustainable livelihood and cultural heritage thus hang in the balance. The next section outlines the Arctic policies of non-Arctic states and their impact on polar communities.

China, India, and the EU's Energy Competition in the Arctic and the Impact on Indigenous Polar Communities

The increasing influence of non-Arctic states in the Arctic region, amid the changing environmental impacts of climate change, has become central to

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[111] Ibid, p. 16, 23.

[112] Silvia Iacuone and Luca Zarrilli, "The Role of Iceland in the Arctic Issue: Diplomacy, Threats, Opportunities" (2020) *Environment and Society N2,* 35–52, 49.

[113] Above n 107.

[114] Klaus Dodds and Valur Ingimundarson, "Territorial nationalism and Arctic geopolitics: Iceland as an Arctic coastal state" (2012) 2(1) *The Polar Journal*, 21–37, 25.

considerations of Arctic energy geopolitics. This section highlights China, India, and the EU's strategic inroads into the region and the consequent impacts on Indigenous peoples' rights to "development-security" via the sustainable development criteria.

1) China's Arctic Policy—China's Arctic objectives are encapsulated in "China's Arctic Policy," published in January 2018. The Policy notes that "China is an important stakeholder in Arctic affairs" as a "Near-Arctic State" – "one of the continental States that are closest to the Arctic Circle." Like the Arctic Eight, China's Arctic Policy proposes an interest in conserving Arctic ecology amidst climate change, utilising shipping routes, resource exploration and exploitation, encouraging scientific research, and participating in Arctic international governance. The legality of the Chinese position in the Arctic is justified through treaties such as UNCLOS, the Spitsbergen Treaty, and general international law. Furthermore, the Policy notes that as a "permanent member of the UN Security Council, China shoulders the important mission of jointly promoting peace and security in the Arctic." [115]

China's economic and strategic interests in the Arctic are clearly articulated through its polar ambitions, which link the BRI trade initiative through the "Polar Silk Road" (Figure 8).[116]

The importance of the Arctic in Chinese energy security is evident as the Policy explicates:

> The utilization of sea routes and exploration and development of the resources in the Arctic may have a huge impact on the energy strategy and economic development of China, which is a major trading nation and energy consumer in the world.[117]

In this aspect, China's strategic cooperation with Russia in the Arctic has evolved into a "comprehensive partnership and strategic interaction," as both countries plan to accelerate joint ventures to develop the NSR.[118] For instance, in

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[115] The State Council, The People's Republic of China, "China's Arctic Policy" (26 January 2018), https://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm (accessed 1 July 2025).

[116] Alina Kovalenkp, "Map of existing and developing routes included in <<Polar Silk Road>>," https://www.researchgate.net/figure/Map-of-existing-and-developing-routes-included-in-Polar-Silk-Road-36_fig4_330643092, (accessed 1 July 2025).

[117] Above n 115.

[118] Mariia Kobzeva, "Strategic partnership setting for Sino-Russia cooperation in Arctic shipping" (2020) 10(2) *The Polar Journal*, 334–352, 334.

