

THE ARCTIC ENVIRONMENTAL CHANGES AND ITS ECONOMIC PROSPECTS

—POLITICAL MOTIVES OF RESPECTIVE COUNTRIES

AND JAPAN'S PRESENCE—

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SUMMARY

- Global warming is progressing at a faster pace in the Arctic than in other regions, and great concerns are being raised about its repercussions on this area, as well as the entire planet. At the same time, many countries are showing interest in the Arctic in view of the region's economic opportunities, such as for resource development and the use of maritime shipping routes.
- When Japanese companies engage in business in the Arctic, it is important for them to understand the relevant countries' policies regarding such as industries, subsidies, and the political motives behind them.
- Japan is regarded highly by other countries for the objectivity and accuracy of its scientific knowledge of the Arctic, along with its neutral political stance. Expansion of activities in the Arctic, while giving consideration to environmental protection and the rights of indigenous peoples, by the Japanese government and Japanese companies will likely help elevate Japan's international presence, for both the public and private sectors.

1. THE CHANGING ARCTIC

1-1 What is the Arctic?

The Arctic is the region north of the Arctic Circle, which is located at a latitude of 66°33'39"N in the Northern Hemisphere (Figure). The greater part of the Arctic consists of the Arctic Ocean, which is regarded as the high seas.¹ The countries with territorial waters and territories in the Arctic are the US, Canada, Denmark (with rights through its dependent territory, Greenland), Norway, and Russia. A total of eight countries, namely, these five countries bordering the Arctic Ocean, plus three countries (Finland, Iceland, and Sweden) that have territories in the Arctic but do not face the Arctic Ocean, are collectively referred to as the "Arctic States." Approximately 4 million people, including about 400,000 indigenous people, live in the Arctic.

Figure: Map of the Arctic



Source: Ministry of Foreign Affairs, "Wakanu Kokusai Josei" (Understanding International Affairs), Vol. 107 (column on the Arctic), December 25, 2013, translated by MGSSI.

¹ A term for bodies of water that cannot be placed under the jurisdiction, either territorially or exclusively, of any specific state; it refers to all parts of the sea except inland waters, territorial waters, archipelago areas, and exclusive economic zones. All countries have the right to exercise freedom of the high seas (freedom of navigation, freedom of overflight, freedom of fishing, freedom of scientific research, etc.).

Atmospheric and seawater temperatures are rising faster in the Arctic than in other regions on Earth, owing to factors such as climate change-induced snow and ice melts, and increasing absorption of solar radiation by sea and land surfaces. As a result, the sea ice in the Arctic Ocean has become susceptible to melting regardless of the season, and the sea ice area has contracted to about 60-70% of what it was in the second half of the 20th century. Moreover, the melting of glaciers and ice sheets on land within the territory of the Arctic is contributing to the global sea level rise.² If warming in the Arctic continue to progress at the present pace, the melting of permafrost³ will release underground greenhouse gases (methane, carbon dioxide), and that is expected to increase the occurrences of extreme weather events, such as droughts, floods, and heat waves, even in the mid-latitude regions of the Northern Hemisphere.⁴

1-2 Resource development in the Arctic

Much of the Arctic Ocean is covered by sea ice, albeit with some seasonal variability. Currently, resources are being developed onshore, in coastal areas, or a short distance offshore of the Arctic states. If the progressive melting of the sea ice continues and advancements are made in technology developments and cost reductions, more offshore development may become possible for some types of resources.

According to the United States Geological Survey, the Arctic's unexplored oil and natural gas deposits are estimated to represent 13% and 30%, respectively, of the world's untapped sources of those fossil fuels.⁵ Development are done by Russian state-owned companies or Norway's Equinor among others. However, the divestment from fossil fuels related business is accelerating globally, and the Arctic is no exception. As many as 16 international banks have already ceased funding for oil and natural gas mining projects in the Arctic.⁶

Regarding mineral resources, iron, nickel, titanium, and cobalt have been mined in Norway, Russia, Finland, and other countries to date. In recent years, the receding glaciers and ice sheets has facilitated mining of zinc, gold, diamond, uranium, and other mineral resources in Greenland, which is drawing global attention.

As for fishery resources, habitats are shifting northward as seawater temperatures rise. In 2018, the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean was concluded by ten signatories⁷ in an effort to prevent overfishing. For the time being, commercial fishing is prohibited in the high seas in the Arctic.

