

SUGGESTED READINGS

Economic Security¹

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Economic security in the Arctic – particularly in the Eastern Arctic – is shifting. New factors are adjusting how actors decide what is economically secure and what opportunities have arisen for adaptation in today's world. Oil and gas in Alaska, for example, is becoming easier to access, leading to an increase in oil and gas production, and extraction in certain geographies of the Arctic. Critical minerals also play an important role in the development of renewable energy technology. Given Greenland's vast resource potential, it is unsurprising that the Greenlandic mining sector represents not only opportunities for Greenland's growing role in Arctic discourse, but for its role in economic competition between China, the United States, the United Kingdom, Canada, and Australia.

China's aspirations to become an economic power in the Arctic transcends traditional notions of security. For instance, China has sought investment in Arctic economic opportunities in Greenland and Iceland. This interest in Arctic investment – both for economic and geo-strategic reasons – has led to comparisons between China's behavior surrounding debt diplomacy in Africa and Latin America, and China's interest in the Arctic. Greenland plays a particularly important role for China's economic interests in the Arctic – not only does it host many natural resources, but it could be the arrival point of the 'Polar Silk Road'. China's relationship with Russia is also an influential factor for economic security, as most of the Sino-Russian cooperation remains economic in nature. It remains to be seen how China will position itself in future Arctic discussions, but certainly economic interests will play an instrumental role in them.

Climate change is also altering accessibility to resources such as oil and gas and influencing countries to mine critical minerals – such as lithium, cobalt, rare earths, and tellurium – to build renewable technologies. Climate change has also resulted in the increasing viability of new Arctic shipping lanes such as the Northern Sea Route (NSR) and the Northwest Passage (NWP). These routes would drastically decrease time needed for maritime trade and commerce; however, they also present interesting dilemmas of security. These new shipping lanes could lead to strategic resource extraction on an intensified basis, increased military activity, regional shipping, fishing, and tourism. An increase in traffic in the NSR may also lead to the development of Eurasian inland river transport. This holds implications and risks for water security, transboundary security, and ecological security. Certainly, it has economic implications

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for Eurasian states. While both routes are not reliably open for trade year-round, states are already taking steps to prepare them for maritime commerce.

Questions of economic security also extend to other sectors. Reduced sea ice in the Arctic will mean increased tourism, fishing, and as mentioned above, new shipping lanes. While less ice could lead to more opportunities for maritime transport, it also obscures questions of Arctic highways as they exist today. Not only are these highways critical in terms of economic infrastructure, but questions are also raised over the survival of remote Arctic communities. The changing climate of the Arctic presents both opportunity and threats. When it comes to security from an economic perspective in the Arctic, a variety of factors and influences all play competing roles – which are the most important remains to be seen.

We invite you to consider the following:

- How will rare earth elements and critical minerals influence the development of Arctic economic security?
- ' How will increased usage of shipping lanes such as the Northern Sea Route and the Northwest Passage change the global economy, if at all?
- What economic role will self-proclaimed 'near-Arctic' state China play in Arctic geopolitics?
- · Will oil and gas extraction continue to be a key influential factor for states looking towards the Arctic?
- How will the EU's proposed moratorium on fossil fuel extraction in the Arctic influence other actors?
- · How will China and Russia's strategic relationship impact the Russian Arctic's economy?

Background Context

BBC Radio 4. "Greenland: to dig or not to dig?" Crossing Continents Podcast, 2021.

Could Greenland become the world's next resource hotspot? The government there hopes so - they've been travelling the world touting the country's vast reserves of oil and gas, and huge deposits of iron ore, gold and rare-earth elements. As melting icecaps make all these resources more accessible, mining promises riches for Greenland and the ultimate prize of full independence from Denmark. But there's a catch - many of the rare earth minerals are surrounded by uranium, pitching Greenland into the world of nuclear politics and environmental hazard. Nowhere is this clearer than in the small town of Narsaq in the country's south. Two proposed rare-earth mines could reverse the town's economic decline, but one just miles away will mine uranium too. James Fletcher travels to Narsaq to ask whether mining will be a blessing or a curse.

Bouchard, Christina. "<u>Arctic Highways as Critical Infrastructure</u>." *NAADSN Policy Primer,* 19 August 2020.