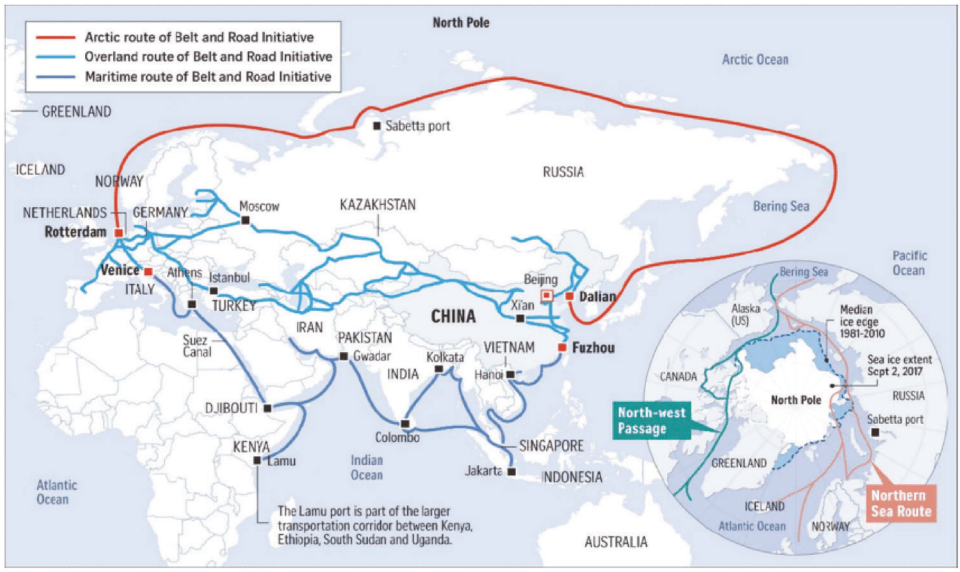


Figure 8. Existing and developing routes in the Polar Silk Road

June 2024, Russia's Rosatom and China's Hainan Yangpu NewNew Shipping Company announced a partnership in building ice-class container ships that will be used to establish a year-round transit on the NSR.[119] Russia-China collaboration in developing Arctic energy is evidenced through the operation of the Yamal liquid natural gas project and the Sino-Russia Arctic 2 natural gas project under construction, which will deepen cooperation between the two countries in oil and gas resources. "Strengthening energy cooperation with Russia in the Arctic region can greatly enhance China's energy security."[120] The Arctic region plays a central role in the diversification of China's energy supply.

The Arctic Policy of China is sensitive towards Indigenous peoples. It mentions respecting Indigenous peoples' culture, tradition, and rights, including "preserving their unique lifestyles and values." China's development and utilisation of Arctic

[119] *The Maritime Executive*, "Russia and China Plan JV Shipping Line for Year-Round Service on the NSR" (6 June 2024), https://maritime-executive.com/article/russia-and-china-plan-jv-shipping-line-for-year-round-service-on-the-nsr (accessed 1 July 2025).

[120] Ke Zhang, et al, "The Potential of Sino-Russian Energy Cooperation in the Arctic Region and Its Impact on China's Energy Security" (2022)1 *Scientific Programming*, 1–10, 9.

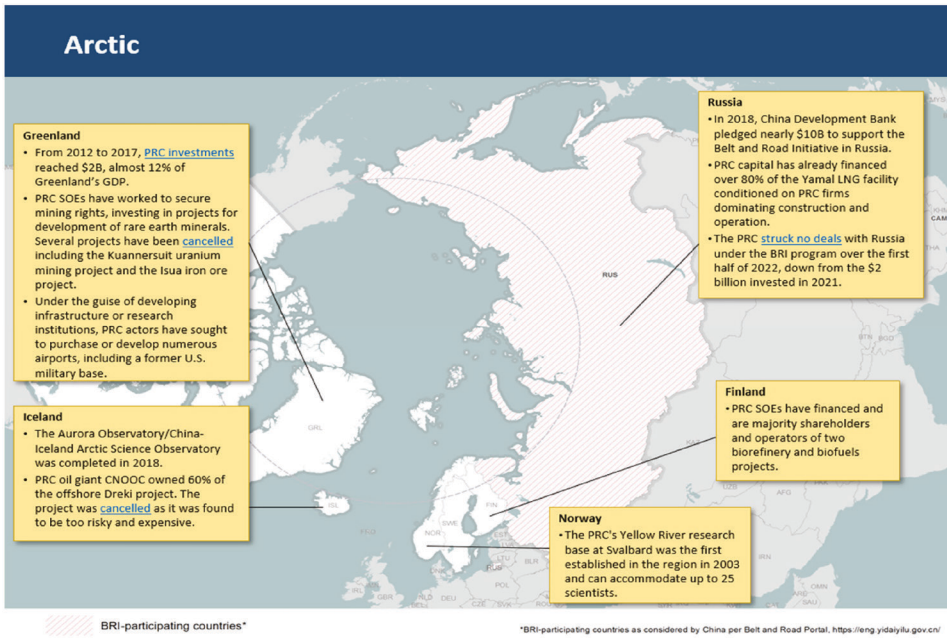


Figure 9. China's Regional Snapshot: Arctic

resources are seen as benefiting the Indigenous peoples.[121] As China adopts a "push-in strategy" in matters of regional governance through its observer member status in the Arctic Council, it is contributing to "reframe[ing] the Arctic global space."[122] A continual push for China's industrialisation and militarisation of the Arctic raises grave concerns about the future of the Indigenous polar communities' rights (Figure 9).[123]

2) India's Arctic Policy – "India's Arctic Policy," published in March 2022, rests on six pillars that cover areas of science and research, climate and environmental protection, economic and human development, connectivity, governance, and capacity building. India's observer status in the Arctic Council underscores its regional strategic interest. India's approach to economic

[121] Above n 115.