1-3 Arctic shipping routes

The three Arctic shipping routes are the Northeast Passage (following the Russian coast),⁸ Northwest Passage (following the North American coast),⁹ and Transpolar Sea Route (crossing the Arctic through the middle of the Arctic Ocean; not yet in use).¹⁰ When simply mentioned as the "Arctic shipping route", it usually means the Northeast Passage, for its higher level of usage. For example, use of the Northeast Passage cuts the transportation distance between Rotterdam, the Netherlands, and Yokohama, Japan, by about 40% compared

² The melting of sea ice does not cause a rise in sea levels. However, the melting of glaciers and ice sheets, such as in Greenland, leads to a rise in sea levels because they exist on the land surface.

³ Permafrost is ground that has remained frozen at temperatures below 0°C for over two years.

⁴ "Warming at the poles will soon be felt globally in rising seas, extreme weather," *National Geographic Website*, December 4, 2019.

⁵ United States Energy Information Administration, "Arctic oil and natural gas resources," January 20, 2012.

⁶ BankTrack, "Banks that ended direct finance for Arctic oil and/or gas projects," last updated March 3, 2020.

⁷ The 10 signatories are the US, Canada, Russia, Norway, Denmark, Japan, China, South Korea, Iceland, and the EU.

⁸ The passage became traversable in the 1930s, and among its uses, ships traveled the route during World War II to transport aid supplies from the US to the north coast of Siberia. During the Cold War era, the passage was used only for domestic shipping by the then Soviet Union. Even after the Soviet Union opened the passage as an international commercial route in 1987, commercial use did not grow. Since the 2010s, however, commercial navigation in the passage has been increasing gradually.

⁹ The passage sees very little use for a number of reasons, including the need to navigate the narrow waterways that wind through the approximately 37,000 islands in the Arctic Ocean, and the severe ice conditions compared to the northeastern route. Only sightseeing cruise ships and some other vessels make infrequent use of the passage within limited waters.

¹⁰ At present, the sea area around the North Pole is covered with thick sea ice, making passage impossible. However, it is predicted that the area around the North Pole will see ice-free summers by around 2050, suggesting this route may become traversable by around that time.

to the Suez Canal route. However, partly due to the additional costs associated with the need to use icebreakers and vessels that satisfy certain ice class¹¹ requirements for navigation through ice floes, only 87 vessels traversed the Northeast Passage in 2019.¹² If the progression of global warming accelerates and the ice-free period is extended, the shorter sailing distance could present cost-saving benefits.

1-4 The rule of law in the Arctic

The Arctic is subject to international regulations, such as the United Nations Convention on the Law of the Sea (UNCLOS, effective since 1994). With respect to the issues of territorial sovereignty and maritime boundaries in the Arctic, although differences in views among the Arctic states have sometimes arisen, all of the countries have so far dealt with such matters peacefully, based on international laws.

The 1996 Ottawa Declaration established the Arctic Council (AC) for the purpose of promoting cooperation and coordination in the Arctic among concerned countries. The AC is made up of the eight Arctic states along with other countries and organizations.¹³ The AC is not a formal international organization, but serves as a forum for discussions.

2. POLITICAL AGENDAS AND POLICIES REGARDING THE ARCTIC

With respect to the Arctic region, many countries ostensibly show interests and concerns in protecting the environment and the rights of indigenous peoples, as well as in promoting international cooperation, among other things. On the other hand, however, the respective countries have hidden agendas, and they can be broadly categorized into the potential returns from natural resource development and the assurance of national security.

2-1 Russia

Apparently, Russia's aims are to increase profits through resource development and making use of the Northeast Passage, and to expand its military bases in the interest of national security.¹⁴ In February 2019, Russia renamed its Ministry for the Development of the Russian Far East as the Ministry for the Development of the Russian Far East and Arctic, indicating the country's stepped up commitment to developing the Arctic.

In the area of resource development, because the production of Russia's existing oil and gas fields has peaked, the country is motivated to explore new locations, such as the Arctic. Also, bearing in mind the concern that fossil fuels could become stranded assets in the future,¹⁵ Russia has a desire to generate as much cash as possible from such assets before that happens. For this reason, the Russian government is trying to maintain its price competitiveness with its "sacrificial"¹⁶ policies, which include preferential taxation and subsidies, to attract domestic and foreign investment, and is rushing to develop new oil and gas fields and pipelines.

