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## China, Republic of Korea and Japan in the Arctic: politics, economy, security



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**Abstract.** China, South Korea and Japan are actively pursuing scientific, economic and political activities for the development of the Arctic, the Arctic resources, ensure security in it, seeking to increase its role in the Arctic Council, cooperating and competing-Rui with other countries. The paper stresses that China is in the final stage of preparation of its Arctic strategy, however, it is noted that the Arctic is important for China, but not a top priority of its foreign policy. The priorities of the Republic of Korea in the development and exploration of the Arctic, as shown by the analysis conducted by, yavlyutsya: research, the use of the Northern Sea Route for the transportation, receipt of orders from Arctic countries for Korean

shipyards for the construction of offshore oil platforms, special vessels and icebreakers; development of relations with Russia. Japan is a growing interest in the Northern Sea Route, scientific research in the Arctic. We consider Japan's attempts to resolve the territorial issue with Russia. Japan's Ministry of Foreign Affairs supports the establishment of a new international structure in the Arctic, which was formed not on a geographical basis, and by the presence of economic interests in the region. Seoul supports the establishment, together with Russia a regional mechanism of multilateral cooperation in the Arctic, with the code name "Asia-Pacific Arctic Council".

**Keywords:** *Arctic, China, South Korea, Japan, the Arctic Council, observer states, interests, scientific research, the Northern Sea Route*

China, Korea and Japan as the Asian Arctic Council observer countries are most actively pursuing the Arctic policy. The research of the interests, various aspects of their work reveals the features of the Arctic policy of every of these three countries. The comparative analysis shows that in addition to political, economic issues of cooperation, these countries have started to pay more attention to the issues of countering new challenges and security threats (terrorism and illegal migration), development of constructive and business cooperation in prevention of emergency situations, the tasks of search and rescue in the Arctic.

### ***Interests and policy of China in the Arctic***

China has the most powerful potential of all Asian countries to participate in the Arctic policy. Today it has the second economy in the world, so is looking for all possible ways for further development. China's interests in the Arctic form a complex which consists of, first, economic, including natural resource- and transportation and logistics interests, and secondly, ecological and climatic and other research interests as fundamental theoretical and various scientific applications, thirdly, geopolitical and closely related military-strategic [1; 2; 3].

China is actively promoting a full series of scientific, economic and political initiatives to secure its strategic interests in the Arctic. The country is actively engaged in polar research [2, p. 54—73]. The start of this research was initiated in 1981, China held the first expedition to the Arctic in 1995, when researchers reached the North Pole on foot. And the first marine expedition to the North Pole took place in 1999. Since 1994 China holds polar research aboard the only China research icebreaker "Syuelun" ("Snow Dragon"), which was purchased from Ukraine in 1993. In August 2013 "Syuelun" was the first of the Chinese ships which passed along the Northern Sea route (NSR) in the Barents sea, and on the way back from Iceland to the Bering Strait — went on high-latitude route, bypassing the Northern sea route<sup>1</sup>. The voyage of "Syueluna", as director of the Polar Research Institute of China (PRIC) Hueygen Yang noted in interview with South China Morning Post, "strongly encouraged" Chinese shipping companies<sup>2</sup>. For the first time a Chinese ship skirted almost all the northern coast of Russia. The Japanese believe that the polar ambitions of Russia were hurt by this case. Commercial use of the NSR is to use (of course, be-paid for) Russian icebreakers, as well as fees for passage along this way [4, p. 63].

Every year China spends about \$ 63 million on polar research, which is approximately equivalent to the costs of South Korea for the same objectives and much more expensive, for example, of the United States. The plans of the leadership of the country are to increase the number of scientists involved in polar issues. There are several research institutes, which are directly involved in Arctic research, the main one is the Polar Research Institute of China (PRIC) in Shanghai, which in 2013 teamed up with leading research institutes of the Northern Europe into the China North European Arctic research; China Institute of Marine Research in Pekin and Qingdao Institute of Oceanology. Research related to the Arctic are held in the Maritime University of Dalian, University of Xiamen, Tongji University in Shanghai, the Chinese Antarctic Centre of topography and mapping at the University of Wuhan, in China marine research center in Qingdao and the Ocean Institute in Chzhetszyan [3, p. 68].

According to Chinese experts, the country needs the research results to get a deeper understanding of the negative impacts of climate change in the Arctic on the environment in China, and its agriculture. It is now established that the air flows in the Arctic are the major cause of extreme weather conditions in China and influence strongly on the economic and social

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<sup>1</sup> Barents Observer. URL: [http:// barentsobserver.com/sites/barentsobserver.com/les/styles/grid\\_8/public/main/articles/xue\\_long\\_snow\\_dragon\\_sinoshipnews\\_com.jpg](http://barentsobserver.com/sites/barentsobserver.com/les/styles/grid_8/public/main/articles/xue_long_snow_dragon_sinoshipnews_com.jpg) (accessed: 21 February 2014)

<sup>2</sup> BBC. URL: [http://www.bbc.co.uk/russian/international/2012/11/121107\\_china\\_congress\\_opens.shtml](http://www.bbc.co.uk/russian/international/2012/11/121107_china_congress_opens.shtml) (accessed: 21 February 2014); Chinalogist.ru: URL: <http://chinalogist.ru/book/news/biznes/kitay-perenes-15-gruzopotoka-na-severnyy-morskoy-put/> (accessed: 21 February 2014)

development of the country. Now China has progressed in terms of scientific and technological development of the Arctic than many Arctic countries, including Russia. China is rapidly modernizing base of Arctic research, rearranging icebreaker port in Shanghai and building new bulks for data processing, storage of polar ice.

It should be noted, that the Arctic, the NSR are guaranteed supply chain of energy and other resources for them, and the US Navy will not be able to block it. The Chinese call the NSR, protected from exposure of the US Navy, informally as "Marine silk way". China is seeking to fixate in the North Sea Route, which allows to significantly reduce the logistics costs, as well as to ship goods safely to the country. Transit of Chinese export goods through the NSR from such large ports as Dalian, Qingdao, as well as from ports of the southern Primorye and DPRK will significantly reduce the time of delivery of containerized cargoes to Europe. According to Chinese forecasts, up to 15% of China's foreign trade cargo will be transported through the NSR by 2020, mainly in the form of container traffic, which is about 800 billion Euro [5, p. 77]. In addition, the NSR is shorter and much cheaper than the southern route from Shanghai to Hamburg. Absence of piracy risks reduces the costs of operation of the NSR, whereas piracy ships particularly threaten to the Chinese ships in the Gulf of Aden, due to which the insurance premiums have increased tenfold for the passage of the gulf. According to Chinese experts, one "northern" trip of container vessel or dry cargo vessel can save from 0.5 up to 3.5 million dollars. For China this issue is extremely important, bearing in mind that the economy of the largest exporting country in 46% is dependent on international shipping. According to opinion of the scientists from the China Institute of International research, the active development of the NSR will encourage the development of China's north-east and the coastal zone, as well as the cooperation of East Asia. The representative of Dalian Maritime University Li Zhenfu quite accurately expressed the view of Chinese experts, believing that the one who will get in the XXI century "control over the Arctic route will control the new way of the global economy". Therefore, in addition to its own base China is renting two ports in North Korea — Rajin and Chongjing, located near the Russian Far East.

At the international level, the question of dividing of the Arctic has not been settled yet, and China benefits from it, seeking to prove that no one has exclusive rights to the development of the region. Presence in China's structure of authorities of special Arctic and Antarctic Administration proves China's serious intentions. It is responsible for the implementation of research programs and stepping up activity in these areas. China is going to create the first ever permanent drifting station in the Arctic Ocean. In autumn 2013 two container vessels belonging to COSCO, passed along the Northern Sea Route from Dalal to Rotterdam. The company received

from the Administration of the NSR the permit for three trips, giving the right for independent sailing along the route in light ice conditions, as well as sailing with ice-breaker assistance. China announced the construction of a new icebreaker with a range of 20,000 nautical miles, able to pass the ice with thickness of up to 1.5 meters, with acceptance of which in 2014<sup>3</sup>. Recently significant investments in the expansion and modernization of production capacities of the Arctic shipbuilding industry are arranged in the country, building of entire fleet of modern icebreakers is planned [2, p. 61].

China is gradually increasing its influence on decision-making process related to the Arctic. Beijing has already been steadily integrated into the system of the Arctic problem solutions: ranging from the environment and ending with the economy. Expanding investment projects in the Arctic states, China lays the foundation for increasing its influence in the region. With a number of major projects, it has formed the basis for building the mechanisms of economic pressure on these countries to implement their own interests in the Arctic. So far Beijing does not show clearly its explicit claims to the Arctic by means of authorities. Excessive activity in the region can only lead to what is now observed in the South China Sea. China's position on the disputed territories in this sea has led to the fact that countries in the region have united to stand against China. India, Japan, Vietnam, Korea, the Philippines, Malaysia and Indonesia actively prevent attempts of Beijing to seize control in the South China Sea.