[122] Matilde Biagioni, "China's Push-in Strategy in the Arctic and Its Impact in Regional Governance*" IAI Commentaries* (5 September 2023)

[123] House Foreign Affairs Committee, "China's Influence in the Arctic" (25 October 2022), https://foreignaffairs.house.gov/china-regional-snapshot-arctic/ (accessed 1 July 2025).

development in the Arctic is guided by the UN Sustainable Development Goals and, accordingly, seeks to "collaborate with Arctic States to strengthen partnerships in sustainable living and non-living resource exploration in the Arctic."[124] The legal mechanisms of UNCLOS and international environmental treaties are upheld in the Policy. India sees itself as a "Tripolar state," with its presence at both poles through its research facilities and in the Himalayas, enabling it to effectively contribute to harmonising environmental impact research conducted in the Polar Regions and the Himalayas.[125]

India's interests in the Arctic are governed by geopolitics. Ice-free conditions in the Arctic are likely to lead to new shipping routes that India seeks to utilise as it ranks "third in the list of seafarer supplying nations catering to almost ten per cent of the global demand."[126] The Policy explains India's ambitions to work towards "the linking of International North-South Transport Corridor with the United States Deep-Water Systems and its further extension to the Arctic."[127] Melting ice also offers access to hydrocarbons and other minerals that India is keen to utilise as it transitions towards renewable energy.

India's Arctic Policy, like those of other Arctic states, focuses on the exploration of strategic minerals, climatology, energy security, and scientific research, while also recognising the socioeconomic rights of Arctic Indigenous peoples. However, India's role as a responsible polar stakeholder in the Arctic, in a manner that ensures the "development-security" of polar communities, will be tested with the accelerating energy exploitation in the region.

3) The EU's Arctic Policy – The EU's updated Arctic Policy – "Joint Communication to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions: A stronger EU engagement for a peaceful, sustainable and prosperous Arctic," published in October 2021, aims to ensure that the Arctic "remains safe, stable, sustainable, peaceful and prosperous."[128]

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[124] Government of India, "India's Arctic Policy: Building a Partnership for Sustainable Development" (March 2022), https://www.moes.gov.in/sites/default/files/2022–03/compressed-SINGLE-PAGE-ENGLISH.pdf (accessed 1 July 2025).

[125] Kanagavalli Suryanarayanan, "Third Pole's View on the North Pole – India's Arctic Policy" *The Polar Connection* (12 April 2022).

[126] Above n 124.

[127] Ibid.

[128] European Commission, *Joint Communication to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions: A stronger EU engagement for a peaceful, sustainable and prosperous Arctic* (13 October 2021).

This policy adopts a "(new) geopolitical lens," for the EU is defined as a "geopolitical power" in the European Arctic and the broader Arctic region. Environmental and climate change issues are perceived as affecting security and defence in the Arctic, which may threaten the EU's own regional interests and overall security. Therefore, the EU will "enhance its strategic foresight" through collaboration with partners, including the US, Norway, Iceland, and NATO, and by establishing a European Commission Office in Nuuk, Greenland. The EU Satellite Centre (SatCen) will support the EU's efforts to monitor the security situation in the Arctic region. The EU adheres to UNCLOS, the UN 2030 Agenda and the Sustainable Development Goals, the decisions taken by intergovernmental bodies such as the Arctic Council, the Barents Euro-Arctic Council, and the Northern Diplomacy Framework.[129]

Regarding the EU's Arctic footprint, the Joint Communication states that the demand for Arctic resources is an essential aspect of the EU's Arctic Engagement. The EU has discouraged the development of hydrocarbons and imposed partial exploration moratoriums whilst encouraging the extraction of other critical minerals and the development of renewables. However, in practice, the Joint Communication does not clarify certain aspects. It does not make any distinction between offshore and onshore extraction. This "calculated vagueness," as Adam Stępień and Andreas Raspotnik note, "is the acknowledgement that the EU mainly imports (Russian) resources produced onshore and the single focus on offshore exploitation could be seen as dishonest."[130] Additionally, natural gas is viewed as a transitional fuel on the path towards carbon neutrality as it is associated with lower carbon emissions. However, the Joint Communication is insistent on tapping into other Arctic minerals, such as rare earth elements, nickel, cobalt, and titanium, that are already extracted, discovered, or expected to be found across the Circumpolar North. For the EU, access to such resources is a key element of its economic autonomy and energy security, which, together, constitute a *geopolitical necessity* for pushing back against China, the world's largest producer of rare earth elements.[131]

The updated Joint Communication notes that the EU will invest in the future of the people living in the Arctic, including the involvement of more young people, women and Indigenous peoples in Arctic decision-making.[132] However, no proposals have been made to enhance the existing formats for dialogue with Arctic

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[129] Ibid.

