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### The State Transport Policy for Development of the NSR in the USSR and the Russian Federation in the 20th Century \*

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**Abstract.** The article examines the development and use of the Northern Sea Route (hereinafter: the NSR) during the Soviet era. It also considers various trends in the development of the state transport policy in the world and significant aspects of its assessment. The above-mentioned transport route is significant from a geopolitical point of view. Although the USSR failed to realize the commercial potential of the NSR and its year-round operation, it made significant progress in the development of the NSR to achieve the political and strategic goals of the Soviet Union. The article analyzes the essential aspects of Soviet and Russian transport policy in the XX century. The author argues that transport innovations caused by the energy crises of the 1970s and 1980s and related environmental problems largely bypassed the Soviet economy due to the period of stagnation. The author concludes that if the USSR had kept pace with modern trends in technology and the Soviet Union had not collapsed, the NSR could have become a self-sustaining route and the goal of year-round navigation on the NSR would have been achieved in Soviet times in the 20th century.

**Keywords:** *USSR, Arctic, NSR, transport policy, transport communications*

#### Introduction

The purpose of this article is to study the evolution of the Northern Sea Route (NSR) during the Soviet era, taking into account the specifics of transport policy. The analysis will focus on how the Soviet Union sought to develop the Arctic region through the development of the NSR. The theoretical part of the article analyzes the concepts of transport policy and various methods used in developed countries to evaluate transport policies and plans, considering the evolution of the development of the NSR in the USSR, as well as specific strategies and plans in support of this strategy.

The relevance of the study lies in the need to emphasize the importance of using methods for assessing the transport policy and plans of any government. The purpose of the article is to emphasize the primacy of political will in the development of the NSR in the USSR in comparison with an objective assessment of transport policy and plans.

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This goal can be achieved by solving the following tasks:

- to analyze the development of the NSR in the USSR;
- to study transport policy and assessment methods;
- to show the applicability of assessment methods to the NSR;
- to emphasize the need to use sound assessment methods in determining the state transport policy in the field of development of transport routes (on the example of the Northern Sea Route).

The object of the study is the development of the NSR in the USSR. The subject of the study is the development of the transport policy of the NSR in the USSR and the application or applicability of methods for assessing the transport policy and plans for the development of the NSR in the USSR.

The methodological basis of the research is analysis and synthesis, description and explanation, dialectical approach, system analysis and comparative analysis.

System analysis made it possible to study the problem as a whole, as well as to consider individual elements of the system of phenomena under study. The method of comparative analysis is implemented by comparing the evolution of transport policy and assessment in the world with the development of the NSR in the USSR. Based on the methods used, it was concluded that although the development of the NSR of the USSR had many positive aspects, it could not be sustainable due to the lack of periodic assessment and economic base.

### ***Transport policy and assessment***

Transport policy is the development of strategies and the implementation of activities aimed at achieving specific goals related to social, economic and environmental conditions, as well as the functioning and efficiency of the transport system. Transport planning is associated with the preparation and implementation of activities aimed at solving specific problems [1, Rodrigue J.P., Comtois C., Slack B., p. 322–323]. The purpose of transport policy is to make effective decisions on the distribution of transport resources, including the management and regulation of existing transport activities. Thus, transport policy can be both public and private [Ibid.]. However, governments are often more involved in the policy making process as they either own or operate many components of the transport system and have varying levels of jurisdiction over all existing modes of transport. Governments are also often aware that their role is to manage transport systems by virtue of the fact that they provide essential public services in addition to enacting a regulatory framework [Ibid.].

Transport services and infrastructure have long been considered key components of the pace and geographic structure of economic growth. Thus, transport investments were aimed at providing basic services (including to the population, industry, trade) and achieving state policy and political goals [1, p. 322–329]. Key examples of this were the construction of the Suez and

Panama Canals. These considerations have exacerbated concerns about economies of scale, monopoly, and destructive competition, leading governments to look for ways to control key transport infrastructure and some key transport services [Ibid.]. In the United States, the tradition of private ownership has led to economic regulation of private transport companies. In many other countries, national transport systems started with private railways and transformed into state structures for both political and economic reasons [Ibid.]. The option of allowing private property and enforcing government regulation was rejected by most countries, so that only the United States and a few other countries had transport “entry points” that included regulated private sectors of industry. Most countries have a long legacy of state-owned enterprises and a direct government role in the operation, investment, and ownership of transport [2, Oster C.V., Strong J., p. 19].

