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International Shipping Routes for Cargo Transportation in the Arctic*

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Abstract. The main purpose of the article is to study the problems of the functioning and competition of sea routes of cargo transportation in the Arctic region. Methodologically, the work is of a research nature within the framework of the global integrated and northern regional studies, based on interdisciplinarity and complexity. A complex of interdisciplinary tasks is synthesized: to show, against the background of the history of the development of the water area of the northern seas, begun in the era of Velikiy Novgorod, the priority of Russians in the Arctic; the geopolitical and economic significance of the new projects of the Northern Sea Transport Corridor (SMTc), the National Arctic Transport Line (NATL) at the present time; to reveal the presence of many actors in the Arctic region of planet Earth. Operating water area of the Northern Sea Route in 2012–2020 based on legislative acts 1998, 1999, 2012. And while it does not provide a significant share of international transit, it is developing as an internal sea route. The article analyzes the literature of domestic and foreign authors and primary sources, including: Novgorod Chronicles, cartography, current legal acts, Decrees of the President of the Russian Federation, decrees of the Government of the Russian Federation and departmental documents of the Ministry of the Russian Federation for the development of the Far East and the Arctic, FSBI “Administration of the Northern Sea Route”, directorates Northern Sea Route of Rosatom State Corporation, International Monetary Fund (June 24, 2020), China White Book (2018), the Polar Silk Road project, etc. The plurality of sea routes for cargo transportation in the Arctic along the coast of Russia, off the coast of Canada, the Arctic Bridge, the Trans-Arctic sea route, the Polar Silk Road of China; modernization of the NSR infrastructure; implementation of investment projects of the oil and gas and mining complex of global significance generates new challenges and opportunities for the development of the Russian Arctic

Keywords: *Northern Sea Route, Northern Sea Transport Corridor, National Arctic transport line, Arctic sea Bridge, Trans-Arctic sea route, China's Polar Silk Road.*

Introduction

World integrated and northern regional studies as a research methodology in relation to the Arctic region is based on interdisciplinarity and complexity, practically leading to the blurring of boundaries between the internal and external policies of the Arctic countries. In northern regional studies, the space of the northern territories is comprehensively explored, including the Arctic region, the Russian North. The purpose of this study is to actualize the problems associated with the functioning and competition of international sea routes of cargo transportation in the Arctic region in the second decade of the 21st century.

Methodology

Problems of the real functioning of the polycentric structure of international economic relations (Russia, China, the Arctic Council countries) in the Arctic region, historical and modern measurements of sea routes in the Arctic are investigated based on an integrated multidisciplinary

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approach. In the study of cargo flows along the sea routes in the Arctic, their effectiveness, methods of a systematic approach, qualitative and quantitative analysis are used. The historical method of studying the activities of the Northern Sea Route at different times is based on the analysis of a wide range of sources, starting from the time of Veliky Novgorod, chronological, comparative-historical approaches, cartography. The search, theoretical, historical, statistical, descriptive methods are used: search and study of literature, study of materials in the media, work with Internet sources and electronic resources, analysis and synthesis, description and systematization of the data obtained, general scientific methods and research techniques. The interdisciplinary subject field of the study of various aspects of the functioning of the Arctic region as a whole resembles a palette of various shades and symbols, including the most unexpected stories from other scientific disciplines.

Brief overview of literature and sources

The many-sided Arctic is constantly changing in the flow of time and meanings, the Arctic thesaurus of knowledge about the Northern Sea Route is being replenished. This year, A&S published a scientific article by a scientist from India Jawahar Bhagwat, Ph.D. Arts has (History): "Navigation on the Northern Sea Route: it is necessary to pay more attention to cooperation and security. Part I" [1, pp. 5–25]. The author of this article analyzed a number of incidents that occurred on the NSR from the point of view of compliance with existing standards. In his opinion, these incidents necessitate a study of the adequacy of the Polar Code, infrastructure along the NSR and the current state of search and rescue operations. Russian scientists K.S. Zaikov, N.A. Kondratov, S.A. Lipina, and L.K. Bocharova, exploring the organizational mechanisms for the implementation of Russia's policy in the Arctic in the XXI century, considered, among other things, the features of the Northern Sea Route as a national transport communication of Russia in the Arctic [2, pp. 96–101]. National and international aspects, modern proposals and innovations for the development of the Northern Sea Route are analyzed in one of his articles by V.P. Zhuravel, head of the Center for Arctic Studies, Institute of Europe, RAS [3, pp. 1–6]. North sea route, seaports, Polar silk way are investigated in the IV chapter monograph "The many faces of Arctic in the flow time and senses", where not only analyzed transportation volumes, but existing forecasts of their growth, infrastructure development [4, pp. 92–112]. Various sources are used. In the business environment, ministries, and departments of the Russian Federation in 2019–2020. an interesting discussion unfolded about the prospects of the Northern Sea Route, its transformation into the Northern Sea Transport Corridor, the creation of the National Arctic Transport Line from Murmansk to Petropavlovsk-Kamchatsky. It seems important to begin the study of the topics stated in this article with a brief analysis of some of the available historical evidence of Russia's priority in the development of the Arctic space, since the role of Russians and domestic navigation in the development of the Arctic and the opening of the Northern Sea Route is often distorted in the literature.

“The path and hope of strangers will be cut short, Russian power will grow in Siberia and the Arctic Ocean” (Lomonosov M.V.)

The early history of the exploration of the northern seas and islands, the search for the Northwestern and Northeastern sea passages in the water area of the Arctic Ocean dates back several centuries and was reflected in numerous scientific works. From the standpoint of the historical-chronological approach, today the first campaigns using the western part of the Northern Sea Route, which began during the existence of Veliky Novgorod, are less known. Already at the beginning of the 13th century, natives of Zavolochye mastered the Kola Peninsula, Tre and Kola. Trains of people to hunt sea animals and collect tribute from the population of the Kola Peninsula went far to the west, beyond Varangerfjord (Norway), - emphasized Doctor of Historical Sciences, Professor V.V. Mavrodin [5, pp. 96–108].

In chronicles and other sources, sea voyages to Europe from the mouth of the Dvina through the White Sea became famous. One of these first campaigns took place in 1320 “In the summer of 6828 ... and Luke go to Murmany, and N'mtsi beat Ignat Molygin's ears”¹. The 1411 campaign from Zavolochye to Murman is known from the chronicles; campaigns in 1419, 1445 sveev murmans to the White Sea, to the Dvina; princes Ushatykh, Ivan the Bearded and Peter in 1496² and others. There is a hypothesis that diplomats Dmitry Ralev and Dmitry Zayetsov in 1494 returned from Denmark back to Moscow through the White Sea³.

Grigory Istoma, interpreter of the Grand Duke of Moscow, was sent in 1496 to the Danish king with his Scottish ambassador David⁴. They made their way not through the Baltic, but along the Northern Sea Route, which was longer, but safer. From Novgorod they reached the mouth of the Dvina, where they boarded four ships, sailed, keeping to the ocean shore. We reached the Kayanskaya land, then overland to Bergen (Norway) and from there on horseback to Denmark [6, pp. 127, 184–188; 7, vol. 1, pp. 509–515]. Vlasiy (Vlas Ignatov, Ignatiev), a translator from Latin and German, accompanied the Russian embassies to the Danish king also by sea around Scandinavia in the late 15th - early 16th centuries [6, p. 188; 7, vol. 1, pp. 515–517].

Sigismund von Herberstein (1486–1566), Austrian diplomat and writer, author of “Notes on Muscovy”, twice visited Russia in 1516, 1526. He personally met with Istoma and David, mentions from their words Dvina and other places known along the way, did not always correctly determine their localization [7, vol. 2, pp. 165–166, 462].

¹ PSRL. Vol. 4. Novgorod and Pskov chronicles. St. Petersburg: Eduard Prats Printing House. 1848.S. 49. Summer 6828.

² PSRL. Vol. 3. The first Novgorod chronicle of the older and younger versions. Moscow-Leningrad: Publishing House of the Academy of Sciences of the USSR, 1950. Summer: 6919, 6927, 6953, 6953. PSRL. Vol. 26. Vologda-Perm chronicle. M.-L-d: Publishing House of the Academy of Sciences of the USSR, 1959, p. 290.

³ PSRL. Vol. 8. Continuation of the chronicle according to the Voskresensky list. St. Petersburg: Eduard Prats Printing House. 1859. S. 227-228.

⁴ Grigory Istoma Maly is a member of many Russian embassies. According to I.Kh. Hamel, Istoma could have been in Ralev's retinue in 1493, and in 1496 he traveled to Denmark a second time (Hamel, 1865, pp. 162–164). A.A. Zimin indicates that Istoma was a member of the embassy in 1496 (Zimin, 1982, p. 108). The inventory of the archive of the Ambassadorial Prikaz of 1614 mentions the “a leave ... to the Danish king” of the clerk Istoma in 1498/99 (OTSAAAP, p. 116).

Dmitry Gerasimov (1465 – after 1535), an outstanding Russian diplomat and scientist, theologian, translator (Latin interpreter) participated in the embassies from Muscovy to Denmark, Norway, Sweden, Prussia to the Grand Master of the Order, to the Holy Roman Empire to Emperor Maximilian, in Rome ambassador to Pope Clement VII in 1523–1526 years. In Rome, he consulted a number of Italian scientists, according to his stories, a book and one of the first maps of Muscovy were published (nautical chart from the atlas of 1553 by Battista Agnese). For the first time in history, D. Gerasimov drew up his own drawing of the Northern Sea Route. His drawing shows a route around Europe and a project for a voyage to China across the northern seas.



Fig. 1. Map of the 16th century. White line - sailing route of D. Gerasimov around Europe, red line - sailing project to China along the northern seas⁵.