Because of their role in the regular function of the supply chain, highways are frequently cited as critical transportation assets. The highway network in the Yukon Territory (YT) and Northwest Territory (NWT) has a limited number of 'alternative' routes. Where the functioning of a highway becomes compromised, there may be immediate impacts to residents and commercial users, including community re-supply. Geographically, YT is the smallest territory, but hosts the most developed highway network. Nunavut (NT) does not have an inter-regional highway system. While infrastructure funding is led by the federal government, the execution of maintenance operations is led by the Territories. Particularly with the severe and changing soil, drainage and weather conditions of the North, regular maintenance, and timely reconstruction of assets at the end of their lifecycle will be vital.

Chuffart, Romain, Liubov Timonina, Saga Helgason and Ekaterina Uryupova. "Building a Pan-Arctic Fisheries Regime with Ekaterina Uryupova." The Arctic Institute, 17 March 2021.

Romain and Saga had a conversation with Dr. Ekatarina Uryupova about fisheries governance and the Central Arctic Ocean. They talked about the importance of rethinking the legal framework for Arctic fisheries management considering climate change and the need for a more dynamic and flexible regime that works globally. The existing framework for fisheries management, with global, regional, and national components is applicable to the Arctic. Despite many bodies where cooperation in research and management occurs, a comprehensive, Arctic-specific legal regime is still lacking.

Coffey, Luke, Daniel Kochis, and James Di Pane. "Arctic Security Is Not About Preparing for War, But about Preparing for the Future." The Heritage Foundation, 22 January 2020.

As other nations devote resources and assets in the Arctic region to secure their national interests, America cannot afford to fall behind. America's very real interests in the Arctic region will only increase in the years to come. The melting of some of the Arctic ice during the summer months each year is creating security challenges, but also new opportunities for economic development. Reduced ice will mean new shipping lanes, increased tourism, and further natural resource exploration. This increase in economic activity will also mean a larger military presence by more actors than ever before. As the U.S. prepares for future security challenges in the Arctic region it must continue to invest in necessary military and security capabilities, deepen its bilateral relations with friendly Arctic countries, focus NATO's attention on the Arctic, and continue to highlight Russia and China's malign role in the region.

Doshi, Rush, Alexis Dale-Huang, and Gaoqi Zhang. "Northern expedition: China's Arctic activities and ambitions." Brookings Institute, April 2021.

This report explores China's internal discourse on the Arctic as well as its activities and ambitions across the region. It finds that China sometimes speaks with two voices on the Arctic: an external one aimed at foreign audiences and a more cynical internal one emphasizing competition and Beijing's Arctic ambitions. In examining China's political, military, scientific, and economic activity — as well as its coercion of Arctic states — the report also demonstrates the seriousness of China's aspirations to become a "polar great power." China has sent high-level figures to the region 33 times in the past two decades, engaged or joined most major Arctic institutions, sought a half dozen scientific facilities in Arctic states, pursued a range of plausibly dual-use economic projects, expanded its icebreaker fleet, and even sent its naval vessels into the region. The eight Arctic sovereign states — Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States — exercise great influence over the Arctic and its strategically valuable geography. China aspires to be among them.

Egede, Múte. "Greenland at the Centre of a Changing Arctic." The Wilson Quarterly, 2022.

Greenland Prime Minister Múte Egede addresses a variety of important issues that will impact the future of Greenland including Arctic geopolitics, climate change and how Greenland will hold a key role in the transition to renewable energy. Egede asserts that Greenland is rising as a key influential actor as states look towards Greenland's resources. Greenland, therefore, is set to seize the opportunity to take its place on the world stage in an open economy whilst developing economically. Alongside this, Egede addresses the decision for Greenland to join the Paris Agreement and becoming a climate responsible sumbol as the worlds eyes shift to the North, which in turn links to Greenland's growing significance in the green transition. Finally, Egede commits to ensuring the Arctic remains a low-tension area and declares that Greenland is at the forefront of important changes, and to truly have a real impact, Greenland will be engaged and seek to take a prominent position on the world stage.

Hsiung, Christopher Weidacher. "The Emergence of a Sino-Russian Economic Partnership in the Arctic." The Arctic Institute, 19 May 2020.

