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CHAPTER 2

East Asian stakeholders in Arctic mining: interests, investments and implications

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Abstract: This chapter investigates the evolving presence of China, Japan and South Korea in Arctic extractive industries, with a focus on their strategic navigation of legal and geopolitical constraints. Through a comparative analysis of state behaviour and enterprise activity, it identifies a triadic actor model – governments, state-owned enterprises and private firms – operating in tacit coordination to incrementally embed East Asian interests in the region. These actors employ low-profile, institutionally adaptive strategies such as joint ventures, diplomatic engagement and technological partnerships to circumvent sovereignty sensitivities and gain durable access to mineral and energy resources. The findings suggest a cumulative, salami-slicing approach that eschews confrontation in favour of technocratic integration and supply chain influence. While this geoeconomic strategy remains partially obscured by limited transparency, its implications for Arctic governance and global resource flows are substantial, marking a quiet but consequential shift in the region's geopolitical economy.

Keywords: Arctic governance, East Asia, resource extraction, salami-slicing strategy, state–business coordination, state-owned enterprises.

INTRODUCTION

The Arctic is becoming a strategically vital region in the global competition for natural resources. The region holds an estimated 13% of the world's undiscovered oil and 30% of its untapped gas (U.S. Geological

Survey, 2008), alongside substantial quantities of minerals such as nickel, copper, cobalt, lithium, rare earth elements, graphite, iron ore, phosphates, bauxite and diamonds, as well as living natural resources – fish (Bastos, 2018). Its emerging maritime routes, such as the Northern Sea Route (NSR), further enhance its economic and geopolitical importance (Farré et al., 2014).

Access to Arctic resources is limited to eight Arctic states – Russia, the United States, Canada, Norway, Denmark (via Greenland), Finland, Sweden and Iceland – which hold sovereignty under international law. However, non-Arctic actors, particularly from East Asia, are increasingly involved. China, Japan and South Korea, despite lacking territorial claims, have gained Observer status in the Arctic Council, enabling participation in governance and resource projects (Babin & Lasserre, 2019, pp. 146–147). Backed by state-supported investments, they engage in mining ventures through partnerships with Arctic firms, aiming to secure critical minerals and diversify supply chains amid growing global demand as a part of broader geopolitical and economic strategy.

The aim of this chapter is to investigate the nature, structure and strategic implications of East Asian engagement in Arctic mining. It seeks to answer the following research questions: how do East Asian actors gain access to Arctic resource projects despite legal and geopolitical constraints? How do these actors navigate the sovereignty-based constraints imposed by Arctic states? How does this reshape Arctic power dynamics and global resource flows? Its central hypothesis is that their engagement follows a "salami-slicing" strategy – avoiding overt challenges to Arctic states' authority while steadily deepening influence through layered tactics: state-backed investments in mining projects, strategic observer status in governance bodies and partnerships that create long-term dependencies. Over time, this approach not only secures resource access but embeds East Asian actors as indispensable players in Arctic supply chains, shifting geopolitical and economic power dynamics.

The analysis draws on a stakeholder theory framework, which enables a systematic classification of East Asian actors based on their level of

involvement and strategic interests. Additionally, concepts from regional developmentalism and state–business coordination models help explain how national policies shape and support international ventures in politically sensitive regions such as the Arctic. The study uses stakeholder theory to analyse actor involvement, alongside regional developmentalism frameworks to explain state-business coordination. Methodologically, it relies on qualitative analysis of policy documents, investment data and case studies of key mining projects, comparing strategies across China, Japan and South Korea.

STAKEHOLDERS IN ARCTIC MINING

A stakeholder is broadly defined as any actor with an interest in a given activity and may be classified as investor, contributor, observer or end user, depending on their level of involvement (Gutterman, 2023). Stakeholders can also be distinguished as committed or uncommitted. Committed stakeholders – such as investors and contributors (including delivery entities) – are directly invested and often exert influence or control over the activity. Uncommitted stakeholders, including observers, end users and sometimes also regulators and interest groups, may not endorse the activity but can still affect its outcomes (McGrath & Whitty, 2017, p. 731). This chapter focuses on committed stakeholders due to their active role in the process of accessing and controlling the extraction and distribution of natural resources.