[130] Adam. Stępień and Andreas Raspotnik, "Continuity with Great Confidence: The European Union's 2021 Arctic Policy Update" *The Arctic Institute* (28 October 2021).

[131] Ibid, 12.

[132] Above n 128.

Indigenous peoples, especially the Sámi, since most are EU/EEA citizens and are more affected by EU policies and actions than any other indigenous group globally. Furthermore, challenges related to the low-carbon transition and how the increased mining for critical minerals and expansion of renewables such as wind power and hydropower projects create additional pressures on the local environment and livelihood in the Indigenous context are not addressed sufficiently[133]. Nevertheless, across all the national Arctic policies examined in this article, the EU's approach to the Arctic is the most vociferous and direct in addressing environmental impacts in the Arctic and the need to accelerate the energy transition. As the EU's quest to acquire full observer status in the Arctic Council may be realised sooner rather than later, the EU's regional mandate is well-positioned to offer strong representation and a voice to Indigenous communities in Arctic decision-making.

CONCLUSION

The Arctic is undergoing a rapid change due to the environmental impacts of climate change. Paradoxically, receding Arctic ice has increased the prospects of simultaneously discovering fossil fuels and critical minerals for green energy. Therefore, the Arctic region has become central to the politics of energy transition. Energy security has compelled the "great powers" to engage in a "scramble for the Arctic" to access raw materials, trade routes, and military bases that can enhance their security in global politics. The Arctic "space" is undergoing a tremendous change. Amidst escalating energy geopolitics of the "great powers," the "development-security" and rights of the Indigenous peoples are at stake.

UNCLOS in the Arctic provides for the general and vague application of international law, which is interpreted differently across national contexts, leading to legal uncertainties regarding sovereign rights claims. Difficulties also arise from the diversification of international law, particularly in environmental conventions and protocols. When it comes to offshore exploitation, there is no international agreement among Arctic states, as international rules and regional or international agreements apply to the Arctic region. This situation "leads to the issues of fragmentation of law, geographically or functionally limited to treaty systems potentially creating not only gaps but also problems of consistency."[134] For instance, the adoption of the Polar Code by the International Maritime Organization (IMO) leaves uncertainties and loopholes. In accordance with

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[133] Above n 130, at 15.

[134] Cecile Pelaudeix, "Governance of Arctic Offshore Oil & Gas Activities: Multilevel Governance & Legal Pluralism at Stake" (2015) *Arctic Yearbook*, 134.

Regulation 43A of MARPOL Annex I, Norway imposes a ban on the use of heavy fuel oil in some areas around Svalbard. However, Russia, Canada and Finland have yet to implement a heavy fuel oil ban under MARPOL Regulation 43A of MARPOL Annex I.[135]

The patchy regulatory and legal framework in the Arctic region has raised significant concerns about environmental impacts on Indigenous polar communities and their ability to preserve their socio-cultural heritage, particularly given the lack of clear demarcation, application and fuzzy interpretations of Indigenous communities' self-governing rights in Arctic states, as explicated in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).[136] An enhanced and effective legal regime at the intersection of human rights law and international law of the sea could mitigate the impact and offer greater opportunities for Indigenous peoples to secure their human rights to traditional activities and culture in the Arctic.[137] A multi-sectoral solution is a prerequisite to protecting the legal human rights of Arctic Indigenous communities.

[135] Annex 1 – Amendment to MARPOL (16 December 2024), https://www.gov.uk/government/publications/mgn-704-mf-prevention-of-oil-pollution-prohibition-on-the-use-and-carriage-for-use-of-heavy-fuel-oil-in-arctic-waters/annex-i-amendment-to-marpol (accessed 8 August 2025); Clean Arctic Alliance, "Heavy Fuel Oil Q&A" (30 May 2024), https://cleanarctic.org/2024/05/30/heavy-fuel-oil-qa/ (accessed 8 August 2025).

[136] 61/295. United Nations Declaration on the Rights of Indigenous Peoples (2007).

[137] Lisa Mardikian and Sofia Galani, "Protecting the Arctic Indigenous Peoples' Livelihoods in the Face of Climate Change: The Potential of Regional Human Rights Law and the Law of the Sea" (2023) 23(3) *Human Rights Law Review,* 1–24.