The Sino-Russian strategic partnership has never been as comprehensive and stable as it is now. While the relationship certainly faces underlying challenges, such as deep-rooted memories of historical rivalry and a growing power imbalance in China's favour, it is remarkable how enduring bilateral relations have been since the end of the Cold War. A major driver for closer ties has been perceived pressure from the US, but Chinese reassurance policies to mitigated Russian threat perceptions of a rising China have also contributed. Long lagging behind more developed political ties, the economic dimension has expanded, particular in recent years. Sino-Russian bilateral trade has steadily grown, exceeding 100 USD billion in 2019. Today, China is Russia's largest trading partner and Russia is China's largest oil supplier. Energy trade constitutes the main pillar, but agricultural trade and cooperation in science and technology are growing. Notably, increased Sino-Russian economic engagement is also evident in the Arctic region. This

begs the question, are we witnessing the emergence of an economic partnership in the Arctic? Early disclaimer: likely, but not without its challenges.

Kenderdine, Tristan. "Northern Corridor for Central Asia-Arctic Ocean Transport Access." The Arctic Institute, 9 November 2021.

The Russian Federation stands to be a net beneficiary of climate change. Melting Arctic multiyear ice is rapidly opening possibilities for Northern Sea Route (NSR) operations with more ice-class vessels, fewer icebreakers, more LNG transit and containerized transport, and more international transshipment ports and multimodal port operations. An increase in NSR traffic offers a natural piggy-back development possibility for opening Eurasian inland river transport to connect to the Arctic with less frozen-river time and more navigation days per year. A warming climate only makes more of Eurasia accessible to maritime transport and inland waterway navigation. While these inland waterway connections could synchronise with expanding trans-Arctic shipping, any development of inland river or Arctic Ocean transport systems carry water security, transboundary security, and ecological security risks. Arctic transport development will also likely not only encourage the re-emergence of regionalisms, and restrengthen geo-economic regional agendas, but will also necessitate institutional strengthening of environmental monitoring, mitigation, and remediation systems. The advance of a Eurasian inland waterway transport system will thus have serious consequences for both geo-economic and environmental security for the polities and biomes which development may service.

Millard, Bryan and Whitney Lackenbauer. "Trojan Dragons? Normalizing China's Presence in the Arctic." Canadian Global Affairs Institute, June 2021.

Many Arctic narratives cast suspicion on China, based on concern that the Asian power will seek to undermine the sovereignty of Arctic states and co-opt regional governance mechanisms to facilitate access to resources and new sea routes to fuel and connect its growing global empire. This paper focuses on China's Arctic maritime capabilities to analyze and infer possible Arctic interests of this self-declared "near-Arctic" state. Do Chinese state officials mean what they say about the Arctic, or are they using the cover of polar scientific research and thinly veiled language to normalize their presence and advantageously position themselves? If acceptance of China's presence - or at least apathy to it – serves as a necessary precondition to access and exploit Arctic resources, the authors deduce how Chinese scientific research reflects and fits with the country's regional interests and its global commercial, resource extraction, and power projection goals. After producing a timeline of key inflection points in Chinese academic and official discourse, the authors analyze the activities of Chinese icebreaker Xue Long and the 11 Chinese national Arctic research expeditions (CHINARE). They conclude that China has successfully used its scientific community as an instrument to normalize its presence in the region for skittish Arctic nations. This is consistent with China's "near-Arctic state" narrative, thus laying the foundation for the broader strategic goal of accessing the region and exploiting its resources.

Poppel, Birger. "Arctic Oil and Gas Development: The Case of Greenland." Arctic Yearbook 2018.