Paolo Giovio (1483–1520) published in 1525 in Latin “The Book of the Embassy of Vasily, the Grand Duke of Moscow, to Clement VII” (republished in 1545 and 1551), in which he reproduced many geographical and cultural information of D. Gerasimov about Russia and the Scandinavian countries [6, pp. 252–275]. The “Book” by Paolo Jovia was one of the few for the 16th century European writings, which present a positive image of Russia [8, p. 149]. *Pavel Ioviy*, in his book about the Moscow Embassy, noted that “*the Dvina, carrying countless rivers, rushes in a rapid current to the North, and that the sea there has such a huge extent that, according to a very probable assumption, keeping to the right bank, from where you can get by ships to the country of China, if there is no land in between*” [6, p. 262].

Combined squads of free people (ushkuyniks, povolniks), including under the leadership of voivods, princes, with the participation of Novgorodians, Dvinyans, Vazhan, Ustyuzhan, Vyatichi went to Pechora, Yugra in 1096, 1187, 1193, 1329, 1445, 1465, 1483, to the Ob’ River and the sea in 1364–1365, 1483, 1499, to Murman (to Norway) in 1320, 1323, 1348, 1349, 1411. It can be concluded that the Russians knew the coasts of the Arctic Ocean in Siberia and Norway as early as the 11th – 16th centuries. In the 16th–17th centuries the development of the northeastern section of the Northern Sea Route begins - from the Northern Dvina to the Taz Bay at the mouth of the Ob’,

⁵ Unknown admiral. Part 44. URL: https://flot.com/bitrix/components/bitrix/blog/show_file.php?fid=30424 (accessed 17 June 2020).

the so-called “Mangazeya Sea Route”. The history of the discovery and development of the NSR as a whole has received comprehensive coverage in the literature ⁶.

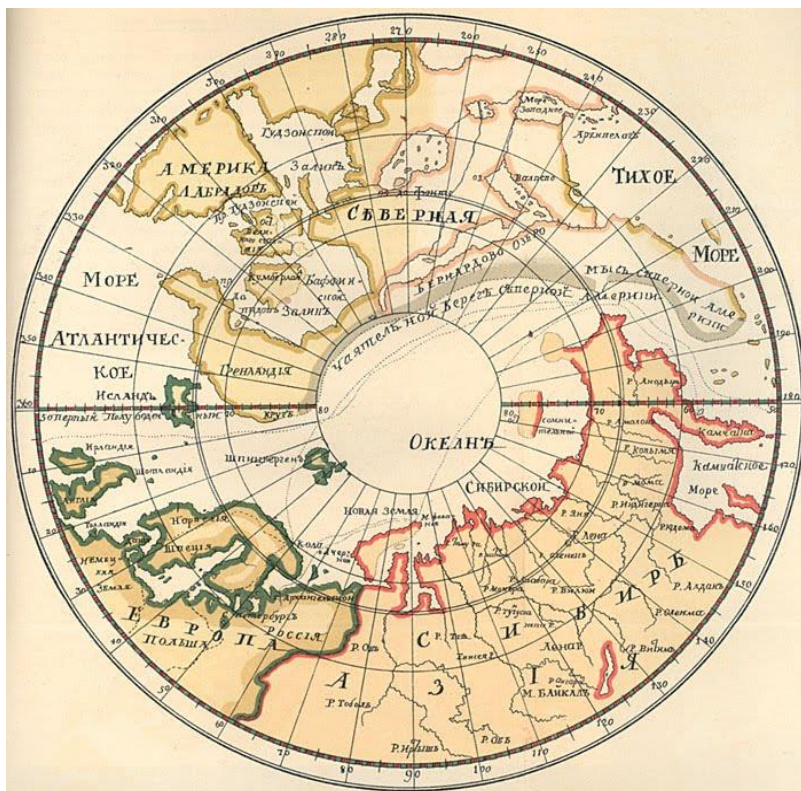


Fig. 2. M.V. Lomonosov's Polar map ⁷.

M.V. Lomonosov (1711–1765) in his famous work "A Brief Description of Various Voyages in the Northern Seas and an Indication of the Possible Passage of the Siberian Ocean to East India" (1764) investigated the navigation undertaken to find the passage to the East Indies by the West-Northern Seas (§§ 1–21). In the second chapter, the scientist considered the search for a sea passage to the East Indies in the northeastern side of the North Siberian Ocean (§§ 22–42). To his work M.V. Lomonosov attached the world-famous Polar Map. Moreover, M.V. Lomonosov makes an important conclusion that *"the Russians have gone to the fishery faraway for about two hundred years"*. With the participation of Pomor residents from the Dvina and from other places near the White Sea, some cities, forts, and winter huts were built along the great rivers in the northern part of Asia. The hike of the Kholmogorets Fedot Alekseev and the Cossack Ivan Dezhnev in 1647-1648. *"The passage of the sea from the Arctic Ocean to the Pacific has been proven, to which our main intention here extends"*. The best passage through the Siberian Ocean *"is hopeful past the eastern-northern end of Novaya Zemlya to the Chukchi nose"* (§83). In the fifth chapter "On the very enterprise of northern shipping and on the establishment and growth of Russian power in the east" (§115) M.V. Lomonosov noted: *"When, by the generous divine providence and by the happiness of*

⁶ Northern Sea Route - Arctic Road of Life: History of Discovery and Development of the Northern Sea Route: Rivers. list lit. / Municipal cultural institution of the municipal formation "Town of Arkhangelsk" Centralized library system, M. V. Lomonosov central town library; [comp. G. I. Popov]. Arkhangelsk, 2012, 87 p.

⁷ History of cartography in Siberia. URL: https://www.sites.google.com/site/kartovedenie/_/rsrc/13547780053_32/home/istoriko-politiceskaa-kartografia-dalnego-vostoka/istoriceskie-karty-sibiri/polarnaa-karta-m-v-lomonosova/4.jpg (accessed 17 June 2020).

the all-merciful autocrat, our desired path across the Northern Ocean to the east opens, then it will be free to strengthen and spread Russian power in the east, mating with the sea route along Siberia to the shores of the Pacific Ocean”.

In conclusion M.V. Lomonosov writes that the commemorated navigation is closer to us than to other European powers. “Thus, the path and hope of strangers will be cut short, Russian power will grow in Siberia and the Northern Ocean and will reach the main European settlements in Asia and America” [9, pp. 417–514].

Legally operating water area of the Northern Sea Route 2012–2020

Currently, the legitimately operating water area of the NSR and its use in the legal space of the Arctic are determined by Law No. 132-FZ of July 28, 2012⁸. The water area of the NSR includes modalities of different legal status: internal sea waters, the territorial sea, the contiguous zone and the exclusive economic zone of the Russian Federation. Its geographical boundaries are limited “from the east by the line of demarcation of sea spaces with the United States of America and the parallel of Cape Dezhnev in the Bering Strait, from the west by the meridian of Cape Zhelaniya to the Novaya Zemlya archipelago, the eastern coastline of the Novaya Zemlya archipelago and the western borders of the Matochkin Shar, Yugorskiy Vorota Ball” (Art. 5.1.).

The previously adopted Federal Law No. 155-FZ of July 31, 1998 “On internal sea waters, the territorial sea and the contiguous zone of the Russian Federation” defines the boundaries of these waters indicated in the name, navigation in the waters of the Northern Sea Route. However, there are no geographically borders of the NSR water area in Federal Law No 155⁹. In the Code of Merchant Shipping of the Russian Federation of April 30, 1999 No. 81-FZ (revised on 08.06.2020), the water area of the Northern Sea Route is limited from the east by the demarcation line of maritime spaces with the United States of America and the parallel of Cape Dezhnev in the Bering Strait, from the west by the meridian Cape Zhelaniya to the Novaya Zemlya archipelago, the eastern coastline of the Novaya Zemlya archipelago and the western borders of the Matochkin Shar, Kara Gates, Yugorsky Shar straits¹⁰. All three legislative acts 1998, 1999, 2012. do not provide a clear evidence base for the boundaries of the NSR. It is difficult to understand, for example, why all the seaports of the White, Pechora and Barents Seas: Arkhangelsk, Severodvinsk, Onega, Belomorsk, Kandalaksha, Kem, Umba, Naryan-Mar, Indiga, Varandey, Murmansk, Pechenga, Anadyr and others today are not included in the water area SMP. Although there is no doubt about their historical belonging to the water area of the Russian Arctic, and then the Russian Arctic and even to the Arctic zone, it is absolutely illegitimate in legal terms already at the time of its appearance in 1989. At the same time, the White Sea has been an internal sea of Russia since ancient times.

⁸ Federal Law of July 28, 2012 No 132-FZ “On Amendments to Certain Legislative Acts of the Russian Federation Regarding State Regulation of Merchant Shipping in the Water Area of the Northern Sea Route”. URL: <https://base.garant.ru/70207760/> (accessed 17 June 2020).

⁹ Federal Law of July 31, 1998 No 155-FZ “On internal sea waters, the territorial sea and the contiguous zone of the Russian Federation”. URL: <http://ivo.garant.ru/#/document/12112602/paragraph/273:0> (accessed: 17 June 2020).

¹⁰ Merchant Shipping Code of the Russian Federation of April 30, 1999 No 81-FZ (as amended on June 8, 2020). URL: <https://base.garant.ru/12115482/> (accessed 17 June 2020).

