THINK ARCTIC

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THE EASTERN DIMENSION OF INTERNATIONAL COOPERATION IN THE ARCTIC

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1. Arctic policy of Asian countries: China, Japan, South Korea, India, Singapore

The Arctic region has become one of the centres of international politics. Growing interest in the Arctic is also coming from Asian countries, far from the region at all. Concern for Arctic development is largely due to climate change in the region, which is much more rapid above the Arctic Circle than the average on the planet. Climate change, especially melting of Arctic glaciers, has a significant impact on the economic activities of the Asian countries. At the same time, they consider the economic potential of the Arctic as attractive: in addition to exploring the rapidly changing Arctic ecosystems, Asian countries are interested in exploiting the resource and transportation opportunities of the region[1]. The Asian states with the strongest interest in the Arctic region include China, Japan, South Korea, Singapore, and India. While there is a general similarity between the main groups of interests, the specific goals of the Asian states in the Arctic are determined by their national interests.

China's Arctic policy

China has long sought to participate in the management of the Arctic. China's official Arctic Strategy emphasises that the country cannot ignore natural changes in the region that affect various sectors of the Chinese economy: agriculture, forestry, and maritime industries[2]. In addition to climate change research, China is interested in the Arctic because of the prospects of diversifying energy supplies and exploiting new Arctic transportation routes[3].

The reason for the increased interest in the region's transport potential is the high dependence of the Chinese economy on international trade and shipping. About half of China's economy is critically dependent on maritime exports and imports[4], including trade with the EU.

For economic and research purposes, China seeks to expand its technical capabilities in the region, in particular by developing its own icebreaker fleet[5]. For example, one of the world's largest non-nuclear icebreakers Xuelong (雪龙, Xue Long), owned by China, has made several scientific expeditions in the Arctic, and a second icebreaking research vessel, Xuelong 2, is also currently in operation[6].

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1 Holroyd C. East Asia (Japan, South Korea and China) and the Arctic // The Palgrave Handbook of Arctic Policy and Politics / eds. K. S. Coates, C. Holroyd. Cham: Springer International Publishing, 2020. P. 319-332.

2 China in the Arctic. Policies, Strategies and Opportunities for Alaska // Roscongress. 24.09.2020. URL: https://roscongress.org/materials/kitay-v-arktike-politika-strategii-i-vozmozhnosti-dlya-alyaski/ (accessed 26.04.2022)

3 Leksyutina Y. V. China and India in the Arctic: interests, strategies and cooperation with Russia // Oikumena. Regional Studies. 2019. №4. P. 40-48.

4 Hong N. China's Interests in the Arctic: Opportunities & Challenges // ICAS, 2018. URL: https://chinaus-icas.org/wp-content/uploads/2018/03/2018.03.06-China-Arctic-Report.pdf (accessed 01.08.2022)

5 Lexiutina Ya. V. China and India...

6 Chinese icebreaker Xuelong-2 departed for the second expedition to the Arctic // TASS 12.07.2021. URL: https://nauka. tass. ru/nauka/11879883 (accessed 09.08.2022)

China calls itself a "Near-Arctic" state (近北极国家) and views the region as an "international space" where countries whose territories are not located beyond the Polar Circle can participate in the collective management of the Arctic due to the global nature of the region's problems[7]. In this regard, China's participation in the international governance of the region has become an important aspect of its Arctic policy: since 2007, China has acted as an ad-hoc observer of the Arctic Council, and in 2013 it was granted the status of its official observer[8]. Although China establishes multilateral partnerships in the Arctic, a characteristic feature of Chinese diplomacy is the emphasis on maintaining effective bilateral ties with Arctic countries.

China's interests in the Arctic are most succinctly formulated in the "White Paper" adopted in 2018[9], which contains the basis of the state's Arctic policy: 1) understand, 2) protect, 3) develop the region and 4) participate in its management to ensure the common interests of the international community in sustainable development of the Arctic. The areas of China's Arctic policy include: deepening the study of the Arctic region, environmental protection and combating climate change in the Arctic, rational use of Arctic resources in accordance with international law, active participation in the management of the Arctic and international cooperation, promoting peace and stability in the Arctic. In doing so, China points to the importance of the special status of the Arctic, approved by the 1982 UN Convention on the Law of the Sea (UNCLOS) and the 1920 Treaty of Spitsbergen, which lay the foundation for the international legal regime in the Arctic. China's Arctic strategy also defines the principles of successful achievement of the region's goals: respect, cooperation, win-win result, and sustainability.

Japan's Arctic Policy

Japan, like China, has long been building up its presence in the Arctic. Its policy in the region is based on three pillars: business, diplomacy, and science[10]. The first pillar is Japan's interest in the region's shipping routes as well as its mineral and marine resources. The diplomacy pillar refers not only to international cooperation in the region, but also to ensuring the country's own national security.

First and foremost, Japan remains one of the maritime powers with a strong interest in the development of maritime trade routes around the world, and in particular in the Arctic[11]. In the long term, the Northern Sea Route appears to Japan as a promising transport route, both due to its

7 Full text: China's Arctic Policy // The State Council of the People's Republic of China. URL: http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm (accessed 26.04.2022)

8 Hong N. Op. cit.

9 Full text: China's Arctic Policy // The State Council of the People's Republic of China. URL: http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm (accessed 26.04.2022)

10 Ohnishi F. Does the Sun also Rise in the Arctic? Three Pillars of Japanese Arctic Policy // Arctic Yearbook. 2015. URL: https://arcticyearbook. com/arctic-yearbook/2015/2015/2015-commentaries/156-does-the-sun-also-rise-in-the-arctic-three-pillars-of-japan-s-arctic-policy (accessed 09.08.2022)

11 Streltsov D. V. Japanese Policy in the Arctic // Comparative Politics. 2017. №1. P. 93-103.

relatively shorter length (the route to Europe through the NSR is 40% shorter than the sea route through the Suez Canal) and for security reasons. Japan's main foreign trade route passes through the South China Sea region, which has long been the subject of disputes over the international legal regime of the sea between ASEAN and China[12]. The current aggravation of the political situation in the region due to the situation in Taiwan once again emphasizes the relevance of Japan's foreign trade diversification strategy.

Arctic mineral resources are also one of Japan's key areas of national interest in the context of energy security and diversification of energy imports: 80% of the oil imported by the state comes through the unsafe southern route via the Middle East, so Japan seeks to diversify imports using the Northern Sea Route, especially liquefied natural gas (LNG) from Russia[13]. The importance of diversification of mineral sources supply has grown since the forced shutdown of the country's nuclear power plants in the wake of the Fukushima nuclear disaster in 2011.

Japan is also interested in the marine resources of the region[14]. Whaling is especially vital for the Japanese side, since whale meat is the traditional national food of Japan[15].

Japan seeks to ensure its national security in the region – it largely depends on the changing strategic balance of power in the Arctic, as well as the possibility of conflicts between individual countries when the number of projects and expansion of the Northern Sea Route increases[16]. In this regard, international cooperation in the Arctic is seen by Japan as the most important component of ensuring security in the region, which reflects the second pillar of the state's Arctic policy: diplomacy. Japan views the region as a global asset, the interaction within which should be beneficial to all actors interested in it[17]. Therefore, Japan's Arctic policy is based on the concept of "commons", which implies the recognition by all states, not only Arctic ones, of the norms and practices in the region in accordance with international law.

Japan's interest in science and technology is based on its accumulated scientific and technological potential. Japan seeks to take a leading position in ensuring the sustainable development of the Arctic. As a signatory of the Paris Agreement, Japan pays special attention to combating and adapting to climate change in the region.

Japan's main interests are formulated in the document "Japan's Arctic Policy" of 2015. Earlier the directions of the state's Arctic policy were reflected in the "Basic Plan on Ocean Policy" (2013), adopted immediately after Japan received the official status of an observer country in the Arctic Council. Japan's priorities in the Arctic include: global environmental problems, Arctic indigenous

12 Ibid
13 Sinha U. K. Gupta A. The Arctic and India: Strategic Awareness and Scientific Engagement. 2014. Vol. 38. № 6. P. 872-885.
14 Doroshev A. Y. Arctic policy of Japan: achievements, challenges, and prospects for further progress // Oikumena. Regional Studies. 2018. №3. P. 154-162.
15 Ibid
16 Streltsov D.V. Op. cit.
17 Ibid

peoples, science and technology, rule of law and international cooperation, the Arctic Motorway, mineral resource extraction, and national security.

South Korea's Arctic Policy

South Korea, like other south-eastern countries, has long demonstrated its interest in the region. At the same time, the country seeks to become the most "safe" and "predictable" partner of the Arctic states[18].

Similar to other states, the Republic of Korea's policy in the Arctic is determined by the prospects for the development of the region's shipping routes, which are important both economically and in terms of national security, the need for growth in the shipbuilding industry, both in construction of Arctic-class ships and marine equipment, and the possibility of exploiting the region's mineral resources.

For political and geographic reasons (South Korea is cut off from mainland Europe by the DPRK), the Republic of Korea is regarded more as an island state, for which maritime trade is the basis of the country's economy functioning: the share of shipping in the country's total trade is about 99.7%[19]. Like Japan and China, South Korea sees the Northern Sea Route as an opportunity to reduce costs due to the shorter sea route compared to traditional routes, as well as an opportunity to avoid insecure areas in the old route zones[20].

In addition, South Korea intends to remain a leader in the shipping industry. It is especially important for the state to strengthen and not to lose its positions on the world markets in the sphere of building ice-class ships[21]. The world's largest shipbuilding companies are Korean Hyundai Heavy Industries (HHI), Samsung Heavy Industries (SHI), and Daewoo Shipbuilding and Marine Engineering (DSME).

South Korea's interests in the Arctic region are partly reflected in its first Arctic strategy, adopted in 2013 after it gained an official observer status in the Arctic Council. At that time, South Korea was the first Asian country to adopt the Arctic Strategy, the "Master Plan for Arctic Policy", which established the state's main priorities in the region: stable international cooperation, increasing scientific activities and research, promoting business in the Arctic and developing the institutional framework[22]. A large part of the document was devoted specifically to scientific research and cooperation with states in this area, indicating the predominantly research-oriented nature of South

18 South Korea enters the fight for Arctic resources // Helion Publishing House. URL: https://helion-ltd.ru/seeking-a-bigger-role/ (accessed 20.07.2022)

19 Epshtein V. A., Tahaeva A. R. Arctic policy of South Korea // Society: Politics, Economics, Law. 2018. №7. Vol. 60.

20 Ibid

21 Ibid

22 Akimova V. G. Arctic policy of the Republic of Korea through the prism of middle power diplomacy // Korean studies in Russia: direction and development. 2021. №1. P. 62-67.