As to the Northeast Passage, Russia obliges foreign vessels to comply with certain conditions, such as acquiring prior permission and receiving Russian icebreaker escorts when they transit through Russia's inland waters and

¹¹ A rating issued by a national authority or other organization that certifies a vessel as having the required strength and performance capabilities for withstanding and breaking through ice in order to travel through sea ice.

¹² Ministry of Land, Infrastructure, Transport, and Tourism, "Navigation of Arctic maritime routes in 2019 using satellite AIS data," March 24, 2020 (Japanese only).

¹³ In addition to the member states, six indigenous organizations have been given the status of permanent participants, and 13 other countries, including Japan and China, along with NGOs have been approved as observers.

¹⁴ Alexandr Voronenko, et al., "Prospects of cooperation between Russia and North-East Asian countries in the Arctic region," Northeast Asia Information File, November 2019.

¹⁵ *Roshia shigen ôte, Mitsubishishōji nado ni shusshi dashin* [Russian resource giant to sound out Mitsubishi and others on investing], Nihon Keizai Shimbun, December 11, 2019.

¹⁶ Daisuke Harada, *Ôbei seisai-ka, Roshia Hokkyokuken de susumu sekiyu gasu kaihatsu no genjō* [Current status of oil and gas development in the Russian Arctic under Western sanctions], Oil & Natural Gas Review (JOGMEC), 2017.9 Vol. 51 No. 5.

the sea areas designated as its exclusive economic zone (EEZ).¹⁷ Possible changes in such regulations and escort fees are causes for concern for other countries that use the Northeast Passage.

On the matter of security, Russia has strengthened its navy and improving dual-use infrastructure along its Arctic coastline.¹⁸ The Russian Armed Forces originally had four joint strategic commands. In addition, in December 2014, it established a fifth joint strategic command that is exclusively in charge of the Arctic.¹⁹

2-2 China

Since around 2000, China has been strengthening its relations with Nordic countries and Russia through investments and other means. In its first white paper on the Arctic, entitled China's Arctic Policy, published in 2018, China presents the "Polar Silk Road" concept for connecting development in the Arctic region with the Belt and Road Initiative. It has been pointed out that the reasons behind this proactive attitude likely include the prospect of economic gains from obtaining access to resources and the use of Arctic maritime routes, as well as strengthening military deterrence by deploying strategic submarines to the Arctic Ocean.²⁰

Of the Arctic states, Iceland and Greenland, in particular, have deepened their relations with China in recent years. China supported Iceland during the Icelandic financial crisis of 2008 by signing a currency swap agreement, and its FTA with Iceland, signed in April 2013, is the China's first FTA with a European country. China has also invested in and financed the development of mineral and marine resources in Greenland (see section 2-4: Nordic countries and the EU). In addition to establishing an Arctic research center in Shanghai in collaboration with five Nordic countries, China has also set up Arctic-related research stations in Norway and Iceland. The US is wary that China will transfer private-sector research data obtained through development and observation activities to its military strategies, such as the deployment of submarines to the Arctic.²¹

2-3 North America

In consideration of environmental protection, the US and Canada are opposed to further oil and natural gas development in the Arctic, at least in the waters under their jurisdictions, as shown by their respective bans on new drilling in most of the US-controlled waters and all of the Canadian-controlled waters in the Arctic.²²

On the issue of national security, however, the US and Canada have slightly different attitudes. The US is extremely wary of Russia and China expanding their influence in the Arctic. Since fiscal 2017, the US has been trying to strengthen cooperation with its allies on Arctic-related initiatives,²³ including the appropriation of a defense budget for the redevelopment of the former site of the Keflavík US military base in Iceland.²⁴ Meanwhile, Canada has, from the beginning, been reluctant to step up NATO's military activities in the Arctic.²⁵ While Canada recognizes that there is a great chasm with Russia and China in terms of political ideologies, it has

¹⁷ Natsuhiko Otsuka, et al., *Hokkyoku-kai kōro ni yoru kajō yusō no hensen to tokuchō* [Changes and characteristics of marine transportation due to Arctic shipping routes], Journal of JSCE (Japan Society of Civil Engineers) Ser. B3 (Ocean Engineering), 2017.

¹⁸ Yu Koizumi, *Roshia Pūchin seiken no yūsen seisaku kadai* [Priority policy issues of Russia's Putin administration], Foreign Legislation, National Diet Library, Japan, July 2012; Mathieu Boulègue, "Russia's Military Posture in the Arctic," *Chatham House Research Paper*, June 2019.