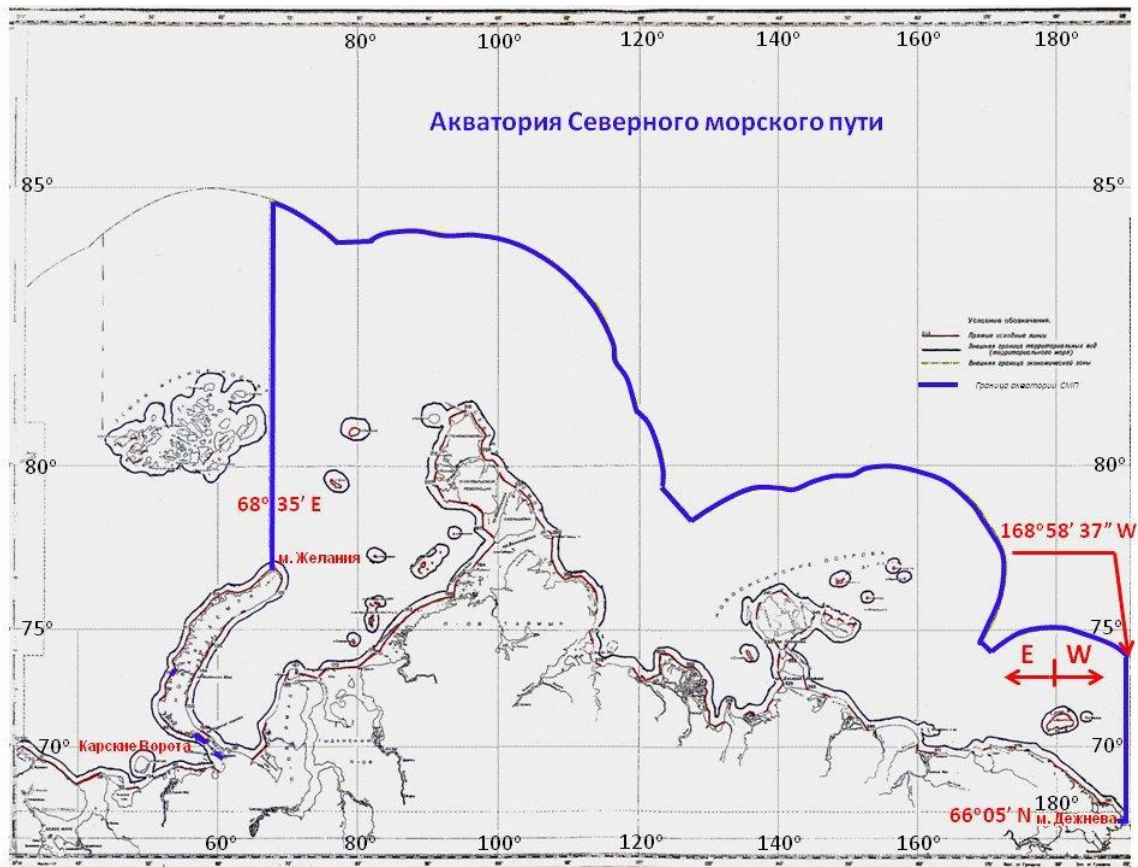


Fig. 3. The NSR water area ¹¹.

According to the 2012 law, the NSR begins after the passage of the Kara Gates or from the northern coast of the Novaya Zemlya archipelago and ends in Providence Bay. The length of the Northern Sea Route C is 3,023 nautical miles. However, both yesterday and today, in public opinion, in the media, the beginning of the Northern Sea Route in the western part of the Arctic is often called Murmansk, Arkhangelsk, or Norwegian Kirkinies. With them, sea routes using then the water area of the Northern Sea Route can begin at any seaport in Europe or Asia: Rotterdam, St. Petersburg, Kirkinies, Shanghai, Yokohama. Vessels going from these ports along the Arctic routes pass the C EUMOR route within the above-mentioned legitimate borders or use high-latitude routes under favorable ice conditions. Formally, the water area of the Northern Sea Route from the Kara Gate to the Bering Sea directly includes only 4 seas: Kara, Laptev, East Siberian, Chukchi. And the White, Barents, Bering, and Pechora seas, as it were, are not Arctic. Therefore, historical, geographical, and economic meanings appear in the new concept of the Northern Sea Transport Corridor, which has not yet been officially legitimized.

In the new historical conditions, the increase in the water area of the NSR actually represents a return to the existence of the Main Directorate of the Northern Sea Route, which was responsible not only for cargo transportation in all the seas of the Arctic Ocean, but also for the industrial development of the vast northern territories in the 1930s and 1980s. The Main Directorate of the North-

¹¹ URL: <https://static.tildacdn.com/f2f2a3bb-6cab-4749-8688-0d8ac0bafb92/1.jpg> (accessed 17 June 2020).

ern Sea Route under the Council of People's Commissars of the USSR was established on December 17, 1932. Decree of the Council of People's Commissars of the USSR dated June 22, 1936 No 1100 approved the Regulations on the Main Directorate of the Northern Sea Route, the area of activity of which was determined in the European part of the USSR of the islands and seas of the Arctic Ocean the Asian part of the USSR - the territory north of the 62nd parallel. Clarifications to this document were made by the resolution of the Council of People's Commissars of the USSR dated January 25, 1941, No. 189, which became invalid in 1988. State measures for the development of the NSR and the industrial development of the northern regions, improvement of management was taken in the former USSR and the Russian Federation at the highest level in 1967 1994, 1997, 1998, 2011.

Currently, since 2019, the Northern Sea Route has been operated by the state corporation Rosatom, which has included FSUE Rosatomflot since 2008. The Government of the Russian Federation, by its order of December 21, 2019 No. 3120-r, for the first time approved the ***Plan for the Development of Infrastructure of the Northern Sea Route until 2035***, which includes 84 measures in 11 directions. It should be emphasized that this is not an ordinary sectoral plan developed by the State Atomic Energy Corporation Rosatom for its departmental tasks, but in essence a nationwide cross-sectoral project for the development of the Northern Sea Route, aimed at the long-term evolution of the Russian Arctic with guaranteed investments. When forming the federal budget for the next financial year, budgetary allocations will be provided for the implementation of planned activities included in the corresponding state programs and federal project¹². The specified plan is based on the forecast of raw materials projects implemented and planned by PJSC Novatek, PJSC Gazprom Neft, PJSC MMC Norilsk Nickel, LLC UK Vostok Ugol, JSC Independent Oil Company, LLC GDK Baimskaya and KAZ Minerals PLC, Vostok Engineering LLC, Severnaya Zvezda LLC. It also includes other freight flows along the Northern Sea Route.

- **2017**: 10.7 million tons were transported in the water area of the NSR, including 9.7 million tons of various cargoes (90.65%) by sea vessels, 797.2 thousand tons of cargo (7.45%) by river vessels, transit ships - 194.4 thousand tons (1.82%).
- **2018**: the total volume of cargo transportation amounted to 20.2 million tons, including transit - 491.2 thousand tons or 2.43%.
- **2019**: a record amount of cargo in the history of the NSR was transported – **31.5 million tons**, including transit - 697.2 thousand tons or 2.21%. These data are in million tons for 2017–2019 leads N.A. Monko, acting Head of the Federal State Budgetary Institution “Administration of the Northern Sea Route”¹³. The main points through which cargo transportation along the NSR was carried out in 2019 were ports: Sabetta - 20.5 million

¹² Plan for the development of the infrastructure of the Northern Sea Route for the period up to 2035. URL: <http://static.government.ru/media/files/itR-86nOgy9xFEUVAgmZ3XoeruY8Bf9u.pdf>; <http://government.ru/docs/38714/> (accessed: 05 June 2020).

¹³ Mon'ko N. In 2019, the volume of cargo transportation along the Northern Sea Route increased by 56.7%. February 20, 2020. URL: <https://www.mortrans.info/morskoj-byulleten/v-2019-godu-obem-gruzoperevozok-po-sevmorputyvyros-na-567/> (accessed: 05 June 2020). Percentages by type of transportation are calculated by the author of the article.

tons, or 65% of the total volume of cargo transportation along the NSR, the terminal near Cape Kamenny - 7.7 million tons (24.4%), Dudinka - 1.5 million tons (4.76%). The annual northern delivery (coal, fuel, food, timber and general cargo, containers) to hard-to-reach regions of the Far North, associated with sea and river transport, occupies its permanent niche in the cargo traffic along the NSR. Transit volumes in 2017–2019 fluctuated from only 1.82% to 2.43% of the total volume of cargo transportation along the NSR.

The key competitor in the world market for the NSR is the Egyptian **Suez Channel**, 193 km long, which is one of the busiest maritime arteries in the world. Its main problem now – the restriction on the size of the ships and the large ships have to reload to the ships of the Suez Channel Administration, which leads to additional time lose and costs. At the same time, the growth in demand for channel services is faster than the growth in its capacity.



Fig. 4. The NSR and the route via the Suez Channel¹⁴.

A comparative analysis of the key indicators of the two routes shows that the navigation through the Suez Canal lasts all year round, in contrast to the NSR. For the passage from Europe to China by the Northern Sea Route, on average, it takes 25 days and 625 tons of fuel oil, and when using the Suez Canal - 35 days and 875 tons of fuel oil. Passage through the Suez Canal costs \$250,000, and the icebreaker escort fee along the NSR is approximately \$380,000. The traditional route via the Suez Canal loses the route around the Cape of Good Hope, around Africa¹⁵. By now, the understanding has come that there are no good reasons to talk about the competition between the Northern Sea Route and the Suez Canal in terms of the volume of transported goods. Overall, the 2019 Suez Canal took about 18.9 thousand ships against 18.2 thousand units in 2018. The net tonnage reached 1.2 billion tons - growth at 5.9%, revenue administration amounted to \$5.8 billion¹⁶. *Dr Tuomas Kiiski*, an expert on Arctic shipping at the University of Turku (Finland), believes that the economic

¹⁴ Business news. URL: https://delonovosti.ru/wp-content/uploads/posts/2017-04/1493018981_smp.jpg (accessed 18 June 2020).

¹⁵ Cheremnykh I. Northern Sea Route and the Suez Canal. Business News. IAA. June 18, 2020. URL: <https://delonovosti.ru/analitika/3921-severnnyy-morskoy-put-i-sueckiy-kanal.html> (accessed 18 June 2020).