Korea's Arctic policy[23]. A second Arctic Master Plan to 2022 was adopted in 2018 based on the results of the first. Unlike the 2013 document, the second plan emphasises multilateral cooperation in the Arctic. Moreover, it highlights four policy directions for South Korea in the new period in the region: expanding economic opportunities for more actors and increasing their resilience, participating in the governance of the Arctic as a responsible observer, conducting scientific research to solve global problems, and building capacity to address Arctic challenges[24].

Singapore's Arctic Policy

Singapore's interest in the Arctic, despite its very remote location from the region, is not accidental. First of all, as an island state whose area is very limited, it is highly vulnerable to rising sea levels, which depend on melting ice in the Arctic. For this reason, Singapore is interested in managing the Arctic region in a sustainable and responsible manner[25]. Other priorities of Singapore's Arctic policy are the shipping capabilities of the region, as well as the prospects of transport infrastructure development. In addition, Singapore is interested in using the region's mineral resources and supplying its own technology and equipment to the Arctic.

Unlike East Asian countries, for Singapore the development of the Northern Sea Route entails certain risks: increasing Arctic cargo traffic potentially threatens the competitiveness of traditional southern European-Asian shipping routes through Singapore, which could lead to a decline in government revenues. Participation in Arctic governance in this regard appears to be an important mechanism for monitoring and influencing key processes and the international legal framework for the development of international maritime transport[26].

It is worth noting Singapore's experience in developing infrastructure for maritime routes. Expertise in the creation and development of ports, management of maritime processes, as well as the organisation of measures to prevent oil spills can be useful for the safe expansion of the Northern Sea Route[27]. Increased maritime traffic along this route may potentially boost demand for Singapore's shipbuilding industry. Singapore's offshore construction sector is particularly developed. Singaporean companies (e. g. Keppel and Sembcorp) were among the first in Asia to start building icebreakers suitable for Arctic shipping[28].

Singapore is also interested in Arctic minerals, as it does not have its own fuel and raw material base. Oil imports from the Middle East have certain risks associated with unsafe maritime

23 Kim M., Marchenkov M. L. The Republic of Korea in the Arctic region: from the theoretical formulation of policy to its practical implementation // The Arctic and the North. 2019. № 37. P. 69-81.
24 Ibid
25 Dershchuk A. Singapore's Interests in the Arctic // RIAC. URL: https://russiancouncil.ru/blogs/arctic/2326/ (accessed 10.08.2022)
26 Zhuravel V. P., Danilov A. P. Singapore on its way to the Arctic // The Arctic and the North. 2016. № 24. P. 145-154.
27 Ibid
28 Ibid

routes[29]. In this case, the Arctic appears to be a region for the country, from which oil imports are important for increasing the volume in the oil refining industry developed in the country[30].

Unlike China, Japan and South Korea, Singapore's policy is more focused on the use of its own technologies in the region, including mineral resources extraction, as well as the development of the Northern Sea Route and shipping[31]. Since Singapore owns 70% of the world market of offshore drilling rigs, a developed oil production industry and 2/3 of the market of floating rigs for oil production, storage and offloading, the export of equipment, technologies, dissemination of operational practices of process management to the Arctic may be economically beneficial for Singapore[32].

India's Arctic Policy

India was granted official observer status in the Arctic Council in 2013 together with other Asian countries. According to the country's leadership, the growing interest in the region from a large number of actors predetermines the need to strengthen India's role in Arctic governance, given the growing involvement of other Asian countries in the Arctic, in particular China. India's key priorities in the Arctic region are climate change, economic and transport potential, and scientific research[33]. As for Singapore, the development of the Northern Sea Route entails certain risks for India, while the reorientation of the Indian Ocean shipping lanes may reduce India's political and economic importance[34].

The Indian government is particularly concerned about climate change in the Arctic, as it entails melting glaciers and directly affects sea levels and coastlines of landlocked states, as well as weather patterns[35]. In addition, the subject of research by Indian scientists has long been the relationship of monsoon rains occurring in the country to the Arctic climate[36]. This seems to be important because monsoon rains in India are one of the serious problems for agriculture.

As an energy-deficient country, India is greatly interested in the Arctic resources[37], which are necessary to maintain rapid economic growth, as well as the prospects of expanding transport routes. In addition, India's policy in the Arctic is aimed at developing human capital in the region and attracting its own specialists to business projects in the Arctic[38].

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29 Zolotukhin I. N., Tumanov Yu. V. Arctic azimuth of a tropical country // Oikumena. Regional Studies. 2016. №1. Vol. 36. P. 145-158.
30 Zhuravel V. P., Danilov A. P. Op. cit.
31 Ibid
32 Zolotukhin I. N., Tumanov Yu. V. Op. cit.
33 India and the Arctic // Ministry of Foreign Affairs. URL: https://mea. gov. in/in-focus-article. htm?21812/India+and+the+Arctic (accessed 10.08.2022)
34 Lunev S. India rushes to the Arctic // RSMD. 2.04.2012. URL: http://russiancouncil. ru/analytics-and-comments/analytics/indiya-ustremilas-v-arktiku/ (accessed 10.08.2022)
35 Sinha U. K., Gupta A. Op. cit.
36 Shahumyan T. L., Zhuravel V. P. India and the Arctic: Environmental Protection, Economics and Policy // The Arctic and the North. 2016. №24. P. 175-184.
37 Sinha U. K., Gupta A. Op. cit.
38 Ibid

The Indian Arctic Strategy adopted in 2022 reinforces the above-mentioned areas of activity in the Arctic, as well as the need to strengthen international partnerships and build national capacities in the region. Separately, India's strategy for the Arctic mentions space research and the development of the technological base for carrying it out[39].

2. Asian cooperation with the Arctic states in bilateral and multilateral formats

2.1 Multilateral cooperation formats with the Arctic states

The non-Arctic states of South and Southeast Asia, although not directly connected to the Arctic region, are gradually getting involved in its development and management, both on a multilateral and bilateral basis. The Arctic Council, the International Arctic Science Committee, the University of the Arctic, the Pacific Arctic Group, and the Asian Polar Science Forum are significant platforms for international cooperation on Arctic development issues. It is scientific cooperation that appears to be the key channel of communication between the Asian countries and the Arctic states on a multilateral basis.

Cooperation in Arctic Council Working Groups and the Arctic Economic Council

In 2013, China, Japan, India, the Republic of Korea and Singapore joined the Arctic Council as observers. So far, they (with the exception of India and Singapore) are participating in the Sustaining Arctic observing networks project[40], which is being implemented in the Arctic Monitoring and Assessment Program (AMAP) working group and is aimed at monitoring changes in the Arctic region with a focus on climate processes. In this working group, China participates in the project on assessing the impact of climate factors on the Arctic climate, air quality and human health (Impacts of Short-lived Climate Forcers on Arctic Climate, Air Quality and Human Health[41]).

Also, since 2013. Japan, China, India, the Republic of Korea, and Singapore in the framework of the working group on the Conservation of Arctic Flora and Fauna (CAFF) support the project Actions for Arctic biodiversity[42], aimed at studying the drivers of animal migration in the Arctic region, as well as at developing recommendations for biodiversity conservation (SDG 13 – Climate Action, SDG 14 – Life Below Water, SDG 15 – Life on Land). One of the objectives of this project is also to raise public awareness of the problem of environmental degradation and changes in Arctic ecosystems. In addition, since 2013, these countries have been participating in the Arctic Migratory

39 India's Arctic Policy // Government of India. 2022.
URL: https://www. moes. gov. in/sites/default/files/2022-03/compressed-SINGLE-PAGE-ENGLISH. pdf (accessed 10.08.2022)

40 Sustaining Arctic Observing Networks // Arctic Observing. URL: https://www. arcticobserving. org (accessed 10.08.2022)

41 Impacts of Short-lived Climate Forcers on Arctic Climate, Air Quality and Human Health. Summary for Policy Makers // Arctic Council.
URL: https://oaarchive. arctic-council. org/handle/11374/2609 (accessed 26.07.2022)

42 Actions for Arctic Biodiversity 2013-2021 // Conservation of Arctic Flora and Fauna.
URL: https://www. caff. is/actions-for-arctic-biodiversity-2013-2021 (accessed 26.07.2022)

Birds Initiative[43]. The project studies migration patterns of Arctic birds and offers recommendations for improving their habitat conditions (SDG 15 – Life on Land). One of the project workshops was held in China in 2018.

Since 2015. India and Japan participate in the Arctic Council Framework for Action, aimed at enhancing the reduction of black carbon and methane emissions[44]. For this purpose, every two years, the acceding states must submit national reports on the countries' implemented and planned measures to reduce methane and black carbon emissions, on the results of the inventory of these pollutants, and on projected emissions[45].

In addition to participating in the activities of the Arctic Council as official observers, representatives of Chinese, South Korean, and Japanese companies take part in events and seminars of the Arctic Economic Council, where the commercial development of the region is discussed. Particular attention is paid to the prospects of the Northern Sea Route[46], the development of shipping and the resource potential of the Arctic.