¹⁹ Japan Ministry of Defense and the Self-Defense Forces, *2015 Defense White Paper*, 2015.

²⁰ Takahiro Ishihara, "Security Architecture and Multilateral Institutions at the Arctic," Japan Maritime Self-Defense Force Command and Staff College Review, June 2014.

²¹ U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, May 2019.

²² In the US, former President Obama had banned new oil and natural gas drilling in the Arctic (Executive Order 13754 of December 9, 2016), but the Trump administration issued an executive order to abolish the ban (Executive Order 13795 of April 28, 2017). In response, in 2019, the federal district court of Alaska declared the order to be invalid, restoring the ban and halting drilling. Since 2016, the Canadian government has been restricting new drilling operations, and in 2019, it strengthened its control by enacting an official regulation (Order Prohibiting Certain Activities in Arctic Offshore Waters, SOR/2019-280).

²³ National Defense Authorization Act for Fiscal Year 2017; National Defense Authorization Act for Fiscal Year 2020.

²⁴ The US closed its Keflavik military base in 2006, and the facility has since been used as an airport for NATO or civilian purposes.

²⁵ Andrea Charron, "NATO, Canada and the Arctic," *Canadian Global Affairs Institute Website*, September 2017.

adopted a stance to do its utmost to pursue dialogue related to the Arctic and coordinate efforts in the field of science and technology.

Regarding the Northwest Passage, Canada declared in 1973 that part of the route constituted inland waters under its jurisdiction, and since then, it has been putting in place regulations that underscore coastal environmental protection. Although the real effect of such regulations is limited because the Northwest Passage is underutilized, the issue remains a political thorn in its relations with the US, which asserts that the Northwest Passage is an international strait.

2-4 Nordic countries and the EU

In Norway, oil production has been concentrated in the North Sea, which is located to the west of the country, but the maturation of existing oil fields has led to plans for new development in the Arctic (off the Barents Sea). However, given that Norwegians have a high level of environmental consciousness, public opinion has been divided with respect to oil exploration in the Arctic region, and since the beginning of 2020, the government has been debating the issue of tightening regulations on new oil field development in the Arctic.²⁶ As for the fisheries industry, which is Norway's second-largest export industry, the country is trying to expand offshore aquaculture in the Arctic, as its coastal aquaculture conditions are approaching saturation. For example, the country provides subsidies to private companies that apply their oil mining technologies to the offshore aquaculture business in the Arctic.²⁷ Since China is an important destination for seafood exports, the country aims to conclude an FTA with China by the end of 2020. However, on the security front, Norway, like the US, is growing increasingly wary over the moves by Russia and China.²⁸

Greenland is one of the areas that sees the greatest potential for resource development with the receding of glaciers and ice sheets on its land caused by global warming. Since the local Greenlandic government is dependent on subsidies from Denmark for one-third of its budget, as it aims to become independent by 2035, it is facing the urgent task of achieving economic independence. Against this backdrop, China's state-owned enterprises have been aggressively investing in mineral resource development and infrastructure development in Greenland since around 2015. Denmark and the US (which has troops stationed at the Thule Air Base in Greenland) are expressing their concerns that such activities will lead to "debt-trap diplomacy."²⁹

The EU, meanwhile, had limited itself to indirect involvement in the Arctic, such as through the member states of the EU³⁰ and European Economic Area³¹ membership countries, which are members of the Arctic Council. However, in recent years, the EU has been showing its intention to engage in the Arctic more tangibly by, for example, emphasizing the importance of multilateral cooperation and compromise³², as it recognizes the growing interest in the Arctic even by countries that are not members of the Arctic Council. The EU relies on imports from Russia and Norway to meet 40% of its oil needs and 60% of its natural gas requirements.³³ This being the case, the EU has a considerable stake in the Arctic as the situation there relates closely with the stability of these supply sources.

²⁶ Nerijus Adomaitis, "Norway to set new limit for Arctic oil drilling," Reuters, February 4, 2020.

²⁷ It is worth noting that much of this aquaculture technology is actually provided by Chinese companies. (Fish Information & Services, "SalMar receives first automated off-shore aquaculture structure from China," June 5, 2017).

²⁸ Siri Gulliksen Tømmerbakke, "Norwegian Foreign Intelligence Services: China and Russia the Biggest Threats Against Norway," High North News, February 10, 2020.

²⁹ Hans Lucht, "Chinese investments in Greenland raise US concerns," DIIS POLICY BRIEF, November 20, 2018.