¹⁶ The Suez Canal will raise the transit fee. URL: <https://seanews.ru/2020/01/10/ru-sujeckij-kanal-podnimet-tranzitnyj-sbor/> (accessed 07 June 2020).

potential of the Northern Sea Route as a seasonal Arctic passage between Europe and Asia is controversial. Despite the fact that the route along the NSR is shorter, the ships must travel more slowly through the still icy waters. Most vessels must be ice-class to operate there at all, which increases costs. Transit times for timely delivery of cargo are unpredictable so far, and shallow water along the Russian coast excludes large container ships that dominate interoceanic traffic. Similar arguments are given in his article by *M.Yu. Gutenev*, noting that the relatively short period of operation does not allow the NSR to become a reliable alternative for Asian transport companies. These shortcomings explain why, despite advertising the NSR, shipping companies are hesitant to “*dip their toes in the cold waters*” of the Arctic [10]. At the same time, China, as a world economic power, the Arctic route provides an opportunity to save time and money, - emphasizes the Chinese scientist *Cheng Hongjie* [11].

The Arctic is rich in natural resources, but their scale and commercial benefit from their development remains in question, - emphasizes the researcher from India *D. Bhagwat*. The extraction of Arctic resources, in his opinion, is technically difficult and costly. The use of energy and mineral resources in other parts of the world, such as the Middle East, Africa and South America, is much cheaper, especially if the price of oil falls below \$ 50 a barrel; the existing shipping lanes that run through the Southeast to Northeast Asia have several advantages. The economy of container transportation along the NSR is not optimal [1, p. 9]. Discussion is the pessimism of some Chinese experts regarding Russia's ability to increase the construction of ships and marine technology to support the growing volume of cargo transportation in the Arctic. The consortium of AO Rosneftgaz, PJSC NK Rosneft and AO Gazprombank has been implementing a large domestic project in the Far East since 2015 - the Zvezda shipbuilding complex is being built¹⁷.

At present, the thesis that it is important for Russia to develop the Northern Sea Route as an internal transport artery, taking into account security, and with the hope of transforming over time into a major international route in the Arctic, is receiving more and more support. Since 2019, ships flying the flag of the Russian Federation have received the exclusive right to sea transportation of oil, natural gas, gas condensate, coal mined in Russia and loaded onto ships in the waters of the NSR. A notification character of the passage of foreign warships along the NSR is introduced.

What caused the world's attention today to the development of sea communications in the difficult climatic conditions of the cold and harsh Arctic?

The natural resources of the Russian Arctic and its sea routes have no analogues today in any other Arctic country (USA, Canada, Norway, Sweden, etc.), or in the world. The Northern Sea Route (NSR) currently provides not only part of the traditional cargo from the North, but also solves the commercial problems of modern Arctic shipping, in particular, the export of oil and gas and mining products to the domestic and world markets of the global society of the Earth. At present in the waters of the Northern Sea transport corridor, comprising himself ports and waterways of the Arctic

¹⁷ SSK “Zvezda”. URL: <https://sskzvezda.ru/index.php/ru/> (accessed: 26 June 2020).

seas (from the Barents Sea to the Bering) and flowing into these rivers, the export of oil in both year-round and seasonal navigation, is made with the terminal in the Pechora Sea (Pomorsky sector) and in the Gulf of Ob' of the Kara Sea (sector of the Northern Sea Route) [12, pp. 65–71].

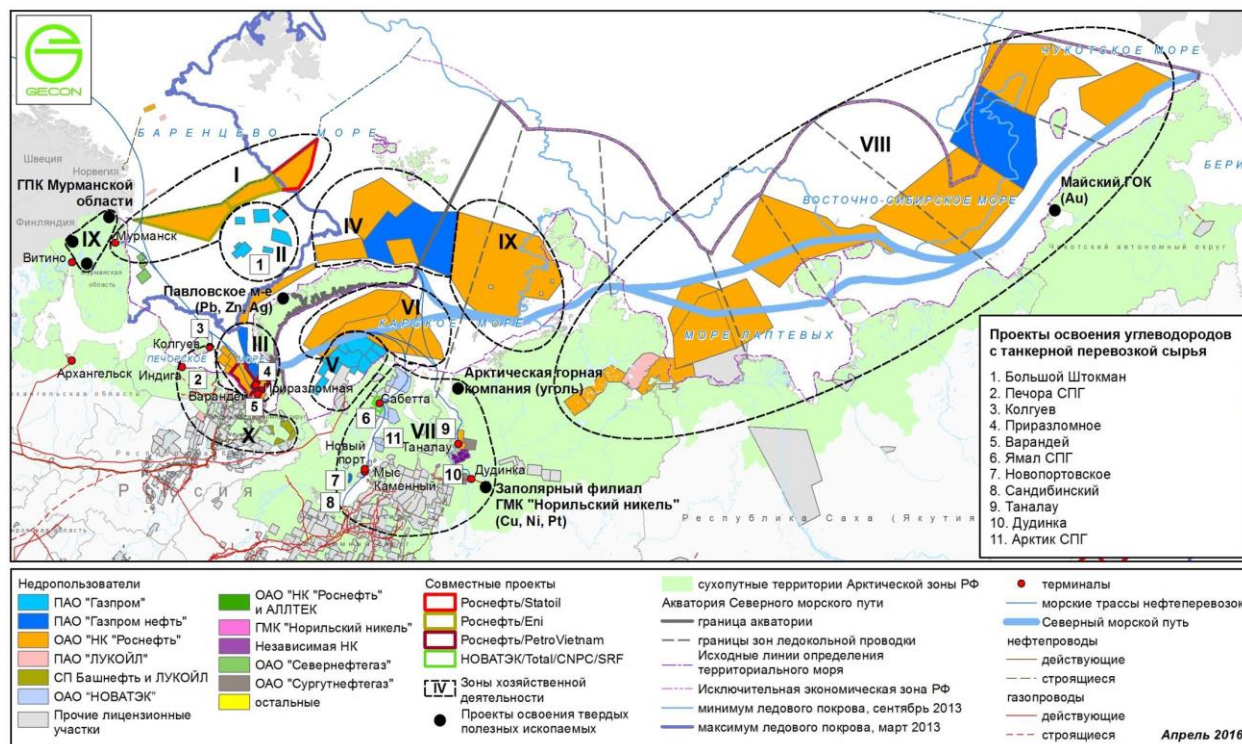


Fig. 5. Grigoryev M.N. Projects for the development of natural resources of the Arctic zone using the maritime transport system. 6th International Conference "Logistics in the Arctic". Murmansk, 12 April 2016.

Analyzing the resources of the Russian Arctic, it should be borne in mind that this is not only oil and gas, but also coal, copper-nickel ores, tin, rare metals and rare earth elements, gold, platinum, tungsten, chromium, titanium and much more that is needed today for effective development of industry, technologies in the world¹⁸.

The AZRF is currently not positioned either as a macrozone or as a macroregion, but is defined as a **geostrategic territory** of several constituent entities and parts of constituent entities of the Russian Federation, which is essential for sustainable socio-economic development, territorial integrity and security of the Russian Federation, characterized by specific living conditions and activities. The development of the main transport infrastructure is ensured, among other things, due to "the functioning and growth of the freight traffic of the Northern Sea Route as a full-fledged international transport corridor, including the development of the icebreaker fleet". The Strategy for the Spatial Development of the Russian Federation until 2025 identifies opportunities for the im-

¹⁸ Brekhuntsov A., Mullin A., Petrov Yu., Proskurin G. (Scientific and Technical Center of the MNP "GEODATA") February 28, 2020. What are we going to transport along the Northern Sea Route? Overview of the raw material base. URL: https://www.korabel.ru/news/comments/resursnaya_baza_arktiki_i_severnyy_morskoy_put.html (accessed 20 June 2020).

plementation of innovative socio-economic projects in priority development areas (PDA), improving the quality of life of northerners¹⁹.

In the water area of the Arctic Ocean, competition for the operation of certain sea routes is intensifying. The role of China in the Arctic is growing. In international relations, it is natural that each Arctic state defends its national interests. Of the 21 countries, members and observers of the Arctic Council, three groups of NATO member states have actually formed, the European Union - 14 countries; in BRICS, SCO - India, China and Russia; The Asia-Pacific Cooperation (APEC) includes the United States, Russia, Canada, Japan, South Korea, Singapore. This division of the AU is actually in conditions of information and psychological warfare, sanctions against Russia, militarization and the great redistribution of the Arctic, - already from the very beginning, genetically creates a conflict situation and tension due to lack of trust and differences of national interests. In terms of population and territory, the AU is dominated by India, China and Russia, which are home to 2.9 billion people or 38% of the total population of the global society of the Earth, possessing enormous human capital and resources. In terms of GDP (PPP), according to the IMF estimates in 2017, China ranked first (\$23,308 billion), second – the United States (\$19,485 billion), third - India (\$9,474 billion). The 4th and 6th places in this ranking were: Japan (\$5,443 billion), Germany (\$4,199 billion) and Russia (\$4,016 billion) Purchasing Power Parity (PPP), in contrast to nominal indicators, allows us to reflect the real volume of production in the country goods and services, and with this approach goes beyond the US dollar [4, pp. 73, 117].

The COVID-19 pandemic has pushed countries into a Great Self-Isolation regime that helped contain the spread of the virus and save lives, but also triggered the worst recession since the Great Depression. C total losses of production in the world economy in 2020–2021 as a result of the crisis caused by the pandemic, implied in the amount of over USD 12 trillion, the IMF predicts a significant decrease in the rate of GDP growth in 2020²⁰.