Subarctic countries are also displeased with China's activity in the Arctic and, considering it a dangerous competitor. Ignoring the discontent of these countries, China calls itself "the Arctic country" by means of experts. But nevertheless, Beijing rarely crosses the "red line" and does not give grounds to consider its intentions aggressive. Now China prefers not to get involved in the diplomatic conflicts and work through joint ventures. But in the wake of rising of the economic power and military potential, Beijing can become less "polite". It is no coincidence that China closely monitors all actions of Russia in the Arctic. For example, if repeated updated application of Russian Federation to the United Nations, sent in August 2015 on the extension of the continental shelf, proving that the underwater Lomonosov and Mendeleev ridges are a continuation of its continental shelf, will be satisfied, China, as some scholars note, finds itself in disadvantage regarding the development of resources in the Arctic. If application response will be successful for Russia, the Arctic area of the country may increase by 1.2 million sq. km.

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<sup>3</sup> V Kitae ob"iavili o stroitel'stve novogo ledokola. URL: [http://www.korabel.ru/news/comments/v\\_kitae\\_obyavili\\_o\\_stroitelstve\\_novogo\\_ledokola.html](http://www.korabel.ru/news/comments/v_kitae_obyavili_o_stroitelstve_novogo_ledokola.html) (accessed: 12 June 2016).

it is also possible that with the increasing of China and a possible weakening of Russia due to the sanctions of the West, Beijing can decide to declare the "Marine Silk Road" as international water area. But then other countries may require recognition of Hainan Strait between the island and mainland China as a neutral area. The beginning of the serious dispute between Russia and China regarding the NSR would be in the interests of the West oriented to raw containment of China.

For the West the emergence of China in the Arctic basin is even less desirable prospect than all the Russia's Arctic claims. That is why many western experts are trying to prove to Moscow that the emergence of China in the Arctic creates a "regional threat, and first of all — for Russia".

In contrast to these assertions Beijing uses rather different approaches in the Arctic. China prefers to be blocked on Arctic issues with the countries whose positions are not as strong in the presence of the great powers of the region, such as Russia, the United States and Canada [6, p. 37—44]. China is seeking benefits, actively working with the "small" countries [7, p. 40—45]. One of the most attractive partners for China is Norway. Both sides at every opportunity actively discuss issues of cooperation in energy sector. Chinese companies are very interested in the experience of the Norwegian partners in deepwater drilling, and for their part they are ready to invest in Scandinavian projects. The first scientific station "Yellow River" in New Ålesund in Svalbard was opened thanks to Norway already in 2004, which provided for China not only the territory, but also the technical basis. Station "Yellow River" was built by the Norwegians, which still provide the service of this station.

Denmark also largely supports the growing role of China in the Arctic. Cooperation of Denmark and China, initially expressed in enhancing of trade between the two countries, is gradually developing into a close partnership. The reason for this are the Greenland minerals. Copenhagen hopes to benefit from the reduction of the Greenland ice sheet, which will allow to extract rare earth metals there. And China is going to become the main buyer of these resources. The current monopoly (97% of world production of rare earth metals is accounted for by China) is a serious concern in the United States and the European Union, including the rare earth metals in a list of 14 strategic scarce raw materials<sup>4</sup>. Sichan Xinue Mining Corporation has become investor of great international project in mining at the Greenlandic Isua iron ore deposit. According to experts view, if it becomes successful, other Chinese companies such as Jiangxi Zhongrun Mining

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<sup>4</sup> They are used in high-tech industries: electronics, nuclear engineering, mechanical engineering, metallurgy, chemical and glass industries. Restricting of the supply of rare earth metals from China had a negative impact on the Japanese, US and European manufacturers.

and Jiangxi Union Mining will join it, which have already explored here deposits of copper and gold<sup>5</sup>.

Iceland is important for Beijing as a firm base for a breakthrough in the Arctic [8, p. 88]. China in the midstream of the financial crisis of 2008 provided the country with a currency swap in 406 million euro to support the banking system. Beijing released Reykjavik several significant loans on extremely favorable terms in 2012. China signed an agreement with Iceland on cooperation in the Arctic, as well as the agreement on free trade area, which entered into force in 2014. The Chinese company China National Offshore Oil Corporation announced a deal with the firm Eykon Energy for exploration of oil reserves off the southeast coast of Iceland<sup>6</sup>. The Chinese investments came into the economy of Iceland. The Chinese felt a taste of luck in Iceland and almost went too far. A number of Chinese billionaires privately tried to buy some islands in the north-east of the country with a total area of over 300 sq. km for "business tourism", as it was officially announced. According to Russian experts, the real purpose of such purchases was most likely the creation of "stationary military bases and communications". Iceland was able to abandon this offer.<sup>7</sup> Soon there was a ban imposed by law to sell the land parcels, which could potentially be used for building bases there. Today, Iceland is the main China's lobbyist in the Arctic Council. Reykjavik convinces the colleagues that the adoption of Beijing as a permanent member will attract Chinese investments in environmental work and collective research in the region. However, Sweden, USA, Norway come out against it. Russia probably does not have sense to lobby China in the Council, as Iceland does and what some Chinese experts say about.

China develops cooperation with Canada in the field of energy production, mainly due to the rapid spread of China's economic expansion in the energy sector in Canada. In recent years, the sums of Chinese investments in Canada's energy sector have been increased significantly, the Chinese companies buy significant stakes in oil and gas projects of the North American partner. China has become the owner of the entire parcel of shares of the Canadian company Athabasca in Alberta, where 85% of world oil sands are concentrated<sup>8</sup>. From 2009 to 2011 China bought shares in such Canadian companies as Teck Resources, ConocoPhillips, Daylight Energy. And apparently,

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<sup>5</sup> Arkticheskaia strategiiia Kitaia. URL: <http://www.daokedao.ru/2013/06/24/arkticheskaya-strategiya-kitaya/> (accessed: 13 June 2016).

<sup>6</sup> Arkticheskaia strategiiia Kitaia. URL: <https://newsland.com/user/4297762863/content/arkticheskaiia-strategiia-kitaia/4492902> (accessed: 13 June 2016).

<sup>7</sup> Marshruty «kitaiskogo ledokola» v Arktike. Mezhdru politikoi i ekologiei / Luzianin S.G. URL: <http://mgimo.ru/about/news/experts/238775/> (accessed: 13 May 2016).

<sup>8</sup> Kitai skupaet pesok v Kanade. 11.01.2012. URL: <http://www.dal.by/news/79/11-01-12-29/> (accessed: 13 June 2016).

China is not going to stop. Canada, in turn, is trying to diversify its energy market, which is now heavily focused on the United States.

As Chinese *China Daily* noted 6 June 2013, China intended to set up in Shanghai China Nordic Arctic Research Centre — CNARC, on the basis of PRIC, with Danish, Icelandic and Norwegian institutions. Chinese experts, holding their ground in the Arctic, introduced in scientific and political use the definition of China as "near arctic power", identified six areas of multilateral and bilateral cooperation of China in the Arctic: a) research, b) natural resources, oil and gas, and c) tourism, d) Arctic shipping routes, d) the use of high technology in the development of the regional economy, and e) culture and education. In addition, research is becoming a tool of soft power at the initial stage of the international cooperation in Arctic [9, p. 43—45].

Rapprochement of Beijing with Moscow is going on, as well as the formation of a strategic alliance between Russia and China in the Arctic [10, p. 24—35]. In system of energy policy of Russia and China, the Arctic is considered as a basis for sustainable development of the Russian-Chinese relations [11, p. 15—22]. As one of the Arctic countries, and the largest by territory and mineral resource reserves, Russia has a unique opportunity for full-scale development of these reserves and to use financial, human and technological resources of China, possessing advanced technologies for resource extraction and searching for partners in their development<sup>9</sup>. China, as well as a number of other non-Arctic states, lays claim to the natural resources of the Arctic. In the future this may lead to an aggravation of rivalry with Russia, having abundant resources in the polar region [12, p. 2—9].