Even though not a single barrel of Greenlandic oil was ever extracted, refined and consumed in or exported from Greenland, hydrocarbon has nevertheless played a significant role in contemporary economical, environmental, and political. Discourses. Not least as a key political issue in Greenland as well as between Greenland and Denmark is the discourse about Greenland's development from a colony to Self-Governance (2009) via status as a Danish county (1953) and Home Rule (1979). One of the article's foci is how the discourse about and the gradual acknowledgement of the Greenlanders' rights to the Greenland subsurface has been an important part of Greenlandic nation building. Furthermore, visions for an independent Greenland have been fuelled by the hopes for 'a shortcut' via discoveries of oil and gas that eventually could compensate for the Danish block grant and pave the way for an independent Greenland. In 2012 Greenland Self-Governance took over the full authority of mineral resources including oil and gas. 2012 was also the year following explorative drillings of eight wells that were all dry. The following years were characterised by a rapidly declining interest from the oil industry in developing hydrocarbon activities in Greenland waters and demonstrated Greenland's dependency on the international market for oil. Greenland being part of a globalised world also became apparent when Greenland was confronted with, for instance, environmental concerns caused by Greenland's wish to be an oil-producing country. Conflicting interests internationally were also reflected in the results based on a national survey on attitudes to, perceptions of as well as hopes and concerns related to oil development. Some results are presented in the article.

Areas of Concern

Andersson, Patrik, Jesper Willaing Zeuthen & Per Kalvig. "Chinese Mining in Greenland: <u>Arctic Access or Access to Minerals?"</u> Arctic Yearbook, 2018.

This article contributes to the academic debate on China's growing interests in the Arctic and enriches our understanding of the various economic and political factors influencing Chinese investment decisions in the mineral sector. The article studies Chinese interests in two Arctic advanced mineral exploration projects – the Citronen Fjord zinc project in Northern Greenland and the Kvanefjeld (Kuannersuit) Rare Earth Element (REE)-uranium project in Southern Greenland. It analyses China's different policies for REE and zinc and their different roles in China's foreign policy strategy – the Belt and Road initiative (BRI), which also includes plans for establishing an "Ice Silk Road". Based on a study of Chineselanguage policy documents and academic articles from the mining sector, we argue that Chinese involvement in the two projects is driven by different strategic considerations. Chinese involvement in REE projects overseas is primarily driven by China's interest in the strategic resource itself, whereas decisions of where to engage in zinc projects are to a higher degree determined by China's foreign policy priorities. China has a well-developed and clearly defined national strategy for REE, a resource it considers "strategic," of which the Kvanefjeld project is likely to be part. Zinc, on the other hand, is not a strategic resource to China, but still essential for its industry. Hence, we argue that the Citronen Fjord project is less tied to national resource strategy; instead, it offers China access to the Arctic region and to zinc as a bonus. By focusing on the mineral sector, the article explores the extent to which mineral interests drive Chinese foreign policy and to what extent other foreign policy interests influence the Chinese mineral sector overseas.

Blaxekær, Lau Øfjord, Marc Lanteigne and Mingming Shi. "The Polar Silk Road & the West Nordic Region." Arctic Yearbook, 2018.

In June 2017, China's National Development and Reform Commission officially announced that the Arctic Ocean would be added to the list of "blue economic corridors" comprising a major part of China's emerging "Belt and Road" trade and infrastructure initiatives. In January 2018, this policy was further codified in China's first governmental White Paper on the Arctic. In May 2017, The Nordic Council of Ministers and China formally agreed to strengthen collaboration between China and the Nordic region on five key areas. At the same time, the West Nordic Region (Greenland, Iceland, the Faroe Islands, and coastal Norway) is increasingly being framed as a distinct part of the Nordic region with its Arctic location, maritime and blue bioeconomy focus, yet these countries have no joint Arctic strategy or approach to the emerging Polar Silk Road. On the one hand, China's enhanced Arctic engagement and strategic collaboration with the Nordic region, which includes the Arctic, maritime economy, and bioeconomy, seem very promising for West Nordic development, on the other hand, geo-political unease about Chinese investments in the Arctic raise questions about what happens when the large-scale geopolitics meet the micro-scale geopolitics of the West Nordic Region. There is a significant gap in both the academic and policy literature on these matters, and as such, this article targets both academia and practitioners seeking to better understand and act according to developments in this region. Theoretically, this article is framed within the English School in International Relations.

Exner-Pirot, Heather. "Pathways to Indigenous Economic Self-Determination." Canadian Global Affairs Institute, May 2021.