Cooperation in scientific research

The interest of Asian countries in the scientific development of the Arctic region[47] is manifested in their active participation in the activities of scientific centres and organisations. For example, Japan's involvement in the management and development of the Arctic region dates back more than 100 years; it was one of 14 countries that initially recognized Spitsbergen as Norway's jurisdiction in 1920, and in the second half of the 20th century the National Institute of Polar Research[48], the Arctic Environmental Research Centre and the Japan Agency for Marine-Earth Science and Technology were established. The Republic of Korea began polar research from the Antarctic; the Korean Arctic Science Committee was founded in 2001, and the Korean Polar Research Institute in Inchon in 2004. India's Arctic research began with the founding of the National Institute of Ocean Technology in 1993. As for China, it stepped up its Arctic research activities in the late 1990s by

43 Arctic Migratory Birds Initiative // Conservation of Arctic Flora and Fauna. URL: https://www. caff. is/arctic-migratory-birds-initiative-ambi (accessed 26.07.2022)

44 Black Carbon and Methane // Arctic Council. URL: https://www. arctic-council. org/about/task-expert/egbcm/ (accessed 26.07.2022)

45 Expert Group on Black Carbon and Methane // Arctic Council. 2017. URL: https://oaarchive. arctic-council. org/bitstream/handle/11374/1936/EGBCM_Executive_Summary_RU. pdf? sequence=10& isAllowed=y (accessed 26.07.2022)

46 Fostering Cooperation between Korea and the Arctic Economic Council // Arctic Economic Council. 2017. URL: https://arcticeconomiccouncil.com/news/fostering-cooperation-korea-arctic-economic-council/ (accessed 10.08.2022)
Promotion of the AEC in Tokyo // Arctic Economic Council. 18.04.2018. URL: https://arcticeconomiccouncil.com/news/promotion-of-the-aec-in-tokyo/ (accessed 10.08.2022)

47 Coates K. S., Holroyd, C. The Palgrave Handbook of Arctic Policy and Politics. Springer Publishing, 2017.
Ohnishi F. Does the Sun also Rise in the Arctic? Three Pillars of Japan's Arctic Policy // Arctic Yearbook. 2015. URL: https://arcticyearbook.com/arctic-yearbook/2015/2015/2015-commentaries/156-does-the-sun-also-rise-in-the-arctic-three-pillars-of-japan-s-arctic-policy (accessed 26.07.2022)

48 Promoting close collaboration for Arctic studies by Japanese and international researchers // National Institute for Polar Research. URL: https://www. nipr. ac. jp/english/collaborative_research/arctic. html (accessed 26.07.2022)

joining the International Arctic Science Committee and founding the China-Scandinavian Centre in 2013. The China-Nordic Arctic Research Centre[49], which is engaged in climate change research (SDG 13 – Climate Action), Arctic economic development, including navigation (SDG 12 – Responsible Consumption and Production), and brings together research centres from China (Shanghai Academy of International Studies, Tongji University Polar and Oceanic Research Centre), Denmark (Nordic Institute for Asian Studies), Norway (Fridtjof Nansen Institute, Polar Institute), Sweden (Polar Research Secretariat), and Finland (Arctic Centre). Singapore's leading Arctic research centres are the National University of Singapore, Nanyang Technological University and the Singapore Maritime Institute[50].

The University of the Arctic (UArctic), which unites institutes and scientific centres that study the Arctic region, cooperates with several centres in China (e.g., Chinese Academy of Meteorological Sciences, Chinese Environmental Research Institute, Institute of Polar Research of China, Harbin Institute of Technology), India (National Centre for Polar and Oceanic Research of the Indian Ministry of Land Affairs), Japan (Hokkaido University), Republic of Korea (Korean Maritime University, Korean Institute of Polar Research). **In total, about 20 scientific institutions of South and Southeast Asia are members of the University of the Arctic.**

An important platform for international cooperation in the Arctic is the **International Arctic Science Committee**, which promotes scientific dialogue in the Arctic by coordinating research on the cryosphere, lithosphere, hydrosphere, atmosphere, and social issues (SDG 13 – Climate Action, SDG 14 – Life Below Water, SDG 15 – Life on Land). Since 1991, Japan has been a member, and later China, India, and the Republic of Korea were included.

A separate site within the International Arctic Science Committee is the **Pacific Arctic Group,** which focuses on research on sea ice, the ocean, Arctic pollution, human capital development, and Arctic monitoring. Of the Asian countries, this group includes China, the Republic of Korea and Japan.

Another Asian platform that deals with the development of the Arctic region is **the Asian Polar Science Forum**, which, in addition to China, India, Japan, and South Korea, includes Malaysia, Thailand, and as observers the Philippines, Sri Lanka, Vietnam, and Indonesia. Several working groups have been created within this platform, focusing on research on land, glaciers, oceans, glaciers, logistics, and planetology. The creation of new formats for managing the Arctic beyond its borders demonstrates the growing importance of this region in the international arena.

Also, since 2011, with the support of the Korea Maritime Institute and the East-West Centre, **the** annual **North Pacific Arctic Conference** is held**,** which is attended by experts from both

[49] Arctic Migratory Birds Initiative // Conservation of Arctic Flora and Fauna. URL: https://www. caff. is/arctic-migratory-birds-initiative-ambi (accessed 26.07.2022)

[50] Black Carbon and Methane // Arctic Council. URL: https://www. arctic-council. org/about/task-expert/egbcm/ (accessed 26.07.2022)

Arctic (Russia, Canada, USA) and non-Arctic states (China, Japan, Republic of Korea). This platform discusses current issues and problems in the development of the Arctic region and ways to overcome them.

To deepen research in the Arctic, and to confirm China's growing interest in the region, **the Sino-Scandinavian Arctic Research Centre (SNARC)** was founded in 2013 to study climate change (SDG 13 – Climate Action), sustainable shipping, and opportunities for economic development in the region as a whole (SDG 12 – Responsible Consumption and Production). This site brings together institutes from China as well as Norway, Denmark, Sweden, and Finland.

Together with European institutions with the **support of the Maria Sklodowska-Curie Fellowship Program, Japanese scientists conducted scientific research on the state of the Arctic** (INCO WP 2018-2020 E-JADE and JENNIFER projects)[51].

Cooperation in the field of shipping

An important international step in the Arctic region's governance was the signing in 2018 by the Arctic countries, as well as China, Japan, the Republic of Korea in Ilulissat of the agreement **"On the Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean[52]",** under which the five Arctic states will not initiate commercial fishing in the Arctic region until there is sufficient information about the resource stocks and ecosystem of these areas, which demonstrates a "precautionary approach" for the implementation SDG 12 (Responsible Consumption and Production) for the rational use of resources.

In addition, along with states whose ships sail in the Arctic and Southern Oceans, including those of Russia, China, Japan and Singapore have ratified the Polar Code of the International Maritime Organisation. The rules established by the Code are aimed at improving the safety of maritime transportation itself and protecting the environment (SDG 12 – Responsible Consumption and Production, SDG 14 – Life Below Water).

Moreover, China, Japan and South Korea are organising **high-level trilateral discussions on the development of the Arctic region.** This format was initiated in 2015 at the trilateral summit with the participation of these countries, which takes place every three years and is dedicated to maintaining trilateral cooperation between the states and the development of their economies. Asian countries also take an active part in international summits and conferences implemented by the Arctic states, in particular Arctic Circle (Iceland), Arctic Frontiers (Norway)[53].

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51 Hoschek M. The EU-Japanese sustainable 2050 initiatives for the new silk road // European Science. 2019. URL: http://european-science. sk/storage/journals/essays/2-2019/322.pdf (accessed 10.08.2022)

52 Agreement on Prevention of Unregulated Fishing in the High Seas in the Central Arctic Ocean (entered into force for the Russian Federation on June 25, 2021) // Official Internet portal of legal information. URL: http://publication.pravo.gov.ru/Document/View/0001202106280035 (accessed 25.07.2022)

53 Jin D., Seo W., Lee S. Arctic Policy of the Republic of Korea // Ocean and Coastal Law Journal. 2017. Vol. 22. № 1. URL: https://digitalcommons. mainelaw. maine. edu/oclj/vol22/iss1/7/ (accessed 10.08.2022)

2.2 Bilateral cooperation formats with the Arctic states

When considering bilateral cooperation between the Asian states in the field of sustainable development of the Arctic region, it is possible to identify common areas characteristic of most of the countries under consideration. These include science, icebreaker construction, renewable energy, gas and oil industries, and infrastructure projects.

China's cooperation with the Arctic states

Cooperation between China and the Arctic states is actively pursued in areas such as oil and gas production, infrastructure, telecommunications, and renewable energy and research, with bilateral partnerships being a priority.

For example, in 2004, the first Chinese polar station "Huanghe" was opened on Spitsbergen[54], followed by a Sino-Norwegian dialogue on Arctic issues. In 2018, China National Petroleum Corporation (CNPC) and Norway's Equinor signed a cooperation agreement on gas and oil exploration and carbon capture technologies[55].

In 2018, the first Chinese icebreaker of its own production, the Northern Dragon 2, was built according to the design of the Finnish company Aker Arctic. Further, there was an agreement between the countries to create an Arctic research centre and exchange data in the space observatory[56]. In addition, a number of Chinese companies (China COSCO Shipping Co., Ltd. and China Railway International Group) are involved in the construction of the Helsinki-Tallinn tunnel[57].

Cooperation between China and Iceland has been very active in recent years, based on the Memorandum of Understanding and Cooperation in Marine and Polar Research and Technology and the Memorandum of Understanding on Geothermal and Geoscientific Cooperation of 2012[58]. A free trade agreement was signed between the countries in 2013, so their trade increased from $401 million to $712 million from 2014 to 2018. As of 2019, the agreement was expanded to include exports of aquaculture products, particularly farmed salmon[59]. The scientific dialogue between the countries is also important: In 2018. China and Iceland have established a joint scientific Arctic observatory in Akureyri, Iceland, where research on solar-terrestrial relations, climate change and biodiversity conservation is conducted.

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54 Konyshev V. N., Sergunin A. A. Strategies of Foreign States in the Arctic: General and Particular // RIAC. 2013. URL: https://russiancouncil.ru/common/upload/Arctic%20Anthology%20Vol%201-2.pdf (accessed 1.03.2022)

55 Ryzhova A. On the prospects for China'cooperation with the Arctic countries // IOP Conference Series: Earth and Environmental Science. IOP Publishing. 2020. Vol. 539. №. 1. P. 1-8.

56 Ibid

57 Holz H., Taffer A., Miller A., DeThomas B. Exploring the Relationship between China's Investment in the Arctic and Its National Strategy // CAN. 2022. URL: https://www. cna. org/reports/2022/01/exploring-the-relationship-between-chinas-investment-in-the-arctic-and-its-national-strategy (accessed 25.07.2022)

58 Nikolaev N. A. Cooperation between China and Iceland in the Arctic // Arctic XXI century. Humanities. 2016. NO.2. Vol. 8. P. 57-66.