Russia became the first point of the visit of Xi Jinping as the new chairman of China 22—24 March 2013. In the course of this remarkably pragmatic, in many respects historical visit, 35 documents were signed aimed at the development of cooperation between Russia and China in the field of energy, metallurgy and electric power industry, food security, agriculture, environment, tourism, information and cultural exchanges, the control of migration, investment, insurance and interbank activity<sup>10</sup>. Agreements on the supply of oil and gas in China have been signed. In 2014 Rosneft and China National Petroleum Corporation (CNPC) agreed to jointly study the Zapadnoprinovozemelsky area in the Barents Sea, as well as Yuzhno-Russky and Medynsko-Varandeisky sections in Pechora Sea. The agreement between CNPC and Gazprom is in force for the exploration of oil and gas fields in the Arctic and the deal is finished for purchase of 20% shares of the project Yamal LNG. The construction of the plant for the production of liquefied

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<sup>9</sup> Anan'eva M.N., Grachev P.A. KART-BLANSh. Arktiku možno sdelat' rossiisko-kitaiskoi URL: [http://www.ng.ru/economics/2014-03-20/3\\_kartblansh.html](http://www.ng.ru/economics/2014-03-20/3_kartblansh.html) (accessed: 13 June 2016).

<sup>10</sup> Frolova I.Iu. Ob itogakh vizita predsedatelia KNR v RF. URL: <http://riss.ru/analitics/3254/>. (accessed: 13 June 2016).

natural gas capacity of 16.5 million is going on within this project, at the resource base of the South Tambey field, the development of transport infrastructure, including the sea port capable of accepting of large-capacity LNG tankers and the airport near Sabetta village in the area of the Gulf of Ob. The Chinese investors have expressed their willingness to invest in the construction of a new deepwater Arkhangelsk sea commercial port and railway Belkomur (White Sea — Komi — Ural), which will shorten the way from Siberia to the White Sea by 800 km. Cargo turnover of the new port area will amount to 30 mln. tons per year<sup>11</sup>. China developing its fleet, hopes in the coming period on the Russian nuclear fleet. According to the vice-premier of Russia, Chairman of the State Commission for the Development of the Arctic D. Rogozin, in accordance with the Complete Plan of the development of the Northern Sea Route, approved in June 2015, a radical renewal of the icebreaker fleet of Russia is provided. In 2017, 2019 and 2020 the Russian fleet will be replenished with three new nuclear icebreakers. In the near future the project of the super-icebreaker capacity of 130 MW will be developed and, which will surely break through the way for super tankers with deadweight of 200 thousand tonnes and more<sup>12</sup>.

On the other hand, China uses contradictions of major powers in the region. At the same time Beijing makes it clear for Moscow that the prospects of the mutually beneficial projects in the face of threats and economic sanctions from the West are more significant than resistance to the penetration of China in the Arctic. China is trying hard to convince Russia that Russia alone will not be able to master the Arctic resources and offers investments for the purpose of creating a tripartite joint ventures involving advanced western (Norwegian) technologies, without which Russia reportedly unable to conduct extraction of raw materials from great depths. Beijing also aims to deliver its geophysical and drilling equipment to Russian enterprises. At the same time, Chinese manufacturers want to provide technical support for its products, as well as monitoring of operating drilling equipment in difficult Arctic conditions. Beijing also intends to have a permanent "polar" fleet, accelerated works to build it are already underway. In addition, China expects to have special aircrafts, able to land at the North Pole. Thus, China's actions in the Arctic are on the rise because China has the scientific, economic and financial capabilities for it. And every year they will only grow also due to the status of observer in the Arctic Council.

China will pursue the role in determining the political frameworks and legal basis for future activities in the Arctic. "Unlike the "polar five" China, Japan and South Korea do not have the

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<sup>11</sup> Kitaitys zainteresovalis' stroitel'stvom Arkhangel'skogo glubokovodnogo morskogo porta. URL: <http://www.dvinainform.ru/politics/2013/04/22/13845.html> (accessed: 13 June 2016).

<sup>12</sup> Ponomarev V.A. Severnym putem idete, tovarishchi! // Sever Press. 2015. URL: <http://goo.gl/utaqu0> (accessed: 13 June 2016).



official Arctic strategies in which the priorities of their Arctic policies would be clearly formulated, but their interests in this region of the world are obvious. They are mostly made public by the representatives of expert and scientific community, and the authorities are cautious not to provoke the "official" Arctic states, including Russia, "[13, p. 124]. Apparently China already has the Arctic program, or at least worked out a plan of actions. According to Professor V.V Karlusov, in the second half of the 2010s China's possible priorities in the Arctic will be: 1) reaching of high level of scientific and applied and qualitative deepening of fundamental research of atmosphere, hydrosphere, lithosphere, and biosphere of polar latitudes with access to the forefront in the world of science in these areas by 2020-2030; 2) construction and operation of the system of permanent polar research stations in the Arctic; 3) the beginning of a large-scale industrial development of the whole complex of mineral resources in the Arctic; 4) the development of fish and other food and technical resources of hydro- and biosphere of the Arctic ocean to solve food security problems; 5) the creation of the only one transport-logistic and information and communication system in the Arctic, including high class trading and icebreaker fleet, the Chinese sea ports; 6) significant revenues of the Chinese tour operators from the development of international tourism on Arctic routes; 7) ensuring of permanent strategic military presence of China in the Arctic polar regions; 8) the general increase of the global status of China [14, p. 30].

The fact that Beijing is increasingly talking about the Arctic as a "global commons" stirs the particular control among the Russian experts. P. Boev supposes that "such approach is extremely unpleasant for Moscow, because the idea of sovereign control over areas in the Arctic does not fit it." <sup>13</sup> Moreover, dispute over the positions of Russia and Canada that the NSR and the Northwest Passage are the internal waters of these countries, may be counterproductive for China. Today it is clear that under existing legislation the rights of China in the Arctic are limited. The country can not claim for any Arctic territories, without calling into question the UN Convention on the Law of the Sea. Famous Chinese position that the country's right to sovereignty and non-interference in the internal affairs of a country should be overriding in international relations, hamper any attempt of China to dispute sovereignty of any of the Arctic countries. In this light, the statements of some Chinese officials that Arctic countries should take into account the interests of all mankind, and the region should be accessible to all, seem contradictory. It is unlikely that China will want to become one of the warring parties in the conflict over the Arctic and will seriously make territorial claims in the region.

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<sup>13</sup> Boev P. Chem opasna dlia Rossii druzhba s Kitaem. URL: <http://www.rbc.ru/newspaper/2014/09/22/56bdb5449a7947299f72c90c> (accessed: 24 October 2015).

Many experts agree that China will acquire much more from cooperation with the Arctic countries, than from an aggressive policy to extend its influence in the region. At the same time, China is interested in blocking all the attempts of Russia to maintain, and if possible to expand its special status in the Arctic. On a number of important aspects China's ambitions in the region are close to the US approach: both countries want the principle of "free hand", though in different ways. However, our countries have much more common interests [15, p. 94]. Russia and China are interested in the development of transit along the NSR, the creation of joint centers of ecological tourism. Russia is ready to involve the Chinese mining companies to the development of hydrocarbon resources on the shelf, as well as their investments for the development of coastal infrastructure. We are interested in developing and exporting of scarce ore mineral resources located in the Arctic zone of Russia to the markets in the Asia-Pacific region. In turn, as already noted, China is interested in access to the hydrocarbon resource base of the Arctic, including the rich fisheries in the Arctic Ocean.

Based on the above, it should be noted that China will continue to hardly strengthen its policy in the north, but will do it gradually, using soft power and trying to find the approval of the other parties. According to Ambassador Extraordinary and Plenipotentiary of the People's Republic of China in the Russian Federation Li Hui, the Chinese party in the development and exploration of the Arctic pays attention to intensification of cooperation and exchange of Arctic experience, improvement of practical cooperation on a multilateral and bilateral basis, as well as expansion of opportunities for public participation, scientific research Institutes, enterprises in the Arctic cooperation. [16] At the same time, it is important to consider that the Arctic for China is important, but not the top priority in the foreign policy of the country.

#### ***Scientific and technological capabilities of the Republic of Korea in the Arctic***

In the forefront of the increased interest of the large world's powers and the Arctic states to the development of the Arctic resources, the Republic of Korea is also seeking to keep up with them, and to secure a certain position in the region. The priorities of the activities of Seoul in the Arctic are: the strengthening of relations in the framework of cooperation with the Arctic states; the development of research activities and the formation of a new model of business activity in the Arctic; improving the legal and institutional infrastructure<sup>14</sup>. All this is necessary in search for answers to the challenges facing the Arctic, such as global warming, environmental protection, the use of the new economic opportunities offered in the Arctic.