In Arctic resource extraction – an area involving both Arctic and non-Arctic actors – three main stakeholder groups emerge: government ministries and agencies, state-owned enterprises (SOEs) and private firms. In East Asia, ministries of foreign affairs (MFAs) are particularly central. China, Japan and South Korea have issued Arctic strategies emphasising economic engagement. China's MFA, in its 2018 Arctic Policy White Paper, endorsed enterprise participation through cooperative mechanisms that respect environmental and Indigenous concerns

(China's Arctic Policy, 2018). Similarly, Japan's Foreign Minister Taro Kono, in a 2018 Arctic Circle speech, highlighted ventures such as the NSR and joint energy projects, stressing responsible, collaborative investment. South Korea's Arctic policy is coordinated by its MFA and five other ministries under the 2013 Master Plan (Government of the Republic of Korea, 2018). China's National Development and Reform Commission (NDRC) also plays a key role, overseeing Arctic economic planning and signing a 2015 memorandum of understanding (MOU) on NSR cooperation (Hsiung, 2020; NDRC, n.d.). Polar research institutes and agencies – Polar Research Institute of China, Chinese Arctic and Antarctic Administration, Korea Polar Research Institute and Japan's National Institute of Polar Research – support Arctic policy through scientific research and implementation (Zhuravel, 2016, pp. 100, 109–110, 119). These institutions act as strategic facilitators. East Asian governments back their Arctic agendas with financial and diplomatic support to secure mining rights and partnerships, following a regional developmentalist model marked by strong state-business cooperation and the promotion of national champions to enhance competitiveness and state power (Weiss, 1995). An example of how ministries have facilitated the continued resource-related activities of SOEs in the Arctic can be seen in China's 2017 agreement with Russia to jointly develop the NSR, allowing SOEs such as COSCO Shipping to expand their transport operations – currently they conduct approximately 30% of voyages along NSR (Martins, 2023).

SOEs have become key drivers of East Asia's growing presence in Arctic mining. Bolstered by robust government backing, they lead investment in both resource development and supporting infrastructure (Kim & Ali, 2017). In China, SOEs play an especially prominent role. The China National Petroleum Corporation (CNPC) and China National Offshore Oil Corporation (CNOOC) are major investors in Arctic energy, particularly Russia's Yamal LNG (CNPC holds a 20% stake) and Arctic LNG 2 (both companies hold 10% stakes) – cornerstones of Sino-Russian cooperation (Offshore Energy, 2013; Si, 2019). Japanese SOEs Mitsui,

Mitsubishi and Japan Oil, Gas and Metals National Corporation (JOGMEC) also held a 10% stake in Arctic LNG 2, although the investment was suspended following Russia's invasion of Ukraine (Humpert, 2019). China Minmetals Corporation, one of the largest metal and mineral trading companies in the world, via its subsidiary CMN owns a 72% share in MMG Minerals company and leads Canada's Izok Corridor project in Nunavut, Canada. This project is crucial for Nunavut, as it could create 1,100 construction jobs and 710 permanent positions, stimulate local businesses and reduce unemployment (14.2%), while its infrastructure investments may make future mines viable and provide long-term economic benefits (Lajeunesse & Lackenbauer, 2016, pp. 81–86). Quebec also seeks Chinese investment to advance its $80-billion Plan Nord, with China's third-largest steelmaker co-developing an iron mine at Lac Otelnuk (Lajeunesse & Lackenbauer, 2016, p. 80). In addition, Shenghe Resources acquired a 12.5% stake in the Greenland's Kvanefjeld rare earths project to secure access to a deposit that may hold up to 20% of the world's rare earth elements. (Barradas, 2023). China Non-Ferrous invested in the Kvanefjeld project to secure, through an agreement, processing of those elements in China (Lajeunesse & Lackenbauer, 2016, p. 86). Greenland presents a value for China, as it has deposits of rare earth elements, uranium, iron ore, lead, zinc, petroleum and gemstones (Lajeunesse & Lackenbauer, 2016, p. 85). Korea Resources Corporation actively pursues Arctic mining opportunities, while Korea Gas Corporation owns 20% of the Umiak SDL 131 gas field – securing 5% of South Korea's LNG imports – and signed an MoU with the Alaska Gasline Development Corporation to collaborate on LNG project development and operations (Foreign Policy Association, n.d.; Alaska Gasline Development Corporation, 2017). Before the invasion of Ukraine, the South Korean company Daewoo Shipbuilding & Marine Engineering secured a $3.5 billion contract to build 16 Arctic LNG tankers for Russia's Novatek and Yamal LNG ("DSME in Yamal LNG Shipbuilding Deal, Russia" 2013). Japanese public company Sumitomo Corporation holds a 5% interest in Alaska's Stone Boy project, with confirmed gold, silver and