Forecasts of the prospects for the development of the world economy

Real GDP growth (change in %)	<u>2019</u>	<u>2020</u>	<u>2021</u>
All sates	2.9 %	- 4.9 %	5.4 %
China	6.1 %	1.0 %	8.2 %
India	4.2 %	- 4.5 %	6.0 %
USA	2.3 %	- 8.0 %	4.5 %
Russia	1.3 %	- 6.6 %	4.1 %
Canada	1.7 %	- 8.4 %	4.9 %

¹⁹ Strategy of spatial development of the Russian Federation for the period up to 2025. February 13, 2019. URL: <https://www.garant.ru/products/ipo/prime/doc/72074066/> (accessed 02 August 2020).

²⁰ Discovery after "The Great Self-Isolation: A Bumpy Recovery Amid Uncertainty. Gita Gopinath. June 24, 2020. URL: <https://www.imf.org/ru/News/Articles/2020/06/24/blog-weo-update-reopening-from-the-great-lockdown-uneven-and-uncertain-recovery> (accessed 25 June 2020).

Japan	0.7 %	- 5.8 %	2.4 %
Euro zone	1.3 %	- 10.2 %	6.0 %

Source: IMF. World Economic Outlook Bulletin, June 2020 ²¹.

Obvious challenges arise not only for Russia. The global slowdown in economic growth may negatively affect the overall growth of freight traffic in the Arctic and in other regions of the world. What will be the demand for energy sources and their demand for consumers around the world after the global coronavirus pandemic and the decline in economic activity? Therefore, the urgency of modernizing the state management of the Russian Arctic, its de-bureaucratization, increasing the efficiency of Arctic cargo transportation, and the quality of life of the entire local population, including the indigenous peoples of the North, increases many times over.

Northern maritime transport corridor: Pros and Cons

A well-known expert on the Arctic, Candidate of Geological and Mineralogical Sciences, Director of Gekon LLC M.N. Grigoryev, a member of the Scientific Council under the Security Council of the Russian Federation, having systematically studied this topic in his writings in 2016-2020, understands the NMTC as a historically established national transport communication of the Russian Federation, which includes ports and maritime shipping routes of the Arctic seas and the Barents rivers flowing into them, The White and Pechora Seas on the western flank, the Northern Sea Route (Kara, Laptev Sea, East Siberian and Chukchi) in the central part, and the Bering Sea on the eastern flank [13, p. 111].

The boundaries of the NMTC in the west - the line of delimitation of the sea spaces of the Russian Federation and the Kingdom of Norway in the Barents Sea according to the law of April 5, 2011 No. 57-FZ; in the east - the line of delimitation of the sea spaces of the USSR and the United States by agreement between them in 1990. The water area of the SMTK is divided into three sectors: 1) the Pomor sector; 2) Sector of the Northern Sea Route; 3) Kamchatka sector (see the map of the "Gekon" center).

²¹ IMF. World Economic Outlook Bulletin, June 2020. URL: <https://www.imf.org/external/russian/index.html> (accessed 25 June 2020).

ГРАНИЦЫ СЕВМОРПУТИ В РАЗНЫЕ ВРЕМЕНА

ИСТОЧНИК: КОНСУЛЬТАТИВНЫЙ ЦЕНТР «ГЕКОН».

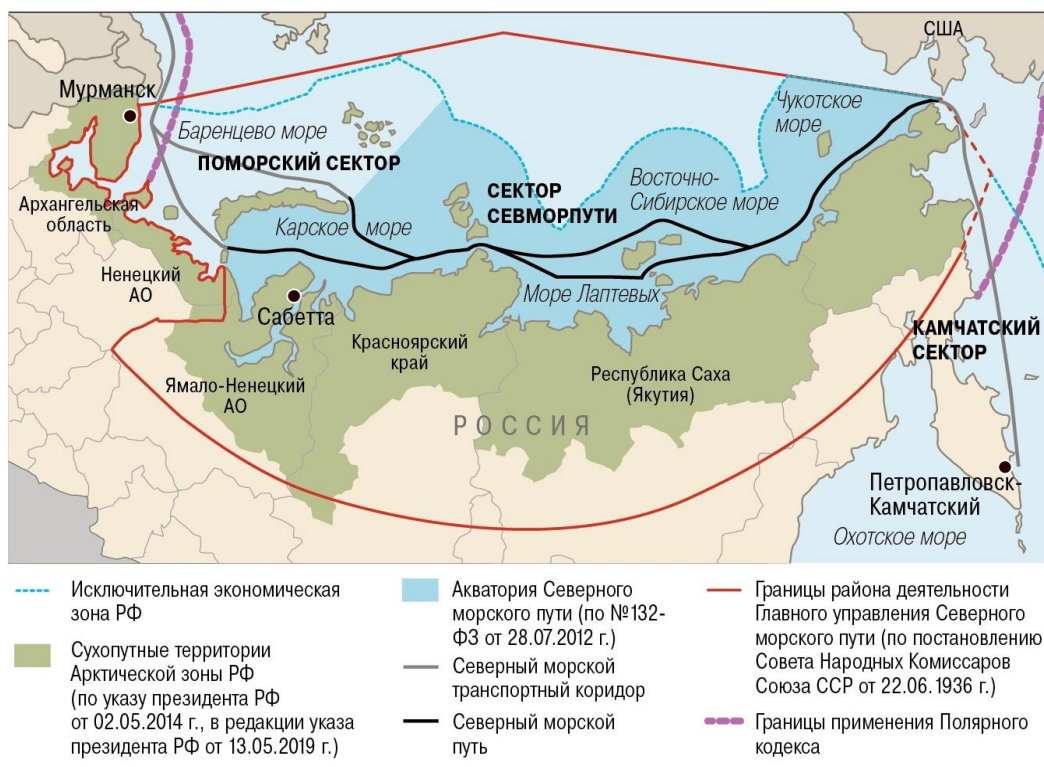


Fig. 6. Northern maritime transport corridor boundaries in different periods of time ²².

The Northern Sea Route is one in three – routes, water area, ways, as stated for the first time at the VI International Conference in Murmansk “Logistics in the Arctic” on April 12, 2016 by M.N. Grigoryev. Northern Sea Transport Corridor (NMTС) - Barents, White and Pechora seas on the western flank, the water area of the Northern Sea Route and the Bering Sea on the eastern flank [14, p. 3]. The development of the SMTK should take place in an evolutionary way.

- **The first phase:** fulfilling the role of the historically established national transport communication of Russia - ensuring the maintenance of the activities of settlements (“northern delivery”) and exporting products (Varandey, Norilsk, Pevek, etc.), ensuring the implementation of large investment projects, national security and the country's sovereignty.
- **The second phase:** development of transport infrastructure to ensure the export of products of the Arctic oil and gas complex to the APR markets. This will require the development of an icebreaker and support fleet, port infrastructure, emergency rescue forces, navigation and hydrographic support.
- **The third phase** of development is the formation of an international transport artery that ensures not only the export of raw materials extracted in the Russian Arctic to world markets, but also a growing transit traffic, both between the western and east-

²² Kommersant. Sevmorput. The government is thinking of extending the route to Sakhalin. URL: <https://im.kommersant.ru/ISSUES.PHOTO/DAILY/2020/088/123.jpg> (accessed 07 June 2020).

ern regions of Russia, and between the markets of the Atlantic and the Pacific Ocean²³.

On October 28, 2019, in the Federation Council of the Federal Assembly of the Russian Federation, Deputy Minister of the Russian Federation for the Development of the Far East and the Arctic A.V. Krutikov said that in the Arctic strategy until 2035, “*we are introducing a new concept of the Northern Sea Transport Corridor - in fact, the entire transport communication from Murmansk to Kamchatka, and we believe that the functions of a single operator of the NSR should extend to this entire corridor*”²⁴. Substantiating this proposal, A.V. Krutikov focused on the growth in oil and gas production and LNG production in the Russian Arctic. An increase in production volumes will lead to an increase in freight traffic along the Northern Sea Route to 80 million tons in 2024, 120 million tons in 2030, and by 2035 will increase to 160 million tons per year²⁵. The department also believed that in order for the sea route to cope with the task, it was necessary to create a regular container line between Murmansk and Petropavlovsk-Kamchatsky. The only way to prevent the disruption of the May decree of the President of the Russian Federation on increasing cargo traffic along the NSR is to expand its borders. In this case, its cargo turnover will include the existing projects in the Pechora Sea - the Prirazlomnaya platform of Gazprom Neft, transshipment at the Varandey terminal of LUKOIL, the extraction of iron ore at the Kovdorsky GOK in the Murmansk Oblast, part of Eurochem, etc. Thus, the total increase in freight traffic due to the expansion of the borders of the NSR will amount to 61 million tons²⁶. In fact, such an increased traffic already exists. And the spears break here, among other things, because of management, competition, bureaucratic procedures, how to count certain cargo flows, how to statistically consider the entire volume of cargo flows throughout the Russian Arctic.

The draft ***Strategy for the Development of the Russian Arctic and Ensuring National Security for the Period up to 2035*** set the task of the integrated development of the infrastructure of the NMTC, including the ports and sea shipping routes of the Barents, White, Pechora and Bering Seas. At the same time, the previous concept of the Northern Sea Route was used as part of the NMTC²⁷. At the meeting of the Presidium of the State Commission for the Development of the Arctic on May 13, 2020, during the discussion, this innovation did not find unified support, despite the fact that A.V. Krutikov gave weighty arguments about the competitiveness of the Northern Sea

²³Mikhail Grigoryev on the evolution of the Northern Sea Corridor. URL: <https://pro-arctic.ru/03/02/2017/expert/25036> (accessed 07 June 2020).

²⁴The role of the Arctic in the development of Russia will increase. 29.10.2019. URL: <https://minvr.ru/press-center/news/23697/> (accessed 15 May 2020).