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<sup>14</sup> Natsional'naia gordost' i kommercheskie vozmozhnosti vlekut luzhnuiu Koreiu v Arktiku.13.11.2013. Арктику.13.11.2013. URL: [http://russiancouncil.ru/inner/?id\\_4=2673#top-content](http://russiancouncil.ru/inner/?id_4=2673#top-content) (accessed: 24 October 2015).

in South Korea seven departments deal with the Arctic issues: Ministry of Foreign Affairs, Ministry of Science, Technology and future planning, Ministry of Commerce, Industry and Energy, Ministry of Environment, Ministry of Land-use, Infrastructure and Transport, Ministry of Maritime Affairs and Fisheries and the Korea Meteorological Administration. South Korean authorities create administrative and legal base for Arctic operations. The "Plan of activation of the Arctic regions" was accepted and published In November 2012, it provided the elaboration and adoption of an appropriate legal framework, the study of the major Arctic states legislation governing activities in the Arctic, government support for scientific research and development related to the Arctic sea transportation, fisheries, shipbuilding, development and production of natural resources, forming of comprehensive database on the Arctic issues, linkages and cooperation between relevant research institutions at home and abroad, training of specialists in the Arctic and Antarctic issues, as well as attracting of powerful members of the Arctic Council for cooperation and the development of specific business models of Arctic exploration<sup>15</sup>.

In 2013 the project was further developed in the form of a "Plan of implementation of a comprehensive policy for the Arctic", arranged with the participation of a number of South Korean authorities — the Ministry of Ocean and Fisheries, the Ministry of Industry, Foreign Trade and Resources, Ministry of Land and Transport. Arctic Policy Implementation Plan contains four basic ideas: calls for increase of the international cooperation in the Arctic, the active participation in the Arctic Council and the deepening of bilateral cooperation with the Arctic states; It supports more active climate research and development in the region, including plans to improve the research infrastructure; It defines the business card about the Arctic, which will include measures to enhance the cooperation with the Arctic countries in shipping and port development, including the development of the Arctic route, shipbuilding, construction of offshore oil platforms, energy and resource extraction; It provides for the establishment of legal institutions, including new laws supporting Arctic activities, and the establishment of the Arctic Information Centre [17, p. 27—31].

Analysis of the official website of the Korea Polar Research Institute (KOPRI) indicates that the national program of the development of the polar regions under the auspices of the Government of the Republic of Korea has been realized since 1987, when the Korea Research Development Institute of the world's oceans (KORDI) established Polar Research Center, PRC. In course of time, the Polar Research Center had a few transformations and in 2004 it was reorganized into Korea Polar Research Institute (KOPRI), and has become the independent

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<sup>15</sup> Cherkashin P. Plany Respubliki Koreia v otnoshenii Arktiki i perspektivy rossiisko-iuzhnokoreiskogo sotrudnichestva v etom regione. URL: [http://russiancouncil.ru/blogs/dvfu/?id\\_4=1433](http://russiancouncil.ru/blogs/dvfu/?id_4=1433) (accessed: 24 February 2016).

operator of the national program for the development of the polar regions, initially — Korean Antarctic Research Program, and after 2004 — Korean Polar Research Program) [17, p. 31]. KOPRI is based in Incheon, the largest port on the west (Yellow sea) coast. Another center for polar research is established in the Korean Maritime Institute, KMI, which branches in Busan and Ulsan on the coast of the Sea of Japan are actively investigating the problem of the transport development of the Arctic and polar logistics. The third center for polar research is being now formed at the Research Institute for Gangwon, RIG, based in the city of Chuncheon [17, p. 31]. In April 2002 the Republic of Korea joined the International Arctic Science Committee<sup>16</sup> and began to carry out the Arctic at the research station Dasan in the settlement of Ny-Ålesund on Svalbard (Spitzbergen). "The first Korean ice-breaker Araon was built in November 2009, which carries out research activities in the Arctic Ocean"<sup>17</sup>.

The Republic of Korea pays great attention to strengthening of the international cooperation in the sphere of polar research, developing cooperation with a number of foreign research institutions involved in research of the polar regions. These include: British Antarctic Survey; China Polar Research Institute in Shanghai; Alfred Wegener Institute for Polar and Marine Research; Russian institutes: Arctic and Antarctic Research Institute in St. Petersburg and the Shirshov Institute of Oceanology; The French Polar Institute Paul-Émile Victor; Japanese National Institute of Polar Research [15, p. 98], the Northern (Arctic) Federal University named after M.V. Lomonosov. South Korea was the organizer of the Arctic Science Summit, which was held in Seoul in 2011, with the assistance of the International Arctic Research Committee. According to some reports, South Korea spends on Arctic research almost as much as the US.

Considering the polar activity as one of the areas of international cooperation, the Republic of Korea aims at great activity in connection with opening commercial and technological opportunities in such sectors as shipping, shipbuilding, offshore technologies and fishing industry. The question arises: what caused such an interest of Korea in the Arctic, which technological capabilities the South Korean industry offers to use in high latitudes?

*Firstly*, the country is dependent on energy imports. In 2013 it imported more than 50% of hydrocarbons from Saudi Arabia, Kuwait and the United Arab Emirates; Qatar, Indonesia and Malaysia. Information about the Arctic oil and gas reserves, of course, causes interest of Seoul. It is

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<sup>16</sup> International Arctic Science Committee (IASC) was established in 1990. Its Board includes representatives of Canada, China, Denmark, Finland, France, Germany, Iceland, Italy, Japan, Netherlands, Norway, Poland, Russia, the Republic of Korea, Sweden, Switzerland, UK. Russia is presented by the Russian Academy of Sciences.

<sup>17</sup> The name of the vessel is a combination of Korean words. The name "Araon" consists of two words: "ara", which in Korean means "sea", and "on", that is "full", "whole". That is, "Araon" is a vessel capable to surf all seas and oceans.

expected that South Korean companies and experts will actively participate in the development and production of energy resources in the Arctic. The country is ready to invest in the projects for search of deposits in the region.

*Secondly*, the interest of the Republic of Korea to the Arctic is caused by the ability to reduce transportation costs using the NSR. Korea made the first trip using the NSR in 2013, it started in the port of Ust-Luga and ended in the Korean port Dzhanguang. Korean ship also passed along the NSR, delivering equipment for the marine terminal in Yamal.

Speaking in Arkhangelsk (September 2015) at the International conference of representatives of the member states of the Arctic Council, observer states and the international scientific community "Ensuring of security and sustainable development of the Arctic region, keeping of ecosystems and traditional ways of life of indigenous peoples of the Arctic," Ambassador for Arctic Affairs Kim Chang said that this experience greatly enriched the knowledge of the Republic of Korea on the exploitation of Arctic shipping routes. In 2014—2015 the country made the commercial crossings along the NSR, to determine the economic feasibility of transportations on this route.

*Thirdly*, with the beginning of a new era of development of the Arctic resources and opening of the sea routes in the region, there is increase in demand for offshore oil rigs and special vessels, such as icebreakers and ships of ice navigation. The Republic of Korea is interested in the Arctic, primarily in the possibility of transporting of the liquefied natural gas, scientific research, sustainable and safe management of fisheries, new northern sea routes, as well as the prospects of the orders from the Arctic nations for Korean shipyards for the construction of special vessels and icebreakers.

The country is a large importer of hydrocarbons (9th place in the world for gas import and the 5th largest in oil import), and the opportunities to diversify its sources of supply are certainly important for the country.

South Korea is interested in the creation of new sea northern routes as it is one of the most important shipbuilding powers of the world, which is able to build icebreakers and other special vessels, oil platforms for export. South Korean shipbuilding companies Hyundai Heavy Industries, Samsung Heavy Industries, Daewoo Shipbuilding and Marine Engineering (DSME) are among the most competitive in the world for the production of high-tech vessels with high class equipment [15, p. 99]. Remarkable part of the global construction of icebreakers and special LNG carriers is made at the South Korean shipyards<sup>18</sup>.

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<sup>18</sup> The shipbuilding industry of South Korea consists of about 300 plants, 30 of which can and build ships with deadweight of more than 10 thousand tons. The main companies are the so-called "big three": HHI (Hyundai Heavy

DSME received from the Russian shipping company "Sovcomflot" an order for the construction of 9 LNG carriers in March 2014<sup>19</sup>. The contract amount is \$ 2.8 billion (the cost of each tanker is about \$ 300 million.). Director of the Institute of Arctic logistics at the Yongsan University (South Korea) Sungvon Hong, speaking at the annual international conference "Transport and logistics in the Arctic - 2015", pointed out that the Korean shipyard DSME builds icebreaking LNG tankers for the Russian project "Yamal LNG". DSME, ahead of competitors, designed specifically for navigation along the NSR ice class LNG carrier ARC-7. New ultra-modern transport vessel with cargo capacity of 170 thousand cubic meters is able to overcome the ice cover of 2.1 m thick<sup>20</sup>. Russian Maritime Register of Shipping (RS) signed a contract with the South Korean shipyard Samsung Heavy Industries Co. LTD on technical monitoring of the design and construction in 2015—2017 of a new series of Arctic shuttle oil tankers of the project 42K «Arctic Shuttle Tanker» with deadweight of about 42 thousand tonnes. New tankers are designed to implement complex tasks of transportation of hydrocarbons from Novoportovskoye field located in the north of the Yamal Peninsula, 30 km from the coast of the Gulf of Ob [18, p. 27—28].