59 Humpert F.M. Icelandic-Norwegian Joint Venture 'Arctic Fish' To Begin Selling Salmon in China // High North News. 25.09.2019. URL: https://www.highnorthnews.com/en/icelandic-norwegian-joint-venture-arctic-fish-begin-selling-salmon-china (accessed 26.04.2022)

China and Sweden also cooperate in science. For example, in 2016. The Remote Sensing and Digital Earth Institute of the Chinese Academy of Sciences established a remote sensing ground station at the North Pole in Kiruna, Sweden's northernmost city[60]. The number of Chinese universities participating in the Royal Swedish University of Technology's student exchange program is growing every year[61]. In addition, China is investing in renewable energy in Sweden. For example, the state-owned Chinese company China General Nuclear Power Group owns assets in six Swedish wind power projects, and it has a 75% stake in the future European onshore wind farm project Markbygden Ett[62].

China's cooperation with Denmark is rather limited. In 2018, Australian exploration company Greenland Minerals and Chinese Shenghe Resources signed a memorandum of understanding to collaborate on a $1.4 billion project in Greenland's Kvanefjeld field, but the Danish government did not approve expanded Chinese investment because of fears of rapid Chinese capital penetration in the region[63]. For this reason, Chinese companies were refused permission to build airports in Greenland[64].

China and the U.S. are gradually deepening their cooperation in the Arctic in the gas sector, despite the current foreign policy controversy. For example, in 2017, Alaska Gasline Development Corporation, Sinopec, The Bank of China and China Investment Corporation signed an agreement on China's participation in a project to produce, liquefy and transport gas from the North Slope to national and international markets[65]. China is gradually establishing partnerships with Canada as well. For example, the Australian company MMG Ltd, 68% of which is owned by China Minmetals Corporation, owns copper and zinc deposits in Nunavut[66].

Japan's cooperation with the Arctic states

Japan's cooperation with Arctic countries is the most advanced in the field of science. Japan's National Institute for Polar Research (NIPR) has been cooperating with the Finnish Meteorological

60 Holz H., Taffer A., Miller A., DeThomas B. Op. cit.

61 Vargö L. Country-specific perspectives on Nordic-Chinese relations: A Swedish Perspective // Nordic-China Cooperation: Challenges and Opportunities / Ed. by A. B. Forsby. University of Copenhagen. The Fudan-European Center for China Studies.Nordic Institute of Asian Studies. 2019. № 52. P. 101-108.

62 Duxbury C. Chinese wind farm investments stoke concerns in Sweden // Politico. 26.11.2021. URL: https://www.politico.eu/article/chinese-wind-farm-investments-stoke-concerns-in-sweden/ (accessed 26.04.2022)

63 Koivurova T. et al. China in the Arctic; and the Opportunities and Challenges for Chinese-Finnish Arctic Cooperation // Finnish Government. 2019. URL: http://urn.fi/URN:ISBN:978-952-287-636-2 (accessed 11.04.2022)
Bowman L., Xu Q. China in the Arctic // Center for Arctic Policy Studies, 2020. 24 pp.

64 Ryzhova A. On the prospects for China'cooperation with the Arctic countries // IOP Conference Series: Earth and Environmental Science. IOP Publishing. 2020. Vol. 539. №. 1. P. 1-8.

65 Passut C. Alaska, Chinese Firms Extend Negotiations for LNG Export Project // Natural Gas. Intelligence. 4.01.2019. URL: https://www.naturalgasintel.com/alaska-chinese-firms-extend-negotiations-for-lng-export-project/ (accessed 11.04.2022)

66 Izok Corridor // MMG. Development Projects. URL: https://www.mmg.com/our-business/development-projects/ (accessed 10.04.2022)

Institute (FMI) since 2016 on a range of issues, including climate change in the Arctic[67]. Japan has carried out projects with Finland in several areas at once: fact-finding missions in 2014 and 2015 in the energy and shipping sectors[68]. Japan's relationship with Canada also involves research. For example, in 2019, a seminar on Japan-Canada cooperation in the Arctic was held as a part of the Canadian High Arctic Research Station Campus[69]. Japan's AERC, together with the Norwegian Polar Research Institute, opened the New Ålesund Polar Observatory on Spitsbergen Island in 1991.

Cooperation of the Republic of Korea with the Arctic states

South Korea seeks to establish a dialogue with the Arctic Five countries. For example, since 2002, the Korean research station "Dasan" has been operating on Norwegian territory[70]. In addition, in 2012, Norway and South Korea signed a Memorandum of Understanding, which initiated closer cooperation between the countries in the field of maritime communications[71]. The memorandum, supported by the Ministry of Maritime Affairs and Fisheries of the Republic of Korea and the Norwegian Ministry of Foreign Affairs, was followed by a joint research project on the Northern Sea Route and the modelling of the Arctic transportation system. In addition, South Korea is holding bilateral consultations with Denmark, Iceland, Canada, Russia, Norway and Finland[72] on the development of transport routes in the Arctic.

India's cooperation with the Arctic states

On a bilateral basis, India most actively cooperates with Norway and Denmark, and it has partnerships with Russia as well. For example, projects with Norway are primarily in the field of science. The first Indian research expedition began in Norway in 2007 and the Himadri Indian research station on Spitsbergen was launched in 2008[73]. India is also a member of the International Svalbard Observing System (SIOS). Joint Danish-Indian projects focus on climate change. A Joint Commission

67 Joint Press Release on the 6th Meeting of the Japan-Finland Joint Committee on Cooperation in Science and Technology (Co-chairs' Summary) // Ministry of Foreign Affairs of Japan. 2016. URL: https://www. mofa. go. jp/files/000138362.pdf http://european-science. sk/storage/journals/essays/2-2019/322.pdf (accessed 10.08.2022)

68 Broad Finnish-Japanese cooperation in the Arctic // High North News. 2016. URL: https://www. highnorthnews. com/en/broad-finnish-japanese-cooperation-arctic#:~:text=Following%20a%20summit%20meeting%20between,relationship%20across%20the%20Arctic%20region (accessed 10.08.2022)

69 Canada-Japan Future Collaboration Workshop at CHARS // Arctic Challenge for Sustainability. URL: https://www. nipr. ac. jp/arcs/blog/en/2019/07/CHARSworkshop. html (accessed 10.08.2022)

70 Arctic Policy of the Republic of Korea // Arctic Portal. URL: http://library. arcticportal. org/1902/1/Arctic_Policy_of_the_Republic_of_Korea. pdf (accessed 10.08.2022)

71 Memorandum of Understanding between the Ministry of Education and Research of the Kingdom of Norway and the Ministry of Science and ICT of the Republic of Korea on scientific and technological cooperation. URL: https://www. regjeringen. no/contentassets/b78d0475ee96495da69a8f584bb8f496/mou-sor-korea-norge-vitenskap-og-teknologi-l1864201.pdf (accessed 10.08.2022)

72 Kim M., Marchenkov M. L. The Republic of Korea in the Arctic region: from the theoretical formulation of policy to its practical implementation // Political Processes and Institutions. The Arctic and the North. 2019. № 37. P. 69-81.

73 Himadri station // National Center for Polar and Ocean Research. URL: https://ncpor.res.in/app/webroot/pages/view/340-himadri-station (accessed 1.03.2022)

for Cooperation has been established between the countries[74], whose working groups will address the challenges of achieving sustainable economic growth, creating jobs and strengthening partnerships to achieve the Sustainable Development Goals and address global climate change[75]. In this regard, in 2020, the countries entered into the Green Strategic Partnership[76] on cooperation in the fields of green technology, renewable energy, pollution control and waste management (SDG 13 – Climate Action, SDG 17 – Partnerships for Sustainable Development).

Singapore's cooperation with the Arctic states

The main channel of Singapore's penetration into the Arctic region is technology, such as scientific, managerial, which allows Singapore to build bilateral relations. For example, a large Singaporean conglomerate Keppel Corporation, specialising in the production of offshore drilling rigs for deepwater oil and gas production, together with the U.S. company ConocoPhillips, in 2012 announced the development of a joint rig for drilling on the Arctic Ocean shelf[77]. Also, the Singapore company ST Engineering received a contract from the U.S. Coast Guard for the construction of an icebreaker, with a total project value of $746 million. The facility is scheduled to be transferred to a U.S. base in 2024.[78] In 2021, Keppel Corporation was announced that it will collaborate with the Finnish company Norsepower on shipping with carbon footprint minimising technologies, in particular the Singaporean company will be involved in the creation and further installation of rotor sails[79]. In addition, in 2022 between Keppel Corporation and the Norwegian company Fred. Olsen Renewables AS (FORAS) entered into a cooperation agreement for wind power generation[80]. Singapore is gradually establishing scientific contacts as well. Currently, memoranda of understanding have been signed between the National University of Singapore, the University of Alaska (Fairbanks) and the Arctic University of Norway (Tromsø). In 2017, Singapore hosted the Arctic Frontiers Forum, which discussed geopolitical, environmental and economic issues in the region, as well as opportunities for achieving the Sustainable Development Goals[81].

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74 Green Strategic Partnership // Ministry of Foreign Affairs of Denmark. 2021. URL: https://indien. um. dk/en/denmark-in-india/green-strategic-partnership (accessed 10.08.2022)

75 Ibid

76 Ibid

77 Keppel, ConocoPhillips Design First Jackup Rig for Arctic Offshore // Offshore Energy. 2012. URL: https://www. offshore-energy. biz/keppel-conocophillips-design-first-jackup-rig-for-arctic-offshore/ (accessed 10.08.2022)

78 Singapore wants to develop the Arctic // GoArctic. 1.10.2021. URL: https://goarctic.ru/politics/singapur-khochet-zanyatsya-obustroystvom-arktiki/ (accessed 10.08.2022)

79 Offshore and marine arm continues to drag down Keppel Corp // Trade Winds. 23.04.2022. URL: https://www.tradewindsnews.com/shipyards/offshore-and-marine-arm-continues-to-drag-down-keppel-corp/2-1-1000126 (accessed 10.08.2022)

80 Keppel Corp to expand wind energy portfolio with $161 mln investment in Europe // Reuters. 13.07.2022. URL:https://www.reuters.com/business/energy/keppel-corp-expand-wind-energy-portfolio-with-161-mln-investment-europe-2022-07-13/ (accessed 10.08.2022)

81 Zolotukhin I. N., Tumanov Yu. V., Veselov I. R. Op. cit.

3. Asian countries' cooperation with Russia in the Arctic and prospects for cooperation

3.1 Russia's Cooperation with Asian Countries in the Sustainable Development of the Arctic Region

Over the past decade, the portfolio of joint projects between Russia and South and Southeast Asian countries in the Arctic has been significantly expanded to include such areas as liquefied natural gas production, oil production and exploration, transport and logistics development, environmental protection, and science and education. Nevertheless, due to the geopolitical crisis and secondary sanctions imposed by a bloc of Western countries, a number of joint projects between Russia and Japan, South Korea and Singapore have been frozen or postponed indefinitely.