This report explores the evolution of Indigenous engagement in resource development and demonstrates how that sector offers amongst the best opportunities for Indigenous nations and peoples to develop their own economies and achieve greater selfdetermination in practice. The majority of First Nations are involved in resource development to some extent, including oil and gas, mining, forestry, hydro and commercial fisheries. Significant Indigenous engagement in the sector has resulted from legal rights, contractual demands, and the need for social license, but also Indigenous business acumen and persistence. To help ensure that Indigenous nations that want to engage more fully in the resource sector are able to do so, the report recommends: (1) working with Indigenous nations to make it easier, not harder, for resource development to occur in their territories by removing the layers of regulation and extra steps for approvals that deter investment or make projects uncompetitive; (2) building the capacity of Indigenous nations to do due diligence into potential projects themselves, including risk analysis, business planning, and environmental assessment; (3) improving access to financing in order to participate as equity stakeholders in projects, including through government loan guarantees; and (4) putting as much energy into strengthening Indigenous economic rights as into political ones in order to establish the conditions under which Indigenous nations can say yes to development.

Gricius, Gabriella. "Geopolitical Implications of New Artic Shipping Lanes." The Arctic Institute, 18 March 2021.

The advent of climate change has brought about several different changes in the Arctic, including increased accessibility to Arctic ports as well as the opening of new Arctic shipping lanes. With new trans-Arctic routes, including the Northern Sea Route (NSR) and the Northwest Passage (NWP), as well as newly built and refurbished ports from Russia, political and military interests are re-evaluating the region as one of geopolitical competition. With the emergence of new possible shipping lanes such as the NSR and the NWP, states are changing their behavior in the Arctic. As the ice diminishes, these shorter maritime routes, their respective ports and natural resources are causing a renewal of interest in what was once considered an impassable region. States have expressed interest in using new shipping lanes for shorter transit times, strategic resource extraction, military activity as well as regional shipping, fishing, and tourism. However, with its unpredictable seas, severe climate conditions, high costs, and lack of developed infrastructure in the northern territories — the Arctic has many obstacles for socio-economic and maritime development.

King, Hobart. "Oil and Natural Gas Resources of the Arctic." Geoscience News and Information, 2021.

This article offers an insight into the enormous potential of resources that exist in the Arctic. The financial cost of extractive Arctic industries is addressed throughout, alongside the challenges of Arctic oil and gas exploration. Hobart provides a short list of reasons as to why oil and gas exploration in the Arctic is so costly. The difficulty of Arctic exploration creates complexities surrounding the expansion of carboniferous Arctic industries, however, as oil and natural gas fields in other areas of the world deplete, the Arctic's vast resource potential attracts Arctic and non-Arctic states' interest. Hobart further addresses the territorial disputes of Arctic states due to competing claims to oil and gas beneath the Arctic Ocean, as well as discussions to extend Arctic state's continental shelf beyond 200 nautical miles; giving way to new economic resource opportunities.

Østhagen, Andreas. "Fish, Not Oil, at the Heart of (Future) Arctic Resource Conflicts." Arctic Yearbook, 2020.

The main export in Greenland – accounting for 88% - comes from its fisheries, making the Greenlandic economy fragile to international price fluctuations. As sea ice diminishes in the Arctic, writings about the region have directed focus to accessing and potentially claiming undiscovered offshore oil and gas resources. However, as has been extensively proven, oil and gas resources in the North have not generated conflict or aggression. Instead, another ocean-based resource is emerging as the primary rationale for disputes in the Arctic: marine living resources. Despite a pro-active moratorium on High Arctic fisheries, issues such as quota distributions for mackerel, snow crab, and access to the maritime zone/shelf around Svalbard have proven particularly conflictual in northern waters. Several Arctic states – or their respective Arctic regions – are heavily dependent on fisheries as a source of economic wealth and food security. States are thus willing to go to great lengths to protect their sovereign rights in their economic zones. This article

examines three cases of conflict related to fisheries management impacted by global warming in the Barents Sea and the North Atlantic in order to tease out lessons, dynamics and general relevance to the Arctic region. There are potential implications that could demonstrate what may face Greenland in the years to come; particularly now that Greenland has banned oil and gas exploration.

Pram Gad Ulrik, Naja Dyrendom Graugaard, Anders Holgersen, Marc Jacobsen, Nina Lave & Nikoline Schriver. "Imagining China on Greenland's Road to Independence." Arctic Yearbook, 2018.