Shipbuilding companies of South Korea are interested in obtaining an order for the construction of methane carriers and ice class and earth-based modular units for natural gas liquefaction plant for "Yamal LNG" project. In addition, South Korean shipbuilders are specialized in the construction of offshore drilling platforms, both mobile and stationary.

With such technological capabilities, South Korea is interested in promoting their products, in using Korean-made vessels for the economic development of the Arctic. Taking into account high competition in the world market of new vessels, the Republic of Korea is focusing on R&D and innovations, also in the construction of ships, meeting modern requirements in terms of environmental impact. Exports of ships is a prominent part of South Korean export, varying in the range of 8 to 12% of its total export. A special feature of this country is a strong economy monopolization by large commercial and industrial groups (the so-called chebols), which are supported by the state. This helps South Korea to support the development of the domestic shipbuilding, shipbuilding technologies and create new vessel designs that meet the latest requirements.

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Industries), DSME (Daewoo Shipbuilding & Marine Engineering) and SHI (Samsung Heavy Industries). These South Korean giants are also three largest shipbuilding conglomerates in the world.

<sup>19</sup> Koreiskaia verf' DSME budet stroit' ne 16, a tol'ko 9 tankerov dlia «Yamal-SPG». 10.07.2014. URL: [http://www.korabel.ru/news/comments/yuzhnokoreyskaya\\_verf\\_dsme\\_budet\\_stroit\\_ne\\_16\\_a\\_tolko\\_9\\_tankerov\\_dlya\\_yamal-spg.html](http://www.korabel.ru/news/comments/yuzhnokoreyskaya_verf_dsme_budet_stroit_ne_16_a_tolko_9_tankerov_dlya_yamal-spg.html) (accessed: 14 June 2016).

<sup>20</sup> Rossiia i Koreia dogovorilis' po Arktike. URL: <http://ks-yanao.ru/novosti/rossiya-i-koreya-dogovorilis-po-arktike.html> (accessed: 24 February 2016).

The interest of the Republic of Korea to the Arctic is largely associated with operation of the NSR, participation in transport for shipping companies in the country<sup>21</sup>, taking advantage of the largest South Korean ports — Busan (known as the "sea capital of the Republic of Korea"), Ulsan (known as the "capital of the Republic of Korea's economy," the largest shipyard in the world is situated in this city — "Hyundai Heavy Industries", the port has 59 berths for liquid bulk goods) and Kvanyan, which is the second largest container port in the country after a Pusan, by the results of 2014 the port handled 2.33 million TEU (equivalent to 20-foot standard container). Korean shipping company TPI Megaline will carry heavy loads for three years to new Arctic port of Sabetta in Yamal. Another major player in the Korean market — company Unico logistics — is currently exploring the possibilities of transportation of heavy cargoes on the NSR and further along the river Ob in Pavlodar (Kazakhstan). According to experts, the Korean government actively supports companies interested in using the Northern Sea Route. The Russian Arctic resources make up a large part of the cargoes transported on the NSR in Korea. In 2013 8 of the 28 international trips on the NSR belonged to Korea. "Cargoes transported to Korea, were gas condensate and naphtha. The country in turn, exported aviation and diesel fuel"<sup>22</sup>.

The development of the NSR will allow the country not only to increase the production of the Arctic class ships, but also to multiply the turnover of the Korean ports. Due to the reduction of travel time of the container traffic between Korea and Europe in about two times, significant saving in transport costs is achieved. In connection with the prospects of development of the Arctic resources and the use of the North-East and North-West passages as international maritime routes, a number of experts in South Korea point to the need for Seoul to take steps that can ensure participation in the development of the main ports of the Arctic and North Pacific, and also can meet the needs of the countries concerned in the various kinds of ice class vessels, which will be needed more and more with the development of the region.

Realization of the plans is expected by strengthening of the cooperation with the most influential members of the Arctic Council, revitalization of navigation on the NSR, participation of the Republic of Korea in the program "Polar Code" arranged by the International Maritime Organization, regulating requirements and shipping rules in the Arctic, and reduction of fees for the use of equipment and facilities of the Arctic ports along the NSR. Northern Sea Route will play an important role in the implementation of the "Eurasian Initiative" — a national strategy of the

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<sup>21</sup> The largest shipping companies of the Republic of Korea are: Hanjin Shipping, Hyundai Merchant Marine, STX Pan Ocean и Korealines.

<sup>22</sup> Iuzhnaia Koreia prokladyvaet morskoi put' v Arktiku. URL: <http://regnum.ru/news/1905228.html> (accessed: 24 February 2016).

Republic of Korea. The country makes great efforts to ensure safe navigation in the Arctic, both by the relevant scientific research and by training in Russian educational institutions. In addition, it is intended to increase the base for conducting the Arctic research, as well as to concretize projects of natural resource development in the Arctic. Pestsov S.K, Tolstokulakov I.A., Labyuk A.I., Kolegova E.A. (Institute of History, Archaeology and Ethnography of the peoples of the Far East, Far East Branch of RAS) point out that South Korea is at the very beginning of its Arctic way, it is increasing its technological and scientific capacity, forms a favorable international environment, gaining authority and strengthens bilateral contacts in the Arctic area. In July 2013 the South Korean government announced its intention to develop a national Arctic policy for the next fifteen years "[19, p. 5].

It is clear for Seoul that for the Republic of Korea it will be difficult to independently ensure the implementation of its economic interests in the Arctic, as well as to withstand competition in the region with China. And here, according to South Korean experts, the priority line is cooperation with Russia, as according to forecasts the largest hydrocarbon reserves lie in the Arctic region, which has in accordance with the UN Convention on the Law of the Sea the sovereignty and jurisdiction of the Russian Federation. In addition, in case of using the NSR as a new international trade route, it will be necessary to pass through the water area controlled by Russia, and to use Russian ports services, geonavigation system and icebreaking fleet. And it is taken account that Russia participate in the international system of partner management of the Arctic region, in particular, the Arctic Council and the Barents / Euro-Arctic Council (BEAC).

Y.V. Morozov and A.F. Klimenko, referring to the opinion of representatives of the Korean side, identify a number of specific initiatives to form a reliable partnership in the Arctic [20, p. 185]. *Firstly*, based on the "Plan of implementation of a comprehensive policy towards the Arctic" to work out and adopt at the government level, "general strategy of cooperation with Russia in the Arctic", and then to apply to Moscow with the proposal of signing the "master plan" of the resource, transport and logistic areas of the development of the Arctic region.

*Second*, to offer Russia to create new sectorial Committee for a new industry cooperation in the Arctic at the Russian-Korean Joint Commission on Economic, Scientific and Technical Cooperation. In addition, the Republic of Korea proposes to establish in the Russian sector of the Arctic joint research body — the "Russian-Korean Cooperation Center of study of the Arctic", which will later be identified as the main "the brains of the outfit" of the Russian-Korean cooperation in the Arctic.



*Thirdly*, together with Russia to initiate the establishment of a regional mechanism for multilateral cooperation in the Arctic, with conventional name "Asia-Pacific Arctic Council" that will allow Seoul to expect for increase of their status and role as one of the leading countries of the Arctic region, fulfilling the function of the gateway connecting Russia, Asia-Pacific region and the Arctic.

*Fourthly*, in order to prepare qualified specialists in the Arctic region it is offered to send Korean experts to study in educational institutions of Russia and attract Russian polar specialists in Korea, as well as to strengthen cooperation with the Northern (Arctic) Federal University named after M.V. Lomonosov (Arkhangelsk), with its structural subdivision — the Institute of Shipbuilding and Marine Arctic technology [20, p. 185].

In general, it should be noted that in concept of construction and development of bilateral cooperation with Russia in the Arctic, the Republic of Korea is based on the fact that the process of development of the Russian Arctic areas in order to consolidate their status, infrastructure, development and production of natural resources, is rather expensive, and would require from Moscow large-scale investments, including foreign ones. It is necessary to check the projects of possible participation of the South Korean business in the development of natural resources in the region by acquiring the share of deposits, the development of nuclear technologies and new materials, the modernization of ports. South Korea is ready to offer investment in exchange for guarantees of free access to the use of the NSR as well as in the Russian sector of the Arctic for research and exploration work, offering necessary service for it. Thus, Seoul aims to gain access to the development of energy, mineral and other resources of the Arctic region, the use of logistic potential of the NSR, gaining of the Russian market of specialized large-capacity shipbuilding, implementation of scientific-technical and humanitarian cooperation in terms of getting from Russia a wide range of expertise, experience and technological skills relating to the implementation of research and economic activities in the Arctic.