³⁰ Denmark, Finland, and Sweden

³¹ Norway and Iceland

³² European Political Strategy Centre, "Walking on Thin Ice," July 2019.

³³ European Commission, *EU energy in figures: Statistical pocketbook 2019*, 2019.

2-5 Japan

Japan has a long history of conducting observations and researches on the Arctic,³⁴ and its data is regarded highly by other countries from the perspectives of objectivity, accuracy, impartial attitude, and transparency.³⁵

In October 2015, the Japanese government formulated its first basic policy on the Arctic, entitled Japan's Arctic Policy, in which it stipulated the priority areas to be R&D, international cooperation, and sustainable development. Furthermore, in May 2018, the government issued the Third Basic Plan on Ocean Policy (approved by the Cabinet), in which it detailed the areas of focus more concretely, pointing to the potential of the Arctic, the importance of economic and commercial opportunities, and the need to enhance Japan's presence in the Arctic by offering solutions to global issues through the promotion of observation and research activities. Currently, Japanese companies are engaged in LNG development in the Arctic and LNG transportation using the Northeast Passage.

Japan does not have an EEZ or continental shelf in the area, and basically has no right to directly access resources in the Arctic sea area. Therefore, it is important for it to collaborate and coordinate with Arctic coastal countries to secure profits.³⁶ Japan has a lesser presence than China which is rapidly increasing investment in the Arctic. However, some countries feel threatened by China, and, instead, are counting on involvement in the Arctic by peaceful and neutral Japan. For example, Russia, which is keen on natural resource development and leveraging the Northeast Passage, is said to be looking to Japan for its financial and technological capabilities, while the US is hoping that Japan, as one of its allies, will invest in infrastructure in view of security concerns in the Arctic.³⁷ In addition, Japan and the Nordic countries, which get considerably closer geographically with the use of the Arctic shipping routes, have many shared values on issues such as environmental protection and protection of the rights of indigenous peoples,³⁸ suggesting that new opportunities for collaboration, for both the public and private sectors, are likely to emerge.

3. CONCLUSION

Global warming is causing a decrease in the sea ice and the melting of permafrost in the Arctic, and it is feared that it will affect not only the environment and ecosystem of the region but also the environment and climate of the entire planet. At the same time, many countries are looking to the Arctic as a new place for economic opportunities and are energizing their related efforts.

When Japanese companies do business in the Arctic, it is important for them to understand the political aspirations of Arctic states and their policies affected by those aspirations. In addition, considering that Japan's position in international relations regarding the Arctic could be affected by the political motives of non-Arctic states – especially China – the situation warrants close attention.

Foreign countries have a high regard for the objectivity and accuracy of Japan's scientific knowledge about the Arctic. Moreover, countries with political aspirations in the Arctic are not wary of Japan for its political neutrality and have a favorable view of Japan. Such a position is advantageous to the Japanese government and

³⁴ The National Institute of Polar Research, Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan Aerospace Exploration Agency (JAXA), Hokkaido University, and others have been involved in Arctic research. Among them, the National Institute of Polar Research has played a pivotal role in Arctic research. Its accomplishments include the establishment of an observation center in the Svalbard archipelago in Norway in 1991 and collaboration with the University of Alaska to set up a research center within the university in 1997.

³⁵ Hiroyuki Enomoto, *Dai 3-shō Kagaku gijutsu*, Korekara no Nihon no Hokkyoku seisaku no tenbō [Chapter 3: Science & Technology] Outlook for Japan's Arctic Policy, February 2020.

³⁶ National Institute for Defense Studies, "Chapter 2: Maintaining the Order in the Arctic Ocean: Cooperation and Confrontation among Coastal Nations," East Asian Strategic Review 2011, March 2011.

³⁷ Michael Green, et al., "The Arctic: A New Frontier for U.S.-Japan Cooperation," KKC International Platform, June 1, 2016.

³⁸ The Japanese government actively advocates respect for the lives of indigenous peoples, including in official government documents, whereas there is little political dictum of that nature coming out of China. (Timo Koivurova et al., "China in the Arctic; and the Opportunities and Challenges for Chinese-Finnish Arctic Co-operation," February 2019.)

Japanese companies in their efforts to expand their activities in the Arctic. Japan could also find opportunities to elevate its international presence, in terms of both the public and private sectors, through approaches that give consideration and contribute to the protection of the environment and the rights of the indigenous peoples in the Arctic.