antimony deposits (Sumitomo Corporation, 2011). SOEs from China, Japan and South Korea also form joint ventures (JVs) with Russian, Canadian and Nordic firms to gain Arctic access, manage operational risks and expand geopolitical influence. Their focus lies in long-term investments in strategic minerals and energy – securing high-risk, high-reward projects to enhance resource security and global positioning (Lajeunesse & Lackenbauer, 2016, pp. 95–99).

While SOEs dominate Arctic ventures, private firms such as Baowu Steel Group, Huawei Marine Networks, Samsung Heavy Industries, Hyundai Heavy Industries, Hitachi and Komatsu are increasingly active in supporting roles. Their contributions span primarily technology, logistics, equipment, trade and sometimes investments. For instance, Hitachi and Komatsu develop mining machinery for Arctic conditions (Hitachi, n.d.); Marubeni Corporation engages in Arctic mineral financing and trade (Marubeni Corporation, 2023); and Hyundai and Samsung Heavy Industries build ice-class vessels essential to Arctic logistics (Kim & Kim, 2025). Moreover, in the Raglan District in Canada, Chinese company Jilin Jien Nickel Industry Co. invested $735 million to produce nickel, copper, platinum and palladium, with the first shipment sent to China via the Northwest Passage (NWP) in 2014. In Yukon, initially invested Chinese SOEs – such as Yunnan Chihong's $100 million lead-zinc venture with Selwyn Resources – but now the Wolverine zinc-silver mine operates under the privately held Chinese firm Jinduicheng Molybdenum (Lajeunesse & Lackenbauer, 2016, pp. 80–81).

East Asian engagement in Arctic mining relies on a synergistic relationship between government agencies, SOEs and private firms, where each actor plays a complementary role. Government agencies set the strategic direction and secure diplomatic ground, SOEs operationalise state goals through high-risk investments, and private firms bring in technological innovation and commercial flexibility. Rather than competing, these actors form a layered ecosystem that collectively enhances East Asia's capacity to enter, influence and sustain a presence in the Arctic resource landscape.

INVESTMENT PATTERNS AND STRATEGIES

East Asian investment strategies in Arctic mining reflect differing national priorities and risk tolerances, particularly in the realm of direct investment, which tends to be more state-driven and strategically oriented. China leads with large-scale, capital-intensive projects backed by strong government support and integrated infrastructure development. Firms such as CNPC and CNOOC exemplify this model, operating under tight state coordination to align with national resource security goals. This is evident in the Silk Road Fund's 9.9% stake in Russia's Yamal LNG, which secures both energy access and critical logistics infrastructure for broader Arctic operations (Schach & Madlener, 2018, p. 9). In contrast, Japan and South Korea pursue a more cautious approach, relying on state-backed agencies to provide selective funding and technical expertise. Their focus lies in high-return, strategic resource niches, balancing opportunity with risk aversion (Schmid, 2019). While direct investments offer long-term strategic control, they carry significant financial exposure and political risk, especially in sensitive geopolitical environments (Hossain et al., 2024).

To mitigate such risks, JVs are widely used as lower-risk, collaborative investment mechanisms (Beamish, 1993). These allow East Asian actors to partner with Arctic stakeholders, combining capital, technology and local expertise. China is particularly active here, forming JVs with Russian firms like Novatek in projects such as Arctic LNG 2, where Chinese financing and engineering align with Russian territorial access and operational capacity. Although energy-focused, such ventures significantly support mining logistics and infrastructure development (Grigoriev, 2025). In the relatively undeveloped Arctic mining sector, where existing foreign-run mines lack strategic value for Canada, Chinese SOEs typically avoid active operations and instead partner with Canadian firms to develop promising reserves using Chinese financing (Lajeunesse & Lackenbauer, 2016, p. 85). Japan and South Korea, while less directly involved in extraction, contribute through JVs that enhance Arctic mineral transport

capacity (So et al., 2021, p. 91). Politically acceptable and adaptive to local regulations, these arrangements trade operational control for stability. Ultimately, China emphasises strategic influence through assertive direct investments, while Japan and South Korea favour partnership-driven, risk-sharing models – revealing a nuanced divergence in East Asian Arctic investment strategies (McCaleb & Szunomár, 2016, p. 200, 209).