Based on the Russian interests, the possible areas of bilateral cooperation with the Republic of Korea in the Arctic are cooperation in the development and modernization of the Russian Arctic ports, which is confirmed by signing of a memorandum of mutual understanding in January 2014.

This area can be called one of the most promising due to high level of technological development of South Korea, as well as rich shipbuilding experience, including specialized vessel construction, and development of the port infrastructure. Russia is also interested in what the Republic of Korea offers: investment, information and communication technologies, scientific

and technical cooperation and joint research and development. The Republic of Korea initiative to establish in the framework of the Russian-Korean joint commission on economic and scientific-technical cooperation of a separate sectorial Arctic Committee makes sense and can be implemented. This will provide rather effective platform to find and discuss specific projects of bilateral cooperation in the Arctic region.

Other proposals of the Korean side do not fully meet the national interests of the Russian Federation. It seems unlikely that the proposal of the Korean side to establish "the Russian-Korean Cooperation Center for study of the Arctic" will have a positive response in view of Seoul's focus for getting foothold for its entry into the Arctic region, for which this structure is considered. Russia also has no interest in the creation of "Asia-Pacific Arctic Council," where issues of development of the Arctic, regionally or globally could be discussed. Feasibility of joint development and adoption of the "master plan" of the Russian-Korean cooperation in the Arctic is questionable in terms of obligations between the parties [20, p. 186]. Therefore, the need for accepting the document, involving large-scale bilateral cooperation in the Arctic, whether it is a "plan", "concept" or "strategy" — is problematic. The introduction of the practice of humanitarian and educational exchanges with the NARFU and its members, it is possible in the case of similar steps by South Korea to ensure the transfer of expertise and knowledge on issues of interest to Russia (information technology, shipbuilding and others).

Thus, the Republic of Korea is one of the most active players in Arctic issues. Despite the fact that the Arctic policy is not independent, the government is actively involved in the working groups of the Arctic Council. The country supposes that the development of the NSR will not only increase the production of the Arctic class ships, but also significantly increase the turnover of Korean ports with ports of the Western Europe. Recently the Republic of Korea has more partnership relations with Russia among the Arctic countries.

### ***The arctic policy, security of Japan***

Japan is not the Arctic state, but it does not want to stay away from the global processes of assessment, development and use of various resources and capabilities of the Arctic region. Despite the fact that the beginning of Japan's activities in the Arctic started only at the beginning of XX century, Tokyo recently has taken full strategy in the region.

Japan applied for the permanent observer status in the Arctic Council in June 2009. The Japanese representatives attend its meetings as observer temporary member since 2010, and experts have actively participated in meetings of the working group of the Arctic Monitoring and Assessment Program. The report "about international cooperation during observation for the

cryosphere" came out in Japan in 2010, the working group on Arctic research was organized. This group presented the report with recommendation to create a consortium to conduct Arctic research, as well as to begin studying the climate change in the Arctic. This consortium has been established [7, p. 40—45]. For the development of the government's Arctic strategy the expert "Japan meeting on the Arctic" was arranged in 2010, aimed to identify the ways to involve the country in control of the region in view of its economic potential, the possibility of taking advantage of the Northern Sea Route (NSR). The so-called "Arctic Task Force" was created in the structure of the Japanese Foreign Ministry in September 2010, it was engaged in comprehensive analysis and monitoring of the changes occurring in the region in several areas: the economy, security, the environment and the international law of the sea [21, p. 118].

the Japan Institute of International Relations got involved in the development of diplomatic strategy in the Arctic in early 2012. They launched the research project Arctic Government and Japan's Diplomatic Strategy, one of its results was cognominal 97-page document, which is the most detailed exposition of Japanese views on the problems of the study and development of the Arctic for today [6, p. 73—80]. According to scientists, the Arctic key areas of foreign policy of the state can be: the establishment of mutually beneficial bilateral relations with the Arctic states with the purpose of joint development of deposits and providing of the development of the region (search for common ground, avoiding conflicts of interest); compliance with the UN Convention on the Law of the Sea 1982; strengthening of the cooperation with the United States on Arctic and security issues; strengthening of Japan's position with regard to environmental issues; promotion of the use of Japanese technology and knowledge; development of diplomatic leverage in the Arctic; strengthening of the state Arctic policy (establishment of the Arctic Committee in the government) [6, p. 74].

Under the chairmanship of Prime Minister of Japan S. Abe, the parliamentary league was founded in 2012, whose main task was the creation of conditions to ensure the safety of the NSR. In March 2013 the post of the ambassador was established, who started to make contacts with the representatives of the Arctic Council countries. The Government of Japan on the base of the decision of the Parliament has included for the first time the topic of the Arctic development in the Marine general plan. Ministry of State Land and Transport has received a separate budget for the study of economic and other perspectives, as well as the benefits and legal aspects of the use of the NSR. Research and forecasting of future changes in the status of the Arctic ecosystem as a result of current climate, oceanographic changes were conducted in 2011 till 2016, in the framework of five-year program GRENE formed for the study of climate change in the Arctic by Japan's Ministry of

Education and Science. The program is provided from the state budget, the size of its annual subsidy is equal to 600 billion yen. About 300 scientists from 35 research institutes and universities participate in the research of this program<sup>23</sup>. In May 2013 Japan got the observer status in the Arctic Council, which allows it to estimate more deeply the problems of the Arctic, the balance of powers in it, and its place in the main areas of the Arctic activity and development.

A.A. Kurmazov, the member of the Russian-Japanese Commission for the settlement of claims relating to fisheries, the first secretary of the Russian Embassy in Japan (Tokyo), on the basis of deep analysis of the Japanese mass media, highlights the most important issues of Arctic problems, which are of particular interest in Russia for the Japanese government. These are: the possibility of use of the Northern Sea Route; research of the Arctic seas; increase of cooperation and at the same time competition between Russia and China and other Asian countries in the joint development of resources in the Arctic, primarily hydrocarbon deposits; accounting of the Russian position related to its interests in the Arctic by military and technical means [4, p. 59].

First of all, Japan is interested in the transit potential of the NSR, opening new possibilities for optimization of Japanese exports to Europe. Having at its disposal one of the largest merchant fleets in the world, Japan can benefit from the NSR, which reduces transit time from Hamburg to Yokohama approximately in 40% and fuel consumption — in 20%, compared with the route through the Suez Canal. The Japanese believe that Hokkaido, with its ports can become a kind of "gateway" of this important traffic way. And Tomakomai is expected to become the homeport<sup>24</sup>. The port is located at a distance, for example, from Murmansk that large container ships can go for two weeks. That is, it is quite possible to arrange the voyage for one month there and back. According to Japanese experts, this port could become a transit point of the NSR where the northern conditions will no longer stop shipping. A delivered goods can be transported from this port further, to the southern parts of Asia.<sup>25</sup>

The availability and the ability to use the NSR is considered widely in Japan. The country has the Center for the Study of the prospects of shipping along the NSR. The Japanese side can see not only the positive aspects, but admits that there are problems that can potentially have a negative

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<sup>23</sup> U Iaponii kontsentrirovannyi interes k Arkticheskoi problematike / A. Kurmazov. URL: <http://www.eastrussia.ru/material/u-yaponii-kontsentrirovannyi-interes-k-arkticheskoy-problematike/> (accessed: 15 June 2016).

<sup>24</sup> Port Tomakomai is located in Tomakomai river estuary to the south-east of Sapporo. The port is equipped with offshore berths with maximum depth up to 24 m, which are able to accept large tanker vessels carrying up to 280 thousand tons. The main items of import of the port are coal, wood and wood products, oil and oil products; export — automotive and industrial equipment. The total turnover of sea transportations for one year in Tomakomai is 43 million tons of cargoes. The port is equipped with modern equipment for loading and unloading, as well as large storage spaces and storage facilities for oil. Construction and repair works are carried out by shipbuilding port companies, which have docks and slipways at their disposal.