Cooperation between Russia and China

To date, a fairly solid foundation for the partnership between Russia and China in the Arctic has been laid. For this purpose, in 2017, a **Russian-Chinese working group on cooperation in the Arctic** was established between the countries, which functions on a permanent basis. In continuation of the dialogue between China and Russia in the Arctic region, a Joint Statement on International Relations Entering a New Era and Global Sustainable Development was signed in 2022[82], which also touches upon strengthening bilateral cooperation between the countries in the Arctic and the development of polar routes.

LNG production

China is an important partner of Russia in liquefied natural gas production. Since 2013, China's CNPC (China National Petroleum Corporation) and Russia's NOVATEK have been jointly implementing the Yamal LNG project, during which a liquefaction plant, several LNG storage tanks, a sea port, and an airport were built. Then, in 2018, these companies began cooperating on the Arctic LNG-2 project. As a part of this project, three processing lines for LNG production will be built. "Arctic LNG-2" is characterised by the implementation of environmental practices, for example, an environmental and social action plan is under development, as well as an environmental and social management plan[83]. Both Yamal LNG and Arctic LNG-2 are being implemented in line with several UN Sustainable Development Goals. For example, the technology for building Arc7 reinforced ice-class tankers corresponds to SDG 9 – Industrialization, Innovation and Infrastructure, while the goals of energy efficiency improvement, development of carbon capture and storage technologies, partial transition to using hydrogen fuel and consideration of the Yamal Peninsula wind potential for subsequent installation of wind energy plants meet SDG 7 – Affordable and Clean Energy and SDG 13 – Climate Action.

82 Joint Statement of the Russian Federation and the People's Republic of China on International Relations Entering a New Era and Global Sustainable Development // Official Network Resources of the President of Russia.2022.URL: http://kremlin.ru/supplement/5770 (accessed 10.08.2022)

83 Arctic LNG 2 Project. Environmental, socio-economic and public health impact assessment // Arctic LNG-2. 2020. URL: https://arcticspg.ru/ustoychivoe-razvitie/raskrytie-informatsii/Arctic%20LNG%202%20NTS%20v3_final%20report_RUS_clean.pdf?ysclid=l28tk8rfa3 (accessed 27.04.2022)

Oil production and exploration

Cooperation between Russia and China is intensifying in oil production and exploration. In 2015, the Chinese company China Oilfield Services Limited (COSL) and Russian companies Magadanmorneftegaz and Lysyanskmorneftegaz signed an agreement to drill two exploration wells in the Sea of Okhotsk at the Magadan-1 and Lysyanskiy areas[84]. In addition, since 2017. PJSC Gazprom engages the Chinese drilling platform Nanhai VIII, owned by the Chinese company China Oilfield Services Limited, to drill wells and conduct exploration in the Kara Sea[85].

Transportation and Logistics

The partnership between China and Russia in the Arctic in the field of transport is developing as well. In 2015, the Russian Ministry for the Development of the Far East and the Arctic and China's State Committee for Development and Reform concluded an agreement on cooperation on **the Northern Sea Route[86],** and in 2017 **the maritime cooperation concept under the "One Belt, One Road[87]"** was published, according to which it was proposed to add a route through the Arctic Ocean to the "traditional" routes from China to Europe. In the same year, during the first loading of LNG at the Yamal plant, Vladimir Putin put forward a proposal on the possibility of combining the Northern Sea Route and the Silk Sea Route[88]. In 2019, NOVATEK, China COSCO SHIPPING Corporation Limited, Sovcomflot and the Silk Road Fund reached agreements to establish the Maritime Arctic Transport enterprise, which will specialize in building ice-class tankers and ensuring safe year-round transportation of LNG from Yamal LNG, Arctic LNG-2 and other NOVATEK projects (SDG 9 – Industrialization, Innovation and Infrastructure).

Science and Education

The most important area of interaction between Russia and China, where there is already a groundwork, is science and education. In 2019, the **Sino-Russian Arctic Research Centre** was established[89], which, by studying climatic, geological, biogeochemical processes, identifies the

84 China Oilfield Services Limited will drill as part of the Rosneft and Statoil project in the Sea of Okhotsk // Oil and Capital. 2.09.2015. URL: https://oilcapital. ru/news/upstream/02-09-2015/china-oilfield-services-vypolnit-burenie-v-ramkah-proekta-rosnefti-i-statoil-v-ohotskom-more (accessed 10.08.2022)

85 On the way to the Kara Sea. Drilling platforms Arctic and Nanhai VIII left the port of Murmansk // Neftegaz.ru URL: https://neftegaz.ru/news/Geological-exploration/199847-na-puti-k-karskomu-moryu-burovye-platformy-arkticheskaya-i-nanhai-viii-vyshli-iz-porta-murmansk/ (accessed 18.04.2022)

86 Hsiung C. The Emergence of a Sino-Russian Economic Partnership in the Arctic // The Arctic Institute. 19.05.2020. URL: https://www.thearcticinstitute.org/emergence-sino-russian-economic-partnership-arctic/ (accessed 26.04.2022)

87 Kolzina A. L. L., Mindubaeva A. A. Polar Silk Road as an area of strategic partnership between the Russian Federation and China // Bulletin of Udmurtia University. Sociology. Political Science. International Relations. 2020. Vol. 4. №. 2. P. 186-195.

88 Putin: Russia and China will jointly make the Northern Sea Route a Silk Road // BRICS National Research Committee. 2017. URL: https://www.nkibrics.ru/posts/show/5a39d5a062726903f43b0000 (accessed 27.04.2022)

89 Russia and China will begin joint research in the Arctic // Shirshov Institute of Oceanology, Russian Academy of Sciences. P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences. URL: https://ocean.ru/index.php/novosti-left/novosti-instituta/item/1311-rossiya-i-kitaj-v-arktike (accessed 27.04.2022)

effects of climate change on the Arctic, studies the quality of sea ice, which correlates with SDG 13 – Climate Action and SDG 14 – Life Below Water. There is also **the Russian-Chinese Research Centre**[90] on the development and implementation of the "Silk Road Ice Road" concept, whose activities cover the study of sustainable navigation, development of monitoring systems in the Arctic and development of transport corridors (SDG 9 – Industrialization, Innovations and Infrastructure, SDG 13 – Climate Action, SDG 14 – Life Below Water). There are also a number of agreements between Russian and Chinese research centres that promote scientific exchange between the countries. For example, in 2016, **the Russian-Chinese Polar Engineering and Research Centre** was founded **in cooperation** between **Far Eastern Federal University** (FEFU) and **Harbin Polytechnic University** (HPCU, China), which is working on applied projects for the industrial development of the Arctic, including the development of ice and ice sheet structures. In addition, in 2016, the university will be working on applied projects for industrial development in the Arctic, including the development of structures for ice-resistant platforms for the Arctic zone of Russia and the Yellow Sea shelf, the study of concrete wear resistance in the polar zone, and the reliability of ship engineering structures (SDG 9 – Industrialization, Innovation and Infrastructure, SDG 11 – Sustainable Cities and Communities). In addition, in 2016, with the support of the State Oceanic Administration of China and the Russian Academy of Sciences, a Russian-Chinese scientific expedition took place, lasting more than a month. The expedition analysed marine flora and fauna and the chemical composition of water in the Arctic region[91] (SDG 13 – Climate Action, SDG 14 – Life Below Water, SDG 15 – Life on Land, SDG 17 – Partnerships for Sustainable Development). In addition to joint scientific expeditions, the number of universities and research centres participating in scientific exchanges is increasing on both sides[92]. On the Chinese side, Anhui State Pedagogical University, Harbin Polytechnic University, and Beijing Polytechnic Institute in Shenzhen take part in the exchange programs.

Cooperation between Russia and India

Cooperation between India and Russia covers such areas as research and development (including space), nuclear energy, defense, oil and gas industries. India's growing interest in the Arctic region creates more opportunities to develop partnerships between these countries.

Oil and Gas Industry

In recent years, India has become involved in oil and gas projects led by Russian companies. In 2014, Rosneft signed **a memorandum of understanding** with ONGC **on cooperation on the Arctic shelf, and in** 2017, Gazprom Neft and several Indian oil and gas companies signed a similar

90 P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences. P. P. Shirshov Institute of Oceanology RAS. Russia and China will begin joint research in the Arctic. 2019. URL: https://ocean.ru/index.php/ novosti-left/novosti-instituta/item/1311-rossiya-i-kitaj-v-arktike (accessed 26.04.2022)

91 Pilot National Laboratory for Marine Science and Technology (Qingdao) // Pilot National Laboratory for Marine Science and Technology. URL: http://www.qnlm.ac/en/page?a= 1&b=2&c=224&d=2&e=1&p=detail (accessed 27.04.2022)

92 Joint Educational Projects with Chinese Universities // Ministry of Education of the Russian Federation. URL: https://mininuniver.ru/international/china (accessed 26.04.2022)

agreement. These agreements create an institutional framework for the exchange of technical, production and commercial practices in the development of fields in the Arctic and on Sakhalin Island (SDG 17 – Partnerships for Sustainable Development). In 2015. Rosneft and the Essar group of industrial companies signed a contract to supply oil for its further processing at the Indian refinery (refinery) in Vadinar. As a result of this agreement, the Russian company entered the share capital of the refinery[93]. The Indian Oil and Natural Gas Corporation (ONGC) is currently working on the Sakhalin-1 project with a 20 percent stake. Cooperation within the framework of this project lays the foundation for further joint projects on the Arctic shelf. In 2021, Indian companies ONGC and Petronet LNG Limited were considering buying 9.9% of the Arctic LNG-2 project[94]. Negotiations also resumed over the participation of Indian companies in the Vostok Oil project, which plans to develop oil and gas fields located in the north of Krasnoyarsk Krai.