MINING DYNAMICS

East Asian countries involvement in Arctic resource extraction requires balancing economic interests with geopolitical sensitivities. As Observers of the Arctic Council, they must navigate the sovereignty and regulatory frameworks set by Arctic states, the primary custodians of the region's resources (Babin & Lasserre, 2019, pp. 145–146). China's growing presence in the Arctic, through investments in projects such as Yamal LNG and Arctic LNG 2, as well as scientific expeditions (Fadeev et al., 2024, p. 23), has raised concerns among Arctic nations about its geopolitical ambitions. These concerns are intensified by China's Belt and Road Initiative, which extends into Arctic regions and fuels suspicions regarding its strategic intentions (Gapon, 2024, p. 26; Fravel et al., 2022, pp. 141–142). In contrast, Japan and South Korea take a more technocratic approach, focusing on scientific cooperation, sustainable practices and technology exchange. By prioritising environmental responsibility, they maintain positive relations with Arctic states, which often view them as more acceptable partners in resource extraction (Tonami, 2016; Kim & Stenport, 2021, pp. 23–24).

Arctic resource extraction is both a technical and politically sensitive issue, involving multiple stakeholders: local governments, Indigenous communities, national authorities and foreign investors. JVs have become the primary model for East Asian involvement, enabling shared financial risks and access to local expertise. In Russia, for example, Asian firms collaborate on energy and mining projects such as Yamal LNG, blending Asian capital with Russian operational knowledge.

These ventures facilitate infrastructure development in the resource-rich but infrastructure-limited Arctic (Tulaeva et al., 2019). Japan and South Korea also partner with Swedish and Finnish firms, focusing on technology exchange, sustainable practices and logistics, particularly in Arctic shipping infrastructure (Khorrami, 2021). Arctic states are increasingly cautious about granting foreign control over resources, particularly those vital for national security or economic independence. The strategic importance of critical minerals, such as rare earth elements and nickel, further complicates negotiations, as these minerals are essential for both civilian and military applications, especially for East Asian countries aiming to reduce dependence on non-allied sources. The Arctic's resources thus hold both economic and geopolitical significance (Tulaeva et al., 2019; Marsili, 2022, p. 150; Sypień, 2024, p. 132). Achieving a balance between economic ambitions and political sensitivity is crucial for the success of East Asian Arctic ventures. The strategies of China, Japan and South Korea resembles "salami-slicing" tactics which refer to a gradual, incremental strategy of gaining influence or control by making small, seemingly insignificant advances that accumulate over time into substantial gains, often while avoiding direct confrontation or drawing attention to the broader strategic objective (Maass, 2021, pp. 35–37). In the discussed cases, this is both evident in the order in which the various actors get involved – government ministries and agencies create the right conditions for SOEs and private entrepreneurs – and in the gradual nature of gaining prominence in the Arctic mining sector, albeit the Chinese approach is more aggressive and effective.

IMPLICATIONS FOR GLOBAL RESOURCE MARKETS AND REGIONAL POWER DYNAMICS

East Asian involvement in Arctic mining is quietly reshaping the structure and resilience of global mineral supply chains. With demand for critical minerals such as rare earths, cobalt, lithium and nickel soaring, East

Asian economies have turned to resource diversification strategies emphasising upstream investment in politically stable jurisdictions. Arctic resources are increasingly seen as an antidote to the volatility and export risks of traditional supply regions – especially by mineral-hungry Japan and South Korea, which hedge against vulnerabilities through equity investments and long-term offtake agreements (Dou et al., 2023; Stensdal, 2015).