²⁵Freight traffic on the NSR by 2035 may grow to 160 million tons per year. URL: https://arctic.gov.ru/digest/?date_start=2019-12-06%2000:00#news-21466 (accessed 12 June 2020).

²⁶The government discussed the expansion of the boundaries of the Northern Sea Route at the expense of five seas. URL: <https://www.rbc.ru/business/20/05/2020/5ec51c9d9a79471c48fb0af3> (accessed 03 June 2020).

²⁷“On the progress in preparing the draft development strategy for the Arctic zone of the Russian Federation until 2035”. Recommendations. Approved at a meeting of the Federation Council Committee on Federal Structure, Regional Policy, Local Self-Government and Northern Affairs (Minutes No. 210 of December 10, 2019). URL: <http://council.gov.ru/activity/activities/parliamentary/109343/> (accessed 27 June 2020).

Route and about the coordination of changes with the Ministry of Transport, Rosatom and the Ministry of Foreign Affairs of Russia. “Neither we, nor the Russian Foreign Ministry sees any negative legal consequences of using this terminology,” – said the deputy Minister, referring to the Northern Maritime Transport Corridor²⁸.

Deputy Prime Minister of Russia - Plenipotentiary of the President in the Far Eastern Federal District Yu.P. Trutnev, at the same meeting of the State Commission for the Development of the Arctic on May 13, 2020, expressed as a counterargument that the government would not adjust plans for the volume of cargo transportation along the Northern Sea Route. “Today we have no such plans. But let's get out of this crisis first, and then we will make decisions,” he prudently noted. More thoroughly Yu.P. Trutnev asked his colleagues to think over the terminology, bearing in mind the proposed SMTK concept, for a broader designation of the entire route from Murmansk to Kamchatka. The Ministry for the Development of the Russian Far East, the Ministry of Transport, the Ministry of Foreign Affairs and Rosatom had to submit to the government agreed proposals on changes to the Merchant Shipping Code (MSC) and the inclusion of inland sea waters, the territorial sea and the exclusive economic zone of the Russian Federation in the Barents, White, Pechora, Bering and Okhotsk seas²⁹. The above departments at a meeting with Deputy Prime Minister Yu.P. Trutnev in June 2020 decided not to expand the boundaries of the Northern Sea Route (NSR), so as not to conflict with international law. Technically, it is possible to make changes to the Merchant Shipping Code, but then the effect of the rules for sailing along the NSR will automatically expand to new water areas and contradictions with international law will arise³⁰. According to Article 234 of the UN Convention on the Law of the Sea, coastal states have the right, within the exclusive economic zone, to establish special rules for ships only in ice-covered areas in order to prevent pollution of the marine environment. However, it will be quite difficult to prove the presence of long-term ice in new water areas.

Director of the Department for the Development of the Northern Sea Route and Coastal Territories of the Directorate of the Northern Sea Route of the State Atomic Energy Corporation Rosatom, Ph.D. in Law M.V. Kulinko³¹ believes that in essence we are talking about the revival of the concept of Glavsevmorput used during the Soviet era. He explained: “This is not a replacement for the Northern Sea Route, but it is a more **economically correct model for the development of our northern seas.**” The Northern Sea Transit Corridor, according to M.V. Kulinko, is just the name of the

²⁸ IAA PortNews May 13, 2020. URL: <https://www.facebook.com/PortNewsIAA/posts/2995300060549976> (accessed: 07 June 2020).

²⁹ State Commission for the Arctic: development strategy until 2035, expansion of the NSR and renovation of Norilsk. May 13, 2020. URL: <https://ru.arctic.ru/infrastructure/20200513/943068.html> (accessed 07 June 2020).

³⁰ The authorities refused to expand the boundaries of the Northern Sea Route. June 20, 2020. URL: <https://www.rbc.ru/business/20/06/2020/5eeeb19f9a7947cfd9e8abaf?noredir=true> (accessed: 20 June 2020).

³¹ Kulinko M.V. worked in the apparatus of the government of the Russian Federation in 2006-2018. in the position of Assistant to the Deputy Prime Minister of the Russian Federation, was Assistant to Deputy Prime Minister D. Rogozin (2011–2018). In 2015–2018 - Executive Secretary of the State Commission for the Development of the Arctic. Since October 4, 2018, Maksim Kulinko, Deputy Director of Directorate - Director of the Department for Development of the Northern Sea Route and Coastal Territories, ROSATOM.

project of a **container line from Murmansk to Petropavlovsk-Kamchatsky**, passing through the NSR within its established borders, which should work between the European and Asian markets. Rusatom Cargo plans to reorient to SMTK part of transit cargo in containers from the southern sea routes, including those passing through the Suez Canal. Rosatom is already working on the contours of a single infrastructure operator of the NSR, the possibility of setting up hub ports in Murmansk and Petropavlovsk-Kamchatsky for container shipping. Rosatom and Roskosmos are engaged in the creation of a satellite constellation necessary to ensure navigation in the water area of the NSR³².

Scientific and practical substantiation of the project for the creation of the *National Arctic Transport Line* was first given in the article by N. Pegin, candidate of sociological sciences, general director of the Kamchatka Development Corporation JSC, published by the magazine *Arctic and North* back in 2016. The National Arctic Transport Line (NATL), in contrast to the traditional definition of the NSR, according to Nikolai Anatolyevich, represents is a broader concept and implies the formation and development of an integrated infrastructure project for the organization of an international transport line with specific points of entry and exit : "*Murmansk transport hub in its western part and Petropavlovsk-Kamchatsky transport hub in the eastern part, as well as supporting ports*" (14, p. 33). Revealing the unique transport and logistics advantages of NATL, N.A. Pegin formulated a number of key problems, including a single management body, a single operator as a single window for freight carriers, and justified the formation of a hub port in Petropavlovsk-Kamchatsky. The organization of such a transport line in the Arctic is becoming a reality and will allow integrating a new sea route into international cargo flows between the Asia-Pacific region, the West Coast of America and Europe, will contribute to the development of territories adjacent to the NSR, will provide a Russian presence in the Arctic and will open access to its resource potential [15, p. 34].

Development of the Russian Arctic until 2035

If we sum up some intermediate results of what has already been done at the state level, then the Decree of the President of the Russian Federation of March 5, 2020 No. 164 "On the Fundamentals of State Policy of the Russian Federation in the Arctic for the period up to 2035" came into force. One of the 6 national interests of the Russian Federation in the Arctic is named "*Development of the Northern Sea Route as a competitive national transport communication of the Russian Federation on the world market*"³³. Zhuravel V.P. in his article noted that the Fundamentals do not mention the *support zones of development*, which were previously proposed by the State Commis-

³²Northern Sea Route. The government is thinking of extending the route to Sakhalin. May 21, 2020. URL: <https://www.kommersant.ru/doc/4349939>. At the beginning of the Northern Sea Route. URL: <http://strana-rosatom.ru/2020/02/04/at-the-beginning-north-sea-route/>; Rosatom and Roskosmos will create a satellite constellation to ensure navigation in the water area of the Northern Sea Route. October 30, 2019. URL: <https://portnews.ru/> (accessed 09 June 2020).

³³ Decree of the President of the Russian Federation of March 5, 2020 N 164 "On the Fundamentals of the State Policy of the Russian Federation in the Arctic for the Period until 2035". URL: <https://www.garant.ru/products/ipo/prime/doc/73606526/> (accessed 14 June 2020).

sion for the Development of the Arctic. The status of the Arctic territories of the Russian Arctic will be determined in terms of the significance of the projects that will be carried out there, as well as the point development of the Arctic. At present, out of 8, only the Kola and Yamalo-Nenets support zones are developing [16, p. 6].

The Government of the Russian Federation completed the preparation and approved in July 2020 the draft Strategy for the Development of the Russian Arctic until 2035, for the first time including the concept of the Northern Sea Transport Corridor (NMTC): “13. The main tasks in the field of infrastructure development in the Arctic zone are achieved through the following set of measures: a) *comprehensive development of the infrastructure of the transport corridor, which includes the ports and sea shipping routes of the Barents, White and Pechora Seas on the western flank, the waters of the Northern Sea Route, the Bering Sea on the eastern flank (hereinafter referred to as the **northern sea transport corridor**)*; b) *the creation of a **headquarters for maritime operations** to manage shipping in the entire water area of the northern sea transport corridor*; c) *integration of the provision of transport and logistics services for transportation along the northern sea transport corridor based on a **digital platform for paperless processing of multimodal passenger and cargo transportation***” (p. 10). The implementation of this Strategy is ensured by amending the state program of the Russian Federation "Socio-economic development of the Russian Arctic", sectoral state programs of the Russian Federation, state programs of the constituent entities of the Russian Federation, national projects, as well as the implementation of measures for the development of the infrastructure of the Northern Sea Route (paragraph 36, p. 31)³⁴.

In July 2020, the State Duma adopted a package of draft laws: No. 895550-7 “On state support for entrepreneurial activity in the Arctic zone of the Russian Federation”; No. 895543-7 “On amendments to the Tax Code of the Russian Federation in terms of stimulating the search and assessment of hydrocarbon deposits, exploration and production of hydrocarbons in certain territories of the Russian Arctic”; No. 895545-7 “On Amendments to the Tax Code of the Russian Federation in Connection with the Adoption of the Federal Law “On State Support for Entrepreneurial Activity in the Russian Arctic”; No. 895557-7 “On Amendments to Certain Legislative Acts of the Russian Federation in Connection with the Adoption of the Federal Law “On State Support of Entrepreneurial Activity in the AZRF”³⁵.

Earlier, by decree of the Government of the Russian Federation No. 656 of May 12, 2020, a priority development area (TOR) “Capital of the Arctic” was created in the Murmansk Oblast³⁶. The

³⁴ Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period up to 2035. URL: <http://www.azrf.labourmarket.ru/docs/проект%20Стратегии%20АЗРФ-2035.pdf> (accessed 07 August 2020).