Transportation and Logistics

India is interested in using the Northern Sea Route as a shorter route, including for transporting oil and gas to India, which will allow it to diversify its supply routes. Indian Prime Minister N. Modi said at the Eastern Economic Forum in 2021 that India intends to become a partner in the project of the Northern Sea Route to turn it into a major artery of international trade as soon as possible[95]. The current cooperation between Russia and India in the transport projects "Vladivostok-Chennai", which connects the Russian Far East with India, and "North-South", which will allow to build a single route across the Indian Ocean, the Persian Gulf and the Caspian Sea, creates a basis for joint development of transport routes to the Arctic. At the same time, India is considering extending the North-South transport corridor to the north, which will facilitate the supply of hydrocarbons from the Arctic to India[96].

Science and Education

Important agreements on cooperation between Russia and India in this area were signed at the XXI Russia-India Summit "Russia-India: Partnership for Peace, Progress and Prosperity" in 2021. The agreements and planned programs included **the Roadmap for Cooperation in Science, Technology and Innovation** between the Ministry of Science and Higher Education of Russia and the Ministry of Science and Technology of the Government of the Republic of India; **the Cultural Exchange Program** between the Ministry of Culture of Russia and the Ministry of Culture of the Government of the Republic of India for 2021-2024.

93 Shahumyan T.L., Zhuravel V.P. op. cit.

94 Indian companies may become participants in the Arctic LNG-2 project // Neftegaz. Ru. 6.09.2021. URL: https://neftegaz. ru/news/Acquisitions/695882-uchastnikami-proekta-arktik-spg-2-mogut-stat-indiyskie-kompanii-vozmozhnosti-est/ (accessed 10.08.2022)

95 India to help Russia develop Northern Sea Route - PM // TASS. 3.09.2021. URL: https://tass.com/economy/1333939 (accessed 10.08.2022)

96 India-Russia Cooperation in the Arctic and the Rising Prospect of Polarization in Arctic Governance. 21.06.2022. URL: https://www. thearcticinstitute. org/india-russia-cooperation-arctic-rising-prospect-polarization-arctic-governance/ (accessed 10.08.2022)

Cooperation between Russia and the Republic of Korea

Bilateral cooperation between Russia and South Korea in the Arctic began to intensify in 2017. At the Eastern Economic Forum, the same year, the newly elected South Korean President Moon Jae-in announced the need to expand cooperation between South Korea and Russia in the Arctic in various areas[97]. In particular, the **concept of the Nine Bridges** was proposed, which included the main areas of cooperation in the Arctic, including shipbuilding, seaports, development of the Northern Sea Route, LNG production, railroads, energy, industrial complexes, agriculture and fishery[98]. In 2020, Korean and Russian representatives signed a Joint Statement on the Implementation Plan for the Nine Bridges Concept of Russian-Korean Trade and Economic Cooperation Version 2.0, which became the roadmap for further cooperation between the states[99]. Also, since 2017, the countries have held annual Russian-Korean Arctic consultations at the level of the Ministry of Foreign Affairs[100].

Oil production and exploration

An important component of cooperation between South Korea and Russia in natural resource extraction was the signing of the Memorandum of Understanding and Cooperation between the two countries in 2017. The Memorandum of Understanding and Cooperation between the two countries, which allows the Republic of Korea to participate in mineral resource development projects in the Russian Arctic[101].

Transportation and Logistics

Separately, the success of South Korean-Russian cooperation in transport, shipping, and logistics is worth noting. Russia has repeatedly used the services of South Korean companies to build gas carriers and icebreaker-class vessels: in 2019, the Russian shipyard Zvezda signed a contract with Samsung Heavy Industries to design icebreaker tankers for the Arctic LNG-2 project. In addition, Zvezda cooperates with Hyundai Heavy Industries to build Aframax-class tankers[102]. In 2017, the countries agreed to jointly prepare a model for the development of the Northern Sea Route as a global transit hub between Europe and Asia[103]. In 2017. Russia also agreed to build 15 ice-class LNG tankers at South Korean shipyards as part of the Yamal LNG project[104]. In the same year, the two countries negotiated the establishment and further operation of an Arctic container

97 Mammadli T., Khubaeva A., Popov S. I., Relations between Russia and South Korea in the Arctic Region: Current Situation and Perspectives // Advances in Economics, Business and Management Research. 2019. Vol. 107. P. 84-87.

98 Ibid

99 "Nine Bridges of Interaction" // Maritime Vesti Rossii. 5.10.2021. URL: http://www. morvesti. ru/themes/1699/91958/ (accessed 10.08.2022)

100 Lexiutina Ya. V. China and India...

101 South Korean Kogas may take part in Arctic LNG 2 project // Construction. Ru. 22.06.2018. URL: https://russianconstruction. com/news-1/32343-south-korean-kogas-may-take-part-inarctic-lng-2-project. html (accessed 10.08.2022)

102 Leksyutina Ya. V. Cooperation between Russia and the Republic of Korea in the issues of economic development of the Arctic / Y. V. Lexiutina // Russia and Korea: a view from Siberia - 2021 : Abstracts and reports of the International Scientific-Practical Conference, Irkutsk, 09-10 October 2021 / Editor-in-Chief KK. V. Ivanov. - Irkutsk: Irkutsk State University, 2021. – P. 28-33.

103 Epstein V. A. Takhaeva A.R. Op. cit.

104 South Korea to build 15 tankers for Russia // TASS. 6.09.2017. URL: https://tass.ru/ekonomika/4536943 (accessed 10.08.2022)

shipping line from Petropavlovsk-Kamchatsky to Murmansk via the Northern Sea Route[105]. In 2020, South Korea's Daewoo Shipbuilding & Marine Engineering (DSME) and Russia's NOVATEK reached agreements to build six Arc7 gas carriers worth $1.7 billion for Arctic LNG-2 by 2023.[106] However, in 2022, the Korean company cancelled the contract due to the Russian side's failure to make the payment for the project[107].

Cooperation between Russia and Japan

Production of liquefied natural gas

In 2016, Russia and Japan launched an eight-point cooperation plan that envisioned a large number of bilateral projects in the Arctic[108], including energy and transport.

One of the main vectors of cooperation between Russia and Japan is LNG production. Currently, Russia exports about 10% of its LNG imports to Japan[109]. Since 2010, Japan has participated in the development of the Yamal LNG project: first, the Japanese companies JGC and Chiyoda provided design, equipment supply and construction services for Yamal LNG, and in 2016, the Japan Bank for International Cooperation (JBIC) opened a loan for the project. The Japan Bank for International Cooperation (JBIC) opened a EUR 200 million credit line for the project[110]. In addition, in 2018, two Japanese energy companies (JOGMEC and Seibu Gas) signed memorandums of understanding for projects on Yamal Island, including with NOVATEK[111]. In 2019, Japan's National Oil, Gas and Metals Corporation JOGMEC, together with the Mitsui & Co. consortium, acquired a 10% stake in NOVATEK's Arctic LNG-2 project[112]. The Japanese investment in the project amounted to about $3 billion. However, they were terminated and frozen in the spring of 2022[113].

Transportation and Logistics

Particular attention should be paid to transport and logistics support for projects on Yamal Island, which occupies an important place in cooperation between Russia and Japan. In 2019, Japan's Mitsui O. S. K Lines, JBIC and Russia's NOVATEK entered into a cooperation agreement to

105 Epstein V. A., Tahaeva A. R. op. cit.

106 NOVATEK will receive tankers from South Korea // Kommersant. 15.10.2020. URL: https://www. kommersant. ru/doc/4531018 (accessed 10.08.2022)

107 South Korean DSME Cancels Contract for Novatek Arctic LNG Carriers // High North News. 27.05.2022. URL: https://www. highnorthnews. com/en/south-korean-dsme-cancels-contract-novatek-arctic-lng-carriers (accessed 10.08.2022)

108 Japanese Prime Minister presented an eight-point cooperation plan to Putin // RBC. 7.09.2016. URL: https://www. rbc. ru/politics/07/05/2016/572d10399a7947c413bf3020 (accessed 10.08.2022)

109 Shipping boss says Japan has no choice but to buy Russian gas // Financial Times. URL: https://www.ft.com/content/01ea5892-a13c-4e3c-95a1-e2c2ee4efdae (accessed 10.08.2022).

110 Leksyutina Y. Russia's cooperation with Asian observers to the Arctic Council // The Polar Journal. 2021. P. 1-24.

111 Streltsov D. V. The Russian Direction of Japan's Policy in the Arctic // Japanese Studies. 2021. № 2. P. 110-126.

112 Ibid

113 "NOVATEK to clarify launch dates and financing options for Arctic LNG 2 // Interfax. 21.04.2022. URL: https://www.interfax.ru/business/836126 (accessed 10.08.2022).

transship LNG in Kamchatka and Murmansk[114]. The Japanese side was promising the development of a transshipment hub in Kamchatka, which would reduce the cost and time of shipping to other parts of Asia[115]. At the moment, Mitsui O. S. K Lines continues to participate in the project[116].

Since 2019, the Yamal LNG plant has been served by 15 Arc7 ice-class tankers, three of which are chartered by the Japanese major shipping company MOL[117]. In addition, there have been numerous shipments of LNG to Japan along the Northern Sea Route from Arctic countries with Russian participation: in 2012, a Russian nuclear-powered icebreaker escorted an LNG tanker from Norway to Kitakyushu, Japan[118], and LNG directly from the Russian Arctic was delivered to Tokyo Bay to the Ohgishima LNG terminal in 2020, for example.[119]

Green Energy

A project was also organised between Russia and Japan within the framework of alternative energy sources to jointly combat greenhouse gas emissions. A joint Russian-Japanese project (involving the Japanese companies NEDO, Takaoka Toko, and Mitsui) to create a unique wind-diesel complex in the Arctic village of Tiksi (Yakutia) was successfully launched, and the complex itself was put into operation[120].