For decades, Greenlandic politicians have sought independence in international politics and economy. Renewed global interest in the Arctic has given new impetus to a strategy of diversifying the existing dependency relations, to put coloniality behind. This article investigates how Greenlandic foreign policy narratives have cast China in different roles that support this strategy. Some narratives are informed by Orientalist tropes imported from Denmark, while others dismiss the very same tropes. Some embrace Chinese partners as crucial on Greenland's road to independence, while others reject China as imperialist. Mainly, China has been imagined as a potent source of material resources (export revenues, investments, labour). Initially, this narrative was employed to support a business attempt to reinvigorate traditional hunting through new export channels. Later, narratives underscored Greenlandic ambitions as a mining country. Recently, they have backed a Greenlandic search for new solutions to the less-hyped fishing and tourism industries. Besides the promise of material gains, Greenlandic authorities have also imagined China as an occasion for international recognition. However, the sought for recognition has changed drastically, from the time when Greenland's national team played soccer against Tibet to current attempts to negotiate science, infrastructure and paradiplomacy with Beijing and Copenhagen. The analysis is based on media reports, government foreign policy statements and parliamentary debates 1999-2018. Theoretically, the analysis draws on a tradition of analyzing international politics and foreign policy as driven by narratives constructing nation state identities in relation to Others, focusing particularly on Orientalist tropes and anti-colonial alternatives.

Reynolds, Douglas. "<u>Restructuring Alaska: An Alaska Oil, Gas, and Industry Economic Treatsi</u>e." *University of Alaska Fairbanks*, 2020.

This paper in the form of a treatise is about how to improve Alaska's overall socio-economic welfare. It explains economic issues in Alaska starting with the Trans-Alaska (oil) Pipeline System (TAPS) and how TAPS interacts with Alaska's oil industry and induces risk averse reactions by the state. It also explains how an alternative oil pipeline can replace TAPS to reduce Alaska's expensive oil tax credits. The treatise also explains some of the issues surrounding how the oil tax credits work or don't work including such interactions as how oil exploration is carried out, why shale-oil will not easily be developed in Alaska and how the credits subsidize Anchorage's area energy costs to the detriment of the state. Ideas for economic development of the state are given including building natural gas infrastructure and how to set up electric utilities to maximize their value to the state. An alternative for Anchorage energy needs is a simple natural gas pipeline to Fairbanks with rail connection to Anchorage and eventually the use of TAPS for natural gas. An incentivized management system for monopoly electric power utilities is explained which

can provide better cheaper electric power and an incentivized management system for a state owned oil company is explained which can help Alaska negotiate with OPEC to Alaska's advantage. Aspects of the university and education funding are explained.

Stepien, Adam and Andreas Raspotnik. "Continuity with Great Confidence: The European Union's 2021 Arctic Policy Update." The Arctic Institute, October 2021.

In this analysis, the authors offer their thoughts on this recent development. The European Union presents itself as a more self-confident actor in the Arctic, taking stock of its economic and environment impacts in the region, while retaining the previous definition of the scope of its Arctic engagement. This includes climate and environment, developmental issues in the European Arctic, as well as international cooperation within and relevant for the region. At the same time, however, one of the key objectives of the new policy statement is to position the EU's Arctic engagement within the landscape of the European Green Deal (EDG) and the newly found self-portrayal of the EU as a geopolitical actor.

Jiang, Yang. "Chinese Investments in Greenland." Danish Institute for International Studies (DIIS), 2021.

Greenland is important to Denmark's position in international politics, and it has become an arena of increasing competition between great powers. Of all China's shipping, investment and scientific exploration activities in the Arctic, Chinese investments in Greenland have become the most controversial issue. For Washington DC, Copenhagen, and the IA Party that won the Greenlandic general election in April 2021, China's political influence and the environmental impacts that might come with investment are a major concern. Behind the concern is the view that Chinese investments are driven and coordinated by the Chinese state for strategic purposes, but there is a lack of studies on how close state-business relations are and to what extent the domestic reforms in China have pushed Chinese companies to seek out Greenland. Therefore, this DIIS report seeks to inform debates around the role of China in Greenland by delving into the following questions: Why would Chinese companies invest in mining projects in Greenland, and how have they obtained access? How have the projects progressed? To what extent have Chinese state actors participated in these projects?