³⁵ Federal Law of July 13, 2020 No 193-FZ “On state support for entrepreneurial activity in the Arctic zone of the Russian Federation” and other. URL: http://www.consultant.ru/document/cons_doc_LAW_357078/ (accessed 07 August 2020).

³⁶ Decree of the Government of the Russian Federation of May 12, 2020 No. 656 “On the creation of the territory of priority social and economic development “Capital of the Arctic”. URL: <http://www.consultant.ru/cons/cgi/online.cgi?req=doc&base=LAW&n=352331&fld=134&dst=1000000001,0&rnd=0.8424026694568092#0824748575263813> (accessed 17 June 2020).

TOP includes four anchor investors, among which, in addition to LLC NOVATEK-Murmansk with the investment project “Center for the construction of large-capacity offshore structures”, included: LLC Sea Commercial Port Lavna with the investment project “Construction of a new coal terminal in the sea trade the port “Lavna” on the western coast of the Kola Bay” ; LLC “Sea Terminal TULOMA” with an investment project to create a terminal for mineral fertilizers and apatite concentrate in the seaport of Murmansk; JSC “Corporation for the Development of the Murmansk Oblast” with an investment project to create an international cultural and business center to realize the geopolitical and cultural potential of the region. In a speech at the V international conference A.V. Krutikov said that Murmansk, as the only ice-free Russian port in the Arctic, could become one of the two hubs of the Northern Sea Transport Corridor and a service center for offshore projects in Russia, after the launch of the Novatek large-scale offshore facilities construction center the region will become one of the largest development centers shipbuilding technologies [17, p. 7].

Geographically, China is an "almost arctic state"

The shortest sea trade route from the Atlantic to the Pacific through the Arctic waters due to global warming and the reduction of sea ice is becoming quite affordable for the optimization of shipping using: Northern Sea Route (NSR) along the coast of Russia, North-West Passage (NWP) off the coast of Canada, as well as through the high-latitude circumpolar route in the center of the Arctic Ocean - Trans-Arctic Sea route (TSR), Arctic Sea Bridge (ASB) – Arctic sea bridge between the ports of Murmansk (Russia) and Churchill (Canada).

In this article, it is possible to touch upon China’s strategic interests only briefly in the Arctic in the context of existing sea routes. China is using all the possibilities for its ships to pass along this route. Arctic strategies of Iceland, Denmark, Canada, China, Norway, Russia, USA, Finland, Sweden are reflected in the Arctic Encyclopedia (2017), where in one of the sections E.S. Kotlova et al. investigate international relations and organizations in the Arctic region [18].

The Northern Sea Route along the coast of Russia and its promising development projects (NMTC, NATL) have already been discussed earlier. As far as the Arctic Bridge is concerned, the Arctic Bridge is a seasonal, irregular sea route of about 4,200 miles, connecting the port of Murmansk in the Barents Sea with the Canadian port of Churchill in the Hudson Bay. The Arctic Bridge, together with the Northwest Passage, may in the future become the main trade route between Europe and North America, provided there are economically viable constant volumes of freight traffic.

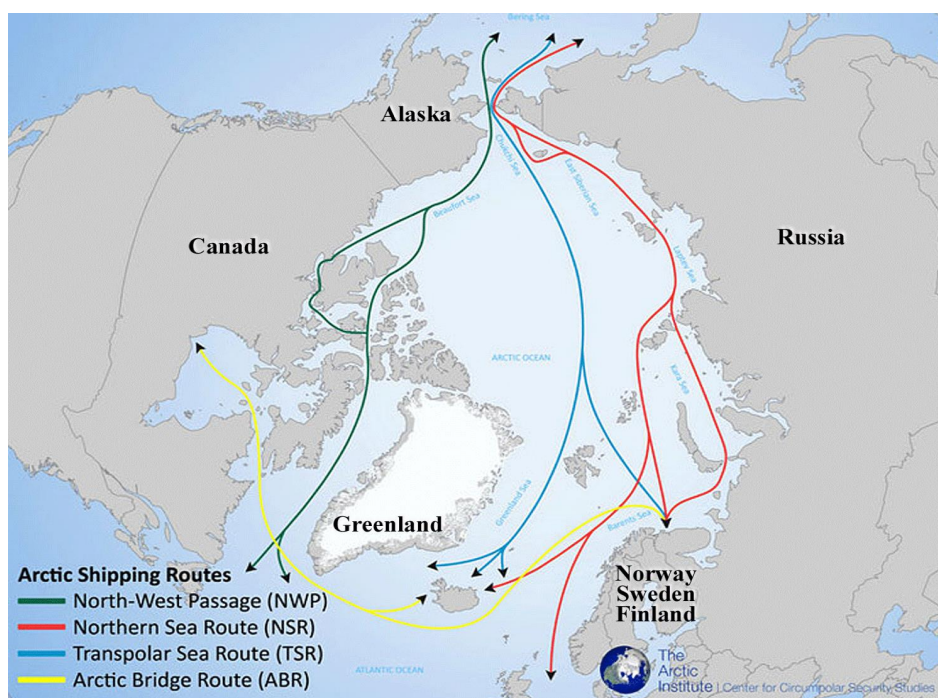


Fig. 7. Sea transport routes in the Arctic ³⁷.

The path from Canada to East Asia and the Atlantic Ocean through the North-West Passage - North-West Passage (NWP) is 7 thousand km shorter than the path through the Panama Canal. A shorter route saves not only time, but also money (lower fuel consumption, lower transit fees). Back in August 2008, the Danish cable ship "Peter Faber" easily covered the route through the Northwest Passage from Taiwan to the destination located between Newfoundland and Greenland [19, p. 92].

China is purposefully studying the possibilities of ships' passage along all routes in the Arctic Ocean basin (AO). The icebreaker "Xuelong" in the process of scientific expeditions consistently passed through them. The climatic motivating factor for China in the development of the Arctic using the Trans-Arctic Sea route (TSR) is mentioned by many experts, linking it with economic benefits. The Northern Sea Route "is a gold mine, having access to which China will be able to increase their exports not only to the already well-established partner countries, but also get the opportunity to discover new trade chain", - noted Yu Andreeva, M. Gibadulin M., Frolova V.A. from the Federal State Budgetary Educational Institution of Higher Professional Education "Vladivostok State University of Economics and Service" in 2015. Prospects for obtaining both economic, strategic, and military benefits pay off all the costs that Beijing has to go to [20, pp. 495–498]. Chinese shipping companies are constantly exploring the economic potential of the Arctic waterways. The fleet of Chinese container ships (Yang Ming Marine Transport Corp) is being updated at an accelerated pace. The Polar Silk Road Program is consistently revealing its Arctic ambitions. The concept of Polar Silk Road itself appeared as the Northeast Passage became more and more associated with

³⁷ Sea transport routes in the Arctic. URL: <https://johnenglander.net/wp/wp-content/uploads/2019/05/TAI-Arctic-Shipping-Routes-labeled.gif> (accessed 17 June 2020).

Asia, especially China, - emphasized Mia Bennett, Assistant professor at the University of Hong Kong³⁸.

The initiative “belt and road” – this is China's infrastructure development strategy, which focuses on the development of and investment in 152 countries and international organizations on several continents. “Belt” applies to overland routes for roads and railways, and the “road” – to the Silk Road of the Sea 21st century³⁹.

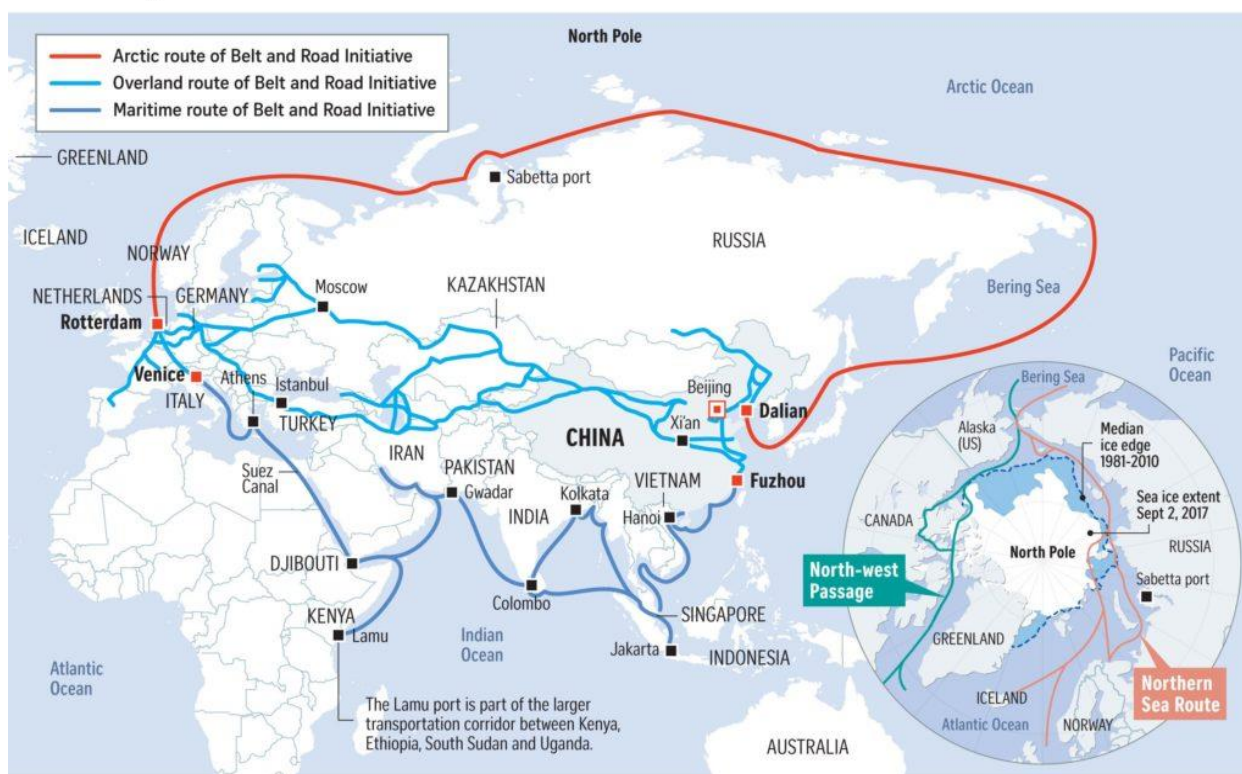
Geographically, China is an “*almost Arctic state*”, one of the continental states closest to the Arctic Circle, - is justified in the Arctic policy of China or in the so-called. White Paper. China intends to cooperate with other countries: 1) in protecting the environment; 2) in protecting the ecosystem; 3) in solving the problem of climate change; 4) in the development of Arctic sea routes; 5) in the exploration and exploitation of oil, gas, mineral and other inanimate resources; 6) in the conservation and use of fish and other living resources; 7) in the development of tourism resources; 8) actively participate in the management of the Arctic and international cooperation, promoting peace and stability in this region⁴⁰. States outside the Arctic region, according to the PRC, do not have territorial sovereignty in the Arctic, but they have rights in relation to scientific research, navigation, overflight, fishing, laying of submarine cables and pipelines on the high seas and other relevant sea areas in the Arctic. The “White Paper” emphasized that the capital, technology, market, knowledge and experience of China will play an important role in expanding the network of shipping routes in the Arctic, will contribute to the economic and social progress of coastal states along these routes [21, pp. 126–128].