Science

Russian-Japanese cooperation on scientific research in the Arctic began in 2014 and is carried out mainly within the framework of the Centre for Arctic Studies of Hokkaido University, on the one hand, and the Russian Academy of Sciences, as well as the North-Eastern Federal University, on the other[121]. The states identified 12 topics in which they conducted joint research in the Arctic. One of the main areas of interaction was the study of climate change in the Arctic (SDG 13 - Climate Action). One of the largest projects was the simulation of climate change by the Japanese research centre "Earth Simulator Centre" based on data obtained at the "Spasskaya Pad" research station in Yakutia[122]. Thus, as part of the GAME-Siberia project in 2017, Russian and Japanese scientists were

114 "NOVATEK, Mitsui O.S.K. Lines and JBIC signed Cooperation Agreement // NOVATEK. 26.09.2019. URL: https://www. novatek. ru/ru/press/releases/index. php? id_4=3447 (accessed 10.08.2022)

115 Streltsov D.V. op. cit.

116 Reality bites in Asia over NATO push // China Daily. 05.07.2022. URL: https://global. chinadaily. com. cn/a/202207/05/WS62c37863a310fd2b29e6a501.html (accessed 10.08.2022)

117 MOL Signs Long-term Charter Contract of 4 LNG Carriers for Russia Yamal LNG Project // Mitsui O.S.K. Lines. 29.06.2017. URL: https://www. mol. co. jp/en/pr/2017/17044.html (accessed 10.08.2022)

118 Doroshev A. Yu. op. cit.

119 Streltsov D.V. op. cit.

120 Ibid

121 Cooperation on Arctic Research between Japan and Russia // International Arctic Science Committee. 2015. URL: https://iasc. info/images/isira/national-reports/2015/Japan_Russia_Workshop_Oct_2014.pdf (accessed 10.08.2022)

122 From climate to transport: what scientists from Russia and Japan are working on in the Arctic // TASS. 22.08.2017. URL: https://tass.ru/v-strane/4497357 (accessed 10.08.2022)

able to predict climate change in the long term[123]. In addition, joint work between the two countries was also carried out in the Cape Baranova ice base, where scientists conducted research on atmospheric processes over large areas, as well as monitoring black carbon emissions[124]. Bilateral meetings between Russian and Japanese representatives have also been held several times: in 2015 the event was dedicated to the study of the carbon budget of the Arctic and Yakutia[125], in 2021 online seminars on Russian-Japanese cooperation in the Arctic were held within the UArctic[126] and as part of the Russian-Japanese scientific forum[127]. In March 2022 a webinar "The Northern Sea Route and Japan-Russia Cooperation in the Arctic" was to be held, but it was cancelled[128].

Cooperation between Russia and Singapore

Although Singapore's presence in the Arctic is rather modest, several joint projects with Russia have been launched. For example, in 2008, a major Singaporean offshore oil platform manufacturing company Keppel Corporation, in particular its subsidiary Keppel Singmarine, built two icebreakers (Varandey, Toboi) for the Russian company Lukoil-Kaliningradmorneft[129]. In addition, in 2021 on the site of Skolkovo the event "Russian-Singaporean Arctic Dialogue" was held, which focused on the prospects of the Arctic transport routes and sustainable maritime navigation[130]. Singapore's participation in such events demonstrates the country's interest in the technological "development" of the Arctic, which will allow it to gain a stronger foothold in the region and promote the introduction of green technologies and practices in shipping.

123 Russia and Japan work together in the arctic // Big Asia. 22.08.2017. URL: https://bigasia. ru/en/content/news/science_and_education/russia-and-japan-work-together-in-the-arctic/ (accessed 10.08.2022)

124 Visit to the Ice Base Cape Baranova research station in Russia // Arctic Challenge for Sustainability. 13.09.2028. URL: https://www. nipr. ac. jp/arcs/blog/en/2018/09/ice-base-cape-baranova. html (accessed 10.08.2022)

125 Scientists of NEFU, Japan and USA to explore carbon budget in the Arctic and Yakutia // UArctic. 05.11.2015. URL: https://www. uarctic. org/news/2015/11/scientists-of-nefu-japan-and-usa-to-explore-carbon-budget-in-the-arctic-and-yakutia/# (accessed 10.08.2022)

126 Online seminar: Japan-Russia Interregional Cooperation in the Arctic and North - Theory and Practice // UArctic. 19.02.2021. URL: https://www. uarctic. org/news/2021/2/online-seminar-japan-russia-interregional-cooperation-in-the-arctic-and-north-theory-and-practice/ (accessed 10.08.2022)

127 Online Seminar "Sustainable Regional Development, International Cooperation and Environmental Protection in the Arctic" // HaRP. 14.09.2021. URL: https://russia-platform.oia.hokudai.ac.jp/ru/report/6867 (accessed 10.08.2022)

128 Webinar on cooperation in the energy sector between Japan and Russia "The Arctic Sea Route and Japan-Russia cooperation in the development of the Arctic Circle" // Russian-Japanese Trade and Investment Promotion Organization. 07.02.2022. URL: https://www.jp-ru.org/news/events/p008980/ (accessed 10.08.2022)

129 Yeranosyan V. Singapore wants to engage in the development of the Arctic // GoArctic. 2021. URL: https://goarctic.ru/politics/singapur-khochet-zanyatsya-obustroystvom-arktiki/ (accessed 10.08.2022)

130 December 17, 2021, in the framework of the Russia-Singapore Arctic Dialogue discussed the development of Sustainable Arctic shipping and the role of the Arctic as a global transport corridor // VIII International Conference of the Arctic: Sustainable Development. 2021. URL: https://arctic.s-kon.ru/17-dekabrja-2021-g-v-ramkah-arkticheskogo-dialoga-rossija-singapur-sostojalos-obsuzhdenie-problemy-razvitija-ustojchivogo-arkticheskogo-sudohodstva-i-roli-arktiki-kak-globalnogo-transportnogo-koridor/ (accessed 10.08.2022)

3.2 Prospects for Cooperation between Russia and Asian Countries in the Sustainable Development of the Arctic Region

In view of the current geopolitical situation, as well as the termination of cooperation between the Arctic states and Russia within the framework of the Arctic Council and a number of other international platforms, the relevance of strengthening dialogue with Asian partners[131], which is complemented by the growing interest of these states in the Arctic region, is growing in order to continue the policy of sustainable development of the Arctic. Since as of August 2022 Japan, the Republic of Korea and Singapore are on the list of unfriendly countries of the Russian Federation[132], full-fledged cooperation with these states is seriously hampered, but in the future, given the accumulated potential for further interaction in the Arctic, the expansion of the portfolio of projects in research, development of transport routes and shipbuilding, as well as the Arctic monitoring is possible.

In this regard, the extensive experience of cooperation between Russia and China in the Arctic region makes it possible to intensify cooperation between these countries to an even greater extent. In addition, an important partner of Russia on the world stage, including in the Arctic, is India, with which there is also a track record of cooperation. Given the fact that these countries are members of BRICS and the SCO, the issues of managing the Arctic region can potentially be brought to these platforms as well. Such a statement was made by Nikolai Korchunov, Ambassador at Large of the Ministry of Foreign Affairs of the Russian Federation[133]. In addition, a **prerequisite for the implementation of sustainable development policy in the Arctic is bilateral cooperation between Russia and China and India, which can be carried out in areas such as the development of Arctic resources, transport and logistics, environmental protection and climate change, tourism, science and education, and support for indigenous and minority peoples**.

Developing Arctic resources

The development of natural resources in the Arctic is one of the key areas of cooperation in the region. Large projects in this industry, such as Arctic LNG-2 and Yamal LNG, appear to be potential opportunities for Chinese FDI. In addition, Rosneft and India's OVL signed a memorandum of understanding on cooperation on the Arctic shelf in 2014 on the sidelines of SPIEF, and a similar memorandum was signed by Gazprom Neft in 2017. In this regard, it is important to elaborate the regulatory and legal framework for successful investment and technological cooperation between

131 Discussion of the current Arctic agenda in the interests of the region's residents will continue in the framework of Russia's chairmanship of the Arctic Council // International Arctic Forum. 2022. URL: https://forumarctica.ru/news/obsuzhdenie-aktualnoj-arkticheskoj-povestki-v-interesah-zhitelej-regiona-prodolzhitsja-v-ramkah-predsedatelstva-rossii-v-arkticheskom-sovete/ (accessed 26.04.2022)

132 Decree No. 430-r of the Government of the Russian Federation dated March 5, 2022 // Russian Government. URL: http://government.ru/news/44745/ (accessed 10.08.2022)

133 Foreign Ministry: Asian countries of BRICS and SCO want to cooperate with Russia in the Arctic // RIA Novosti. 22.05.2022. URL: https://ria.ru/20220522/arktika-1789979025.html (accessed 10.08.2022)

Russian, Chinese and Indian companies. Besides, negotiations continue on the participation of Chinese and Indian companies in the Russian Arctic project "Vostok Oil"[134], including the development of oil and gas fields in Krasnoyarsk Krai. It should also be noted that great attention should be paid to the environmental side of oil and gas projects, so that their implementation would not be associated with damage to the Arctic marine ecosystems. Therefore, the parties should introduce innovative technologies for exploration and production of mineral resources (SDG 14 – Life Below Water, SDG 17 – Partnerships for Sustainable Development).

Transportation and logistics

The Northern Sea Route and the Polar Silk Road play the role of key transport hubs in the Arctic region, so attention to these projects is growing every year. In this regard, in partnership with China, it is possible to create a new transport enterprise similar to the "Marine Arctic Transport", which would improve the region's transport accessibility (SDG 9 – Industrialization, Innovation and Infrastructure). In addition, to increase the attractiveness of projects in the Arctic zone of the Russian Federation, it is necessary to provide information support, including the involvement of specialists with knowledge of the Chinese language. Projects should also be based on the principles of sustainable development, which will reduce the burden on Arctic ecosystems (SDG 14 – Life Below Water, SDG 15 – Life on Land). In the case of India, a promising project for cooperation with Russia in the Arctic is the North-South international transport corridor, the development of which could reduce the cost of transportation between India and Russia by about 30%[135].