<sup>25</sup> Iamada E. Vorota v Aziyu — vygoda Hokkaido // Hokkaido simbun. 2014. 2 avg.

impact on the efficiency of its operation. Severe climate conditions may alter the duration of navigation and speed of pilotage, in this connection, additional the icebreaker fleet will be needed for and as a result — there is a significant rise in operating the NSR. Weak population of the coastal areas and poor infrastructure of Russian ports in the Arctic, particularly its eastern part, also upsets Japan. At the same time, the Japanese experts predict that with cooling of relations with Europe because of the Ukrainian events, Russia will increasingly turn towards Asia. The flow of energy in Asian countries will be increased, and the role of the NSR will also be increased, in spite of all the problems. The Japanese fleet is ready to escort the Japanese ships on their way through the Arctic routes. Japan floated out its first icebreaker called Shirase in 2009. There are three icebreakers in total in Japan and it is expected to expand the icebreaking fleet. Japan intends to launch a weather satellite for monitoring of ice conditions in the Arctic seas [15, p. 102—108].

It is planned to launch in Japan a project for creation of the newest unmanned underwater bathyscaf to study the Arctic waters. The task of the device is collecting of oceanographic data. It is assumed its length will be about 10 meters, and it will be able to function without refueling up to several tens of days. The data obtained will be used to ensure the safe passage of ships through the ice<sup>26</sup>. Stock of orders for the construction of tankers for use in the NSR has been forming. At the same time, Japanese investors believe that the time for a large-scale investments in the development of Arctic natural resources or the use of the northern sea routes has not come yet, and they are cautious in this respect.

It should be noted that since 1993 the Research Fund of ocean policy has become the center coordinating the study of Arctic issues and developing scientific and expert grounds of policy in this area. The Fund acts as the head structure in the programs for the study of the NSR. Specifically, the subject of study of Japanese experts were not only technical, but also the international legal and military strategic aspects of the operation of the NSR. Sluggish research related to the NSC conducted in Japan since 1995, after the collapse of the USSR. The activation started after the East Asian neighbors of Japan started to deal much this matter, at the same time they are its nearest rivals for the development of the Arctic — China and South Korea.

Japan pays more attention to research with aim to get new knowledge about the marine biological and other resources and forecasting of climate change. At the same time, they think that natural and man-made processes in the Arctic affect global climate, economic, energy systems, in which Japan is included, as well as any other country [22, p. 9—11]. Development of observation

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<sup>26</sup> Iaponiia sozdast podvodnyi bespilotnik dlia issledovaniia Arktiki. URL: <http://www.arctic-info.ru/news/14-2014/aponia-sozdast-podvodnii-bespilotnik-dla-issledovania-arktiki> (accessed: 30 March 2016)

programs for the polar climate, biology and geology is carried out by the National Research Polar Institute (RPI), which is the leading research institution in this field [22, p. 9—11]. It was founded in 1973 as an inter-university center for polar research. In 1991, with the assistance of the Norwegian Research Polar Institute opened research station in the village of Ny-Ålesund on Spitsbergen (79° N. latitude), which is responsible for monitoring of air environment and radiological situation. In 2004, NRP was reorganized into an independent research institution, part of the state system of scientific and research organizations — research organization of information and systems. RPI since the beginning of 2000s, was reoriented from the Antarctic to the Arctic problems, actively participate in international research project — International Polar year, publishes several scientific periodical works in Japanese and English. The visit of the group of scientists of the RAS was arranged in July 2014, as per the invitation of the Ministry of Education and a number of Japanese research institutions to establish international scientific cooperation on the study of the Arctic. The members of the Russian delegation made a number of reports at the National Institute of Polar Research (NIPR) in Tokyo and at the University of Hokkaido, which caused great interest of Japanese experts.

The visit to the company Jamstec in Yokosuka (Kanagawa Prefecture) and to the research vessel Yokosuka with deep-sea manned submersible Shinkai 6500 attracted particular interest. Jamstec has a unique experience in the world ocean, including the successful trial production of gas hydrates on the continental slope of Japan in the Nankai area owned with her ultra-modern deep-sea drilling vessel Chikyu (in Japanese — "globe") [23].

With assistance of Russia and the United States the Japanese actively monitor the distribution of ice on the NSR. During pilotage, surface observation tools are insufficient to ensure safe navigation in difficult ice conditions, so as mentioned, unmanned underwater research vessel has been building. Observations from the water column will give a lot more information for safety of navigation, including the thickness of the ice and the formation of underwater ice ridges, as well as salinity, direction of currents, and more. The study of the state of Arctic ice is important also because the changes of the ice cover, especially if they happen quickly, will for sure affect the advances in climate and state of ecosystems. Taking into account the climate warming, the mobility of floating ice is increased in the Arctic, contributing to the formation of more of extended zones of compression, layers and ice deformation, wind-wave processes are enhanced, the number of icebergs is increasing. All this, in the end, creates additional hazard for vessels, increases occurrence of environmental pollution risks.

The leading Japanese organizations: Nippon Foundation and the Ocean Policy Research Foundation, financing research together with Norway and Russia have started to take an active

part in the international program of the NSR study (INSROP project). Consortium of polar environmental research was founded in Japan, which is focusing on increase of workforce capacity and links with the scientific community, both in Japan and abroad. Scientists are actively engaged in the development of methods of careful use of space and resource potential of the Arctic. In October 2015 Prime Minister Shinzo Abe at a meeting on the Integrated Maritime Policy Council said that Japan should become an important player in the area of the North Pole and develop relevant scientific technology, as well as play an active role in the development of international rules of navigation and exploitation of natural resources in the Arctic region<sup>27</sup>. The Government of Japan intends to join the negotiations on possible agreement on the rules of fishing in the central part of the Arctic Ocean, which is not included in the exclusive economic zone of coastal states<sup>28</sup>.

The state and major Japanese business companies show great interest in Arctic issues, as they are interested in access to deposits of natural gas and oil. This is due the recent lack of natural resources noticeable in the country, and dependence on energy import has increased, energy import provides 84% of country needs. Japan's demand for the natural resources of the Arctic became particularly urgent after the disaster at nuclear power station "Fukushima" in 2011 and in the light of the uncertainty of the future of nuclear energy of the country, providing up to 30% of its electricity needs. Most nuclear power stations in the zones of very high seismic activity has been already closed (or will be closed in the near future). Instead of nuclear energy, Japan intends to develop alternative energy sources — solar, wind, tidal and so forth. However, it will take a lot of time, and for this reason, in the short and medium term, Japan will continue to increase the consumption of traditional energy resources — oil and gas [15]. That is why Japan can not ignore the huge reserves of energy resources in the Arctic, other preferences which can be received in the development of the natural resources and Japan tries to expand its presence in the region. After the mentioned catastrophe, as it turned out, considerable part of the coastal and adjacent waters of Japan has become unsuitable for seafood production.

Japan is also interested in rare earth metals. Its experts study ways of their production in the Arctic, together with other Arctic countries, in order not only to obtain the necessary experience and information, but also to secure access to natural resources in the future. Japan strongly hopes that if it makes serious contribution to the Arctic research, in particular in the field of environmental protection, then it will receive additional preferences in using the NSR and in the

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<sup>27</sup> Iaponiia planiruet aktivizirovat' deiatel'nost' v Arktike. URL: [http://www.arctic-info.ru/news/16-10-2015/aponia-planiruet-aktivizirovat\\_-deatel\\_nost\\_-v-arktike](http://www.arctic-info.ru/news/16-10-2015/aponia-planiruet-aktivizirovat_-deatel_nost_-v-arktike) (accessed: 17 March 2016)

<sup>28</sup> Iaponiia primet uchastie v dialoge o rybolovstve v Ledovitom okeane. URL: <http://www.arctic-info.ru/news/14-03-2016/aponia-primet-ycastie-v-dialoge-o-ribolovstve-v-ledovitom-okeane> (accessed: 17 March 2016)

development of the Arctic resources. Japan does not admit for its direct competitors (China, Republic of Korea) to receive pre-emptive rights in the Arctic, and therefore seeks to monitor and review any changes and activities of all forces in the region that directly or indirectly affect the interests of the country, to use as accumulated experience in bilateral relations with the Arctic powers, as well as leading positions in key international organizations such as the International Maritime Organization.

The analysis shows that Japan seeks to find among the members of the Arctic Council those countries that are in need of raising funds for the development of the Arctic, as well as the allies who could balance the stronger Arctic powers. In this regard, Japan has made a bet on Norway, which takes favorably the Arctic claims of Tokyo. Thus, the common interests of two countries in the Arctic was fixed at the joint seminar on polar issues in April 2010, in Tokyo and at the international Arctic conference in Tromsø, Norway (January 2011).

Another object of interest from the part of Japan — Canada, which is also interested in attracting of foreign capitals and technology to develop its Arctic zone. In November 2010, Canadian and Japanese scientists made a successful experiment on gas production from methane hydrate, they drilled a hole on the shore of the Beaufort Sea. They managed to maintain gas production for six days, which was estimated by experts as a very good result. Although the industrial level of gas production from hydrate in the Arctic, according to experts, can be achieved not earlier than in 10-15 years, the experiment once again showed how inexhaustible energy potential the region has. According to some estimates, in the Arctic region of Canada there are reserves of methane hydrate, able to provide the needs of this country in gas for a few hundred years.