³⁸ Bennett M. Along the Polar Silk Road, China Breaks the Ice. URL: <http://cn.chinausfocus.com/finance-economy/20181106/34091.html#eng> (accessed 17 April 2019).

³⁹ Full text of the Concept for Maritime Cooperation under the Belt and Road Initiative. URL: http://russian.news.cn/2017-06/20/c_136381457.htm (accessed 11 July 2020).

⁴⁰ Full text: China's Arctic Policy. The State Council Information Office of the People's Republic of China. January 26, 2018. URL: http://english.www.gov.cn/archive/white_paper/2018/01/26/content281476026660336.htm (accessed 17 June 2020).

China's polar extension to Silk Road



NOTE: September is the end of summer in the North Pole when the frozen lid of sea ice tends to shrink to its smallest. Unlike the Antarctica, there is no land under the frozen Arctic ice.
 Sources: CHINA'S NATIONAL DEVELOPMENT AND REFORM COMMISSION, THE ARCTIC INSTITUTE, NATIONAL SNOW AND ICE DATA CENTRE, REUTERS STRAITS TIMES GRAPHICS

Fig. 8. Polar silk road ⁴¹.

Dr Collin Koh Swee Lean, Research Fellow, Institute for Defense and Strategic Studies, School of International Studies named after S. Rajaratnam, based at the Nanyang Technological University of Singapore, in his article "China's strategic interest in the Arctic goes beyond the economy," stressed that Beijing has long viewed the Arctic as a consequence of its strategic, economic and environmental interests⁴². This is primarily economic, especially energy cooperation with Russia: the Power of Siberia gas pipeline, the key role of Chinese companies in the Arctic LNG 2 project, the creation of a global transport corridor through the Northern Sea Route. Chinese sponsors, including the Silk Road Foundation, have provided billions of dollars to help build the Yamal LNG project. Chinese experts and diplomats talk about the need to achieve a "high level of trust" with Russia and suggested at one time five ports as reference ports for China's participation - Murmansk, Sabetta, Arkhangelsk, Tiksi, Uelen. China's interests in relation to sea transport corridors in the Arctic, interaction between Russia and China in the Arctic, the potential of Russian-Chinese cooperation were discussed in their article by *Qin Dong*, PhD student, and *A.L. Lukin*, associate professor of the Far Eastern Federal University [22, pp. 158-166]. In pursuit of its own interests, China intends to maintain an appropriate balance of its current and long-term interests in

⁴¹The Polar Silk Road Comes to Life as a New Epoch in History Begins. URL: <https://southfront.org/the-polar-silk-road-comes-to-life-as-a-new-epoch-in-history-begins/> (accessed 11 July 2020).

⁴²Collin Koh Swee Lean. China's strategic interest in the Arctic goes beyond economics. URL: <https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/>. URL: <https://www.rsis.edu.sg/profile/collin-koh-swee-lean/#.Xvi75OoudPY> (accessed 10 June 2020).

order to contribute to the sustainable development of the Arctic, including in scientific terms. General Director of the Center for the ICIE "Silk Road Economic Belt", D.Sc. n. V.N. Remyga awakens the possibility of creating a Russian-Chinese consortium for the implementation of Arctic projects. As a first step, he proposes to develop a program for the construction and joint operation of ice-class ships. The total funding for the implementation of this program will be 2 - 3 billion US dollars. In this regard, on the agenda is the question of whether to develop rachivaniya in China program for the construction of its own icebreaker fleet. It would be more logical to combine the capabilities of the two countries [23, p. 21].

Institute of Oceanology RAS named after P.P. Shirshova and Qingdao National Marine Science and Technology Laboratory establish Arctic research center⁴³. Tianjin Center for Marine Cartography of the People's Republic of China has prepared a "Collection of Maps and Reference Materials on the North Pole" ⁴⁴.

At the heart of the differences between Russia and China on Arctic issues is the concept of "common heritage of mankind", which is used in two ways: underline the international status of the Arctic sea routes and the delimitation of the continental shelf in the Arctic Ocean, - noted *Sun Syuven* in his dissertation "Problems and prospects for Russian-Chinese cooperation in the development of the Arctic "(2019). The diplomatic philosophy of China "Qutong Tsunyi" (to find common ground in the existing differences) can contribute to the Arctic interaction as a whole [24, pp. 5–6, 14, 35].

China is investing heavily in the development of Greenland. In 2017, Shanghai-based Shenghe Resources bought a 12.5% stake in Greenland Minerals and Energy A/S and became its largest shareholder, having the right to increase its stake in the flagship project of the Greenland uranium mining company in Kwanefjeld to 60%.

Another Arctic country, Iceland, is receiving special attention from China. Iceland's central location in the northern hemisphere makes it the ideal northern gateway to Europe from East Asia, similar to the prosperous port of Piraeus in Greece, which in a few years is expected to handle up to 6.2 million TEU per year, making it one of the five largest ports in Europe. Over time, Iceland could become a similar transit hub in the Atlantic Arctic, expanding infrastructure as needed as the international shipping network expands through Arctic routes. Italian Prime Minister D. Conte and Chinese President Xi Jinping signed an agreement on China's investment in the development of the commercial ports of Genoa and Trieste on March 23, 2019, as well as on the development of tourism and the export of Italian oranges. 13 EU countries have signed memorandums of intent to cooperate with China. The number of European countries ready to develop trade relations with China continues to grow. By the end of 2020, it is planned to conclude a comprehensive investment agreement between the EU and China.

⁴³Russia and China will begin joint research in the Arctic. URL: <https://ocean.ru/index.php/novosti-left/novosti-instituta/item/1311-rossiya-i-kitaj-v-arktike> (accessed 06 August 2020).

⁴⁴The first Chinese collection of maps and reference materials on the North Pole is being prepared for publication. URL: <https://russian.dbw.cn/system/2014/05/19/000854084.shtml> (accessed 06 August 2020).

Conclusion

In conclusion, it should be noted that the Great Redistribution of the Arctic was by no means completed in the XX century. This is evidenced by the refusal of the United States to ratify the 1982 UN Convention on the Law of the Sea (UNCLOS), conflicts around the passage along the Northern Sea Route, the unfinished division of the continental shelf of the Arctic Ocean, the creeping militarization of the Arctic, and the threat of cyber-attacks.

The Russian state, business and transport organizations can really become catalysts for positive changes in the AZRF in the new historical and economic conditions of the third decade of the 21st century. The development of hydrocarbons, mineral and biological resources after the coronavirus pandemic in the Russian Arctic will largely determine the development of the Northern Sea Route and the legitimization of the Northern Sea Transport Corridor, which was first included in the AZRF Development Strategy until 2035. Further infrastructure development to meet the needs of the Russian population in increasing the coastal sailing, northern delivery. There are still many climatic, legal, environmental, economic, political, and technological uncertainties in the commercialization of transit. In this context, it would be logical to practically, in fact, transform the entire Russian Arctic into a territory of advanced socio-economic development.

It is important not to forget about the increasing role of the PRC in the Arctic region, the promotion of projects within the framework of the Polar Silk Road. Otherwise, the Arctic picture will not be complete. The capital, technology, market, knowledge and experience of China in expanding the network of sea routes in the Arctic and promoting the economic and social progress of coastal states along the routes, become the basis of Chinese leadership and geopolitics in the Arctic.

The plurality of sea routes for cargo transportation in the Arctic along the coast of Russia (NSR, NMTC, Northeast Passage); The Northwest Passage (NWP) linking the Atlantic and Pacific Oceans through the Canadian Arctic Archipelago; the irregular Arctic Bridge from Murmansk to the Canadian port of Churchill; c the shortest of the Arctic sea routes - a promising circumpolar route Trans-Arctic sea route from the Atlantic Ocean to the Pacific Ocean through the center of the Arctic Ocean (TSR); China's Polar Silk Road linking Asia and Europe; modernization of the NSR infrastructure; the implementation of investment projects of the oil and gas and mining complex of global significance – all this generates new challenges and opportunities for the development of the Russian Arctic, due to geographically, economically, geopolitically, and has practical significance.

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