The Arctic itself is fast emerging as a new resource corridor, with East Asian investments in extraction projects often paired with infrastructure plays – ice-class vessels, LNG terminals and port facilities along the Northern Sea Route. For Japan and South Korea, these efforts bolster energy and materials security; for China, they fit seamlessly into a global trade network built under the Polar Silk Road banner. As Arctic shipping routes become increasingly viable, even remote mineral sites are drawn deeper into global supply chains (Beveridge et al., 2016, p. 405, 410). Meanwhile, strategic stockpiling and resource nationalism have become defining features of Arctic resource governance (Kangasluoma & Lempinen, 2022, p. 401). The strategic styles vary: China, guided by the 2018 Arctic White Paper and an expanding web of bilateral deals, takes a proactive, multifaceted approach, blending politics, science and economics. Its SOEs, buoyed by concessional finance and diplomatic heft, are deeply entrenched in Arctic ventures (Tulaeva et al., 2019; Gapon, 2024, p. 23). Japan and South Korea, by contrast, play to their strengths in sustainable stewardship, presenting themselves as high-skill, low-risk partners, particularly appealing where Western investment is hampered by sanctions or environmental, social and governance (ESG) requirements (Heng & Freymann, 2023) and engaging leading private companies specialising in the development of technologies capable of operating in Arctic conditions.

East Asian countries influence in Arctic mining has broader consequences for global power dynamics. Control over strategic mineral reserves enhances the economic sovereignty of both producing and consuming states, impacting global manufacturing and defence industries (Jones, 2024; Nolan, 2025). East Asian investments also shift geopolitical

influence, particularly in the Russian Arctic, where China's presence counters Western disengagement. These trends raise concerns among Euro-Atlantic actors about strategic dependency and governance asymmetries (Heng & Freymann, 2023), prompting renewed diplomatic engagement in Arctic forums. This shift also fuels Western concerns over Russia's growing dependency on China in a subsequent field.

CONCLUSION

East Asian engagement in Arctic mining manifests a complex yet coherent triadic configuration, encompassing governmental institutions, state-owned enterprises and private firms. Each actor group contributes distinct, yet mutually reinforcing, roles: government ministries articulate strategic aims and cultivate diplomatic access; SOEs absorb capital-intensive risks in line with national policy imperatives; and private firms provide specialised technologies and operational acumen. Rather than acting in isolation, these entities operate in orchestrated coordination, enabling China, Japan and South Korea to navigate sovereignty-bound constraints while incrementally embedding themselves in Arctic extractive value chains. Although calibrated to avoid geopolitical provocation, their presence is reshaping the landscape of mineral and energy resource extraction in the High North.

East Asian actors use adaptive, low-friction strategies to access Arctic resources, prioritising joint ventures, scientific cooperation and multilateral engagement to gain legitimacy while respecting sovereignty norms. They integrate through bilateral agreements and policy alignment, minimising regulatory resistance. Their growing investments in LNG and critical minerals are reshaping Arctic supply chains, turning the region into a key node in global resource networks. This incremental involvement reflects a broader East Asian geoeconomic vision, subtly reconfiguring power dynamics under a cooperative facade. The "salami-slicing" approach – incremental and non-confrontational – gains

empirical support. Chinese SOEs leverage concessional finance and diplomacy to gain influence through minority stakes and infrastructure investments, while Japan and South Korea emphasise technology and sustainability for soft power. Both avoid zero-sum strategies, fostering interdependence and positioning East Asia as key players in Arctic extraction. This engagement reflects broader global trends, where globalisation, capital mobility and complex supply chains enable geographically distant actors to assert strategic presence and shape extractive regimes without traditional hard power instruments.

Nonetheless, significant informational lacunae persist. Investment flows, often routed through opaque instruments and third-country intermediaries, remain difficult to trace and quantify. Scientific cooperation, while discursively benign, may conceal dual-use motives with extractive or strategic implications. Host-country screening mechanisms, especially in jurisdictions with limited transparency, further obscure the real scale and character of East Asian involvement. While this study establishes the strategic logic of East Asian Arctic engagement, future research would benefit from more granular investment data, regulatory impact analysis and longitudinal tracking. In the absence of greater transparency, the full scope and consequences of this quiet geo-economic incursion will remain partially hidden, warranting increased attention from scientists and politicians.

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