Judging by the publications in the Japanese media, Japan is strongly concerned about military and other activities of Russia to ensure its interests in the Arctic. But the order of the President of Russia V.V. Putin to strengthen the military component of the Arctic<sup>29</sup>, adoption of the new Maritime Doctrine of the Russian Federation<sup>30</sup>, is considered not only as a strengthening and increasing of the capacity of Russian military power in the Arctic, but also as attempt of Russia

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<sup>29</sup> Indeed, Russia for the last two or three years, has been increasing its presence in the Arctic in different areas. The Russian Defense Ministry, Russian Emergency Ministry and Federal Security Service of Russia strengthen their positions in the Arctic. United Strategic Command "North" — a new military structure on the base of the Northern Fleet was created and launched from December 1, 2014. Russian Defense Minister S.K. Shoigu said on October 22, 2015, that the establishment of the Arctic grouping of Russian troops will be completed by 2018, and Defense Ministry will finish reconstruction of six airfields in the Arctic in 2016-2017. As part of a comprehensive system of safety of the population and territories of the Russian Arctic, 10 complex rescue centers of Russia have been opened with a total staff of 16 thousand people.

<sup>30</sup> Russian President Vladimir Putin signed the Maritime Doctrine of the Russian Federation on July 26, 2015 in Baltiysk on board of frigate "Soviet Union Fleet Admiral Gorshkov" after the meeting, which was attended by Deputy Chairman of the Government of RF Dmitry Rogozin, Defense Minister of RF S. Shoigu, Fleet commander-in-chief V. Chirkov, General commanding Office of the Western Military District A. Sidorov.



to restrain increasing activity of the United States, Canada and other Arctic countries in the Arctic region. People start to realize that the deployment of military infrastructure in the Arctic is carried out to protect the national interests of Russia, it contributes to maintaining the balance of forces in the region and countermeasure together with law enforcement agencies and special services of the new challenges and security threats.

As recent events show, Japan uses all the possibilities of cooperation with Russia in the Arctic development to promote issues related to solving the problem of "northern territories." The status of the Kuril Islands and the Japanese-American Security Alliance represent a serious obstacle for the establishment of partnership relations between two countries. The prospect of whole year-round navigation along the NSR increases the value of the Kuril Islands (ports, warehouse infrastructure, facilities of the security systems), which will give a new impuls for the disputes about these islands [4, 6]. In addition, the Japanese media periodically raise the issue of violations of standards of use of the environment by RF and the "degradation" of indigenous small peoples of the North, Siberia and the Far East. Nevertheless, Japan is ready to cooperate with Russia, well aware of the scale of the potential benefits it can derive from these relationships. By establishing practical relations with Russia, Japan is seeking to take advantage of the potential of the Arctic and to find support of the RF in the confrontation to assertive China policy. Russia is considered by the Japanese government as one of the main partners in the development of Arctic resources and shipping along the Northern Sea Route.

Japan considers Russia as the most influential player in the Arctic and in the Arctic Council and with Russian support Japan hopes to get greater access to the Arctic for its energy and marine transportation companies and research institutions. [4] It is about expanding the list of Japanese energy suppliers, increase of traffic routes along the NSR. In order to receive it, Japan fully strives to master the Russian experience of navigation and operation of equipment in harsh weather conditions, with maximum benefit to take advantage of its sea ports with competitors, such as Singapore, Shanghai and Hong Kong. In May 2013 the Japanese company Inpex Sogrogation concluded agreement about joint development of two oil fields owned by Russia with Rosneft.

In November 2015, the head of "Rosneft" I.I. Sechin offered to Japanese companies to supply their ships and equipment for the development of the resources of the Russian shelf, including the Arctic, basing on the rights of one of the main technological partners — ship and marine equipment suppliers. Also, according to him, the Japanese shipbuilders and marine

equipment manufacturers have the opportunity to enter the Russian shipbuilding projects, particularly in the shipbuilding complex "Star"<sup>31</sup>.

Russia can also benefit from the strengthening of relations with Japan. Because Russian strategic interests gradually move from Europe to Asia, Russia should protect themselves in the event of unforeseen circumstances in the relationship with China and to establish close partnerships with other Asian countries. Although Beijing is still the most important trade partner of Russia in East Asia, Moscow should expand the list of East Asian buyers of its energy resources. Infrastructure of the energy projects Altai and Power of Siberia is still aimed only at China. For Russia, this is quite a serious motive for the expansion of the customer base and the inclusion of other countries of North-East Asia in it. In addition, Russia lags behind its main competitors in the field of technologies, which are necessary to conduct activity in the Arctic region. Japanese know-how in the field of energy production and marine operations can be useful for Russian companies. If Moscow and Tokyo are able to overcome the obstacles to dialogue, they will derive benefits not only in the Arctic but also in the countries of North East Asia.

Japan continues to actively cooperate with Washington in security issues. Japan considers the US as a military-political ally and relies on the support of the US government to obtain additional powers in the Arctic organizations and support for the exploitation of resources [6, c. 77]. In November 2014 the Governments of Japan and the United States signed a memorandum of joint research in the field of experimental extraction of methane hydrate in Alaska. The document was signed by Minister of Economy of Japan Yoichi Miyazawa, and US Ambassador in Japan Caroline Kennedy, in Tokyo at the International Conference "Producers and consumers of liquefied natural gas in 2014". The project will be arranged by the Japan Oil, Gas and Metals National Corporation (JOGMEC) and the State Laboratory of Energy and Technology of the US Ministry of Energy<sup>32</sup>.

They support their Arctic ambitions by appropriate financial and economic, scientific and technological base, as well as a significant political potential for the active participation in Arctic policy. Japan, forcing the process of joining the Arctic Council as an observer, wants to be a full participant in the future. Japan's Ministry of Foreign Affairs supports the establishment of a new international structure in the Arctic, which would be formed, in their opinion, not at the geographical basis, but by the presence of economic interests in the region.

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<sup>31</sup>Secin predlozhit' iaponskim sudostroiteliam postavlat' tekhniku dlia osvoeniia shel'fa. URL: [http://www.arctic-info.ru/news/06-11-2015/secin-predlozil-aponskim-sydstroitelam-postavlat\\_-tehniky-dla-osvoenia-sel\\_fa](http://www.arctic-info.ru/news/06-11-2015/secin-predlozil-aponskim-sydstroitelam-postavlat_-tehniky-dla-osvoenia-sel_fa) (accessed: 17 March 2016).

<sup>32</sup>Iaponiia i SShA dogovorilis' o sovместnoi dobyche gaza na Aliaske. URL: [http://www.arctic-info.ru/news/06-11-2014/aponia-i-ssa-dogovorilis\\_-o-sovmestnoi-dobice-gaza-na-alaske](http://www.arctic-info.ru/news/06-11-2014/aponia-i-ssa-dogovorilis_-o-sovmestnoi-dobice-gaza-na-alaske) (accessed: 17 March 2016)

In carrying out the Arctic policy, Japan has recently faced with need to take into account the "Ukrainian factor". The loyalty to the allied relations with North America and Europe does not allow for Japan to go for the greater rapprochement with Russia, even though in the Arctic. Therefore, the practical interests of Japan (and not only in relation to the Arctic component) will largely depend on how it will be able to build a relationship of trust with Russia, both in the medium and long term. At present time, recognizing the leading role of Russia in the Arctic, Japan is trying to build a balanced relationship with RF, in spite of the difficult political situation in the world.

### **Conclusion**

China, South Korea and Japan at all sites put forward the idea that the Arctic is a "province of all mankind", and its development should be arranged by efforts of all the countries that have this urgent need, the relevant financial, economic and technological opportunities. They try to revise in their favor the legal status of the Arctic, non-admission of registration of the applications for the extension of the continental shelf in the region by the coastal states. They seek to transfer northern sea routes under international control (the Northern Sea Route in Russia and the Northwest Passage in Canada).

China, South Korea and Japan are seeking to ensure a permanent, or at least seasonal presence in the Arctic in the form of scientific expeditions, cargo transportation, fisheries, mining, education, settlements, they try to get information about the deposits of strategic natural resources in the Arctic and their development, prospects of operation of the Northern Sea Route, Russian technologies of ice-breaker constructions, the situation in the areas inhabited by indigenous peoples of the North.

In this regard, Russia faces extremely difficult tasks in the issue of the protection of this region as a national resource base and transport route. Russia's relations with China, the Republic of Korea and Japan on the issue of economic development of the Arctic should combine elements of both cooperation and competition. Russia's task is to find a reasonable balance in this area.

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