Protecting the environment and combating climate change

As the fight against climate change becomes a global priority, given the speed of climate processes in the Arctic, cooperation in this area with India and China as major emitters of greenhouse gases and signatories of the Paris Agreement is essential. As a part of this direction, it is possible to create a joint system for monitoring climate change, black carbon and methane emissions. The initiated cooperation between Russia, India and China within BRICS on space environmental monitoring using Earth remote sensing satellites (with the participation of the Research Institute of Aerospace Monitoring "Aerospace" and Geophysical Centre of RAS, Research Institute of Aerospace Information of Chinese Academy of Sciences, Centre for Applied Application of Satellite Remote Sensing of

134 India continues to consider joining Rosneft's Vostok Oil project // Neftegaz. ru. 22.11.2021. URL: https://neftegaz.ru/news/Acquisitions/709948-indiya-prodolzhaet-rassmatrivat-vkhozhdenie-v-proekt-vostok-oyl-rosnefti/ (accessed 10.08.2022)
Rosneft expects commercial bids from companies from China for VPP for Vostok Oil // Neftegaz.ru. 23.02.2022. URL: https://neftegaz.ru/news/Alternative-energy/726885-rosneft-ozhidaet-kommercheskikh-predlozheniy-ot-kompaniy-iz-kitaya-po-ves-dlya-vostok-oyl/ (accessed 10.08.2022)

135 The North-South International Transport Corridor will improve connectivity between India and Russia through cheaper multimodal transit routes // Russia Briefing. 29.07.2021. URL: https://www.russia-briefing.com/news/mezhdunarodnyj-transportnyj-koridor-sever-yug-uluchshit-soobshhenie-mezhdu-indiej-i-rossiej-s-pomoshhyu-bolee-deshevyh-multimodalnyh-tranzitnyh-marshrutov.html/ (accessed 10.08.2022)

Ministry of Natural Resources (LASAC) and India[136]) will allow to identify the impact of global climate change on the Arctic (SDG 13 – Climate Action).

Moreover, it is possible to expand the portfolio of projects to combat microplastic pollution in the Arctic region. In this regard, research groups of the three countries can prepare a joint report on the current level of microplastic pollution in the Arctic Ocean for the subsequent collection and disposal of marine debris and microplastics. (SDG 14 – Life Below Water).

In addition, since India and China are observers of the Arctic Council and take part in its work, cooperation on the conservation of Arctic biodiversity can be initiated within the working group on the conservation of Arctic flora and fauna (SDG 14 – Life Below Water, SDG 15 – Life on Land).

Tourism

Arctic tourism is a way to raise awareness of the problems of the Arctic region, including climate change, and will also create new jobs in the subjects of the Russian Federation located in the Arctic zone (SDG 8 – Decent Work and Economic Growth). This requires the launch of an information portal about the Arctic region with potential tourist routes in English, Chinese and Hindi, as well as simplified booking of hotels by Chinese and Indian tourists (for example, through the portal Ostrovok.ru[137] or new portals). In addition, due to the withdrawal of Visa and Mastercard payment systems from Russia, it is necessary to provide the possibility of booking Arctic tours with the help of the Chinese Union Pay system and the Indian RuPay system.

Support for indigenous and minority peoples of the North

To ensure the sustainable development of the Arctic region, it is necessary to ensure the preservation and application of traditional knowledge of indigenous and minority peoples of the North, as well as the active involvement of representatives of indigenous peoples in the management of the region through participation in Arctic platforms (e.g. the Arctic Council). It is also possible to hold Russian-Chinese and Russian-Indian events on the culture of indigenous peoples of the Arctic region, which is on Russia's agenda in the Arctic Council[138], and is also one of Chinese and Indian priorities in the Arctic (SDG 17 - Partnerships for Sustainable Development.

Science and education

At the present time, in conditions of international polarisation, the termination of cooperation between international institutions and Russia, including the Arctic sites, it becomes more relevant to maintain a scientific dialogue, in which there is already a groundwork both in relations with China

136 Scientists of Russia, India and China improve methods of space environmental monitoring // Ministry of Science and Higher Education of the Russian Federation. 27.05.2022. URL: https://minobrnauki.gov.ru/press-center/news/mezhdunarodnoe-sotrudnichestvo/51915/ (accessed 10.08.2022)

137 Hotel and hotel reservations // Ostrovok.ru. URL: https://ostrovok.ru/?sid=0c90f7f3-c51e-4fb8-be84-99b1d8bf748b (accessed 26.04.2022)

138 Chairmanship of Russia in the Arctic Council in 2021 - 2023 // Arctic Council URL: https://www.arctic-council.org/ru/about/russian-chairmanship-2/ (accessed 27.04.2022)

and with India. Research areas include studies of climate change, Arctic flora and fauna, sea ice and ice shelf dynamics, topographic mapping, geophysical and geological studies, which will be useful both for preserving biodiversity in the region and contribute to building safe routes for the Northern Sea Route. Joint scientific expeditions are important (SDG 13 – Climate Action; SDG 14 – Life Below Water; SDG 15 – Life on Land). The Russian research station "Snowflake[139]", which is under construction, as well as the drifting station "North Pole-1", launched in 2022, appear to be promising sites[140]. The Russian-Chinese Arctic Research Centre and the University of Delhi are also possible platforms for cooperation in science. The creation of new Russian-Chinese, Russian-Indian and trilateral scientific centres in the Arctic could also be promising.

In addition, it is necessary to stimulate scientific exchange in the field of sustainable development of the Arctic region, which could involve such Chinese and Indian centres as Dalian University of Information Technology, Harbin Engineering University, Qingdao National Laboratory for Marine Science and Technology, Harbin Polytechnic University, National Centre for Polar and Oceanic Research of the Indian Ministry of Land Management, etc. In addition, the creation of joint online courses in Chinese, English and Hindi (SDG 4 – Quality Education) could help raise awareness of the Arctic region.

139 International Arctic Station Snowflake // Snowflake. URL: https://arctic-mipt.com (accessed 10.08.2022)

140 The world's first drifting station "North Pole-1" // RIA Novosti. 21.05.2022. URL: https://ria.ru/20220521/stantsiya-1789429887.html (accessed 10.08.2022)

Interest to the Arctic region

The Asian states with the strongest interest in the Arctic region include China, Japan, South Korea, Singapore, and India .

China's interests in the Arctic

China's interests in the Arctic are most succinctly formulated in the "White Paper" adopted in 2018, which contains the basis of the state's Arctic policy: understand, protect, develop the region and participate in its management to ensure the common interests of the international community in sustainable development of the Arctic

Understand	deepening the study of the Arctic region
Protect	environmental protection and combating climate change in the Arctic
Develop the region	rational use of Arctic resources in accordance with international law
Participate in its management to ensure the common interests of the international community in sustainable development of the Arctic	active participation in the management of the Arctic and international cooperation, promoting peace and stability in the Arctic

Pillars of Japan's Arctic Policy

Japan's priorities in the Arctic

Japan's priorities in the Arctic include :


Global environmental problems


Arctic indigenous peoples


Science and technology


Rule of law and international cooperation


The arctic motorway

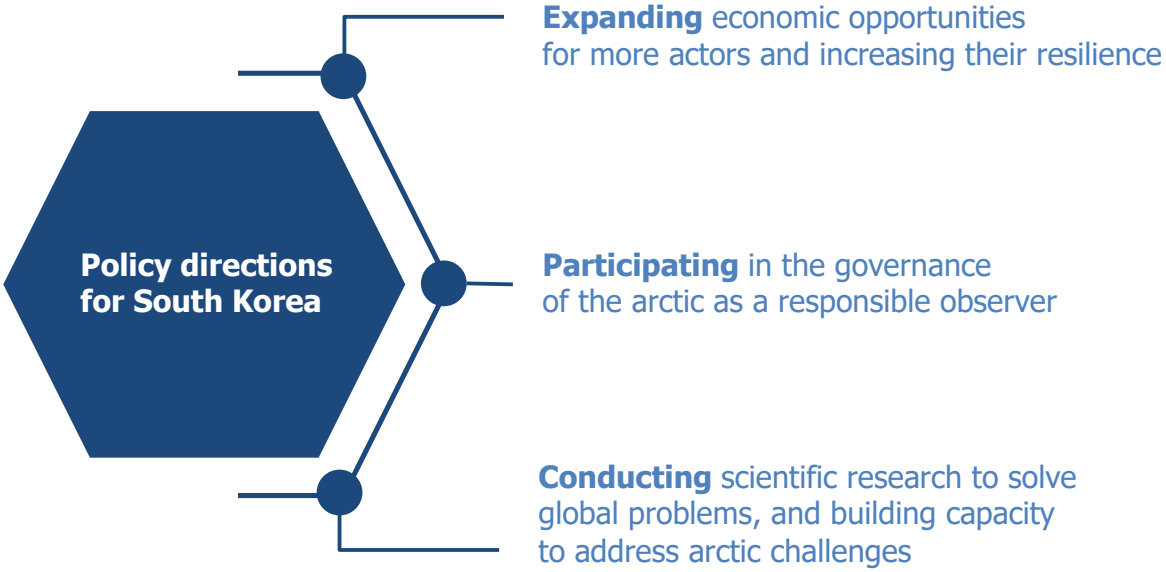

Mineral resource extraction


National security

South Korean priorities in the Arctic

South Korean priorities in the Arctic are:

- Stable international cooperation
- Increasing scientific activities and research
- Promoting business in the arctic
- Developing the institutional framework



Singapore's Arctic Policy

Singapore's Arctic Policy:

Managing the arctic region in a sustainable and responsible manner

The shipping capabilities of the region, as well as the prospects of transport infrastructure development,

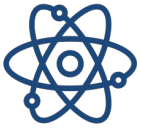
Using the region's mineral resources and supplying its own technology and equipment to the arctic

India's priorities in the Arctic region

India's key priorities in the Arctic region:

Climate change

Economic and transport potential



Scientific research

Projects of Arctic Council

Sustaining Arctic observing networks	• China, • Japan, • South Korea	
Impacts of Short-lived Climate Forcers on Arctic Climate, Air Quality and Human Health	• China	
Actions for Arctic biodiversity	• China, • Japan, • India, • South Korea • Singapore	• **SDG 13** Climate Action, • **SDG 14** Life Below Water, • **SDG 15** Life on Land
Arctic Migratory Birds Initiative	• China, • Japan, • India, • South Korea • Singapore	• **SDG 15** Life on Land
Framework Program of Action of the Arctic Council aimed at intensifying the reduction of black carbon and methane emissions	• Japan, • India	