In many countries it has been considered that each mode of transport plays a unique and well-defined role in the transport system and that these roles overlap very little, if any at all [Ibid.]. Each of them was considered separately, without taking into account other modes of transport, and no special attention was paid to the impact of competition between suppliers or consumers on transport services [Ibid.]. Even when intermodal competition was evident, public policy tended to protect individual modes of transport. Attempts by international maritime shippers to provide domestic services have often met with resistance, especially in Japan, China and Korea [Ibid.]. Perhaps, the most striking example was the regulation of freight traffic in the United States, which was stimulated by railroad fare discrimination and railroad price wars [Ibid.].

In the second half of the 20th century, the transport sector was privatized and deregulated, and governments were faced with different responsibilities, demands and challenges. It has been accepted to identify five key tasks for the public sector in the new transport policy [2, p. 24]:

- Restructuring
- Concession management
- Competition policy
- Preservation of access
- Safety and environmental control.

In transportation, as in any other area of public policy, payments are done by charging or by taxation. The value of the method of evaluating transport investments based on the method of cost-benefit analysis follows from the review of international practice that has been presented in various studies. Most developed countries have adopted the method of cost-benefit analysis as a means of providing decision makers with advice on the justification of the scheme of recommendations and justifications for projects [3, Worsley T., Mackie P., p. 42]. This method was developed during the period 1960–1975 [3, Worsley T., Mackie P., p. 3–4]. There were differences across countries in the degree to which distributive and spatial factors outside of cost-benefit

analysis influence decision-making, as well as differences in the distribution of power in federal countries. However, the similarity of assessment methods in the seven countries studied significantly exceeded the number of differences [3, Worsley T., Mackie P., p. 42].

The evaluation system will cease to be useful if it becomes ossified and distant from the interests of decision makers. We will discuss how to respond to current challenges, but firstly, it is useful to outline how we arrived at these conclusions and what role economic analysis plays in the policy process [Ibid.]. It can be concluded from various transport policy studies that economic analysis has played a variable but relatively modest role in policy development. Politics is often presented as “non-negotiable” [Ibid.]. It is part of a prior commitment, and decision makers may reject policy alternatives as inconsistent with their goals [Ibid.]. By way of example, the British Secretary of State for Transport, Nicholas Ridley, who served from 1983 to 1986, had policy objectives for the bus industry in 1984: deregulation, privatization and complete elimination of subsidies to the industry. When he was told that he could achieve the first two goals, but not the third, he agreed to this [3, p. 27]. Various studies in Europe have shown that there is an “institutionalized” economic and political bias in favor of public spending on land transport infrastructure. The EU’s Motorways of the Sea policy has recognised these distortions and mechanisms have been put in place to allow shipping to develop further. However, there is still a discrepancy: transport policy across Europe allows for permanent public funding of road and rail infrastructure, but not maritime infrastructure.

Political science experts argue that the cost-benefit analysis system (CBA) encroaches too heavily on the freedom of choice of democratically elected politicians to make choices on behalf of society [3, Worsley T., Mackie P., p. 15]. Proponents say that such attempts are largely useless exercise that can both confuse and produce results [3, Worsley T., Mackie P., p. 14–15].

In the second half of the 18th and early 19th centuries, many transportation routes were created for political reasons such as national accessibility, job creation or security. Economic expediency began to play a more important role in the second half of the 20th century. Transport is an important factor influencing economic activity, but it is also shaped by it. Therefore, many Western countries began to make policy decisions on transport projects, including privatization or joint public-private ownership, based on economic cost-benefit analysis, in the 1970s and 1980s. Thus, we can say that governments play a critical role in transport as the initiators of investment and regulation. The political role of transport cannot be denied, as governments subsidize the mobility of people and goods.

### ***USSR Development Strategy of the NSR***

“The tsarist government had the most powerful icebreakers in the world, built abroad, in England, but could not use them... Soviet workers in the Arctic were able to use icebreakers in the Arctic Ocean with great success” [4, Joffe S., p. 22].

### ***Russia's pre-revolutionary period of the NSR development***

The exploration of the Arctic began in Tsarist Russia. Nansen and Amundsen became national heroes in their countries at a time when Europe was carrying out important Arctic research, because their activities were fully in line with the spirit of the time. Russian efforts to develop the Arctic were aimed at eliminating the Northern Sea Route from international competition, mainly from the northern European countries, although these expeditions did not yet have a clear profit value [5, Kitagawa H., p. 12].

Tsarist Russia also sent a number of expeditions to explore the NSR, but only a limited number of them were successful [6, Zubkov K.I., Karpov V.P., p. 46–55]. In the period from 1876 and 1919, 122 expeditions were registered in search of a sea route along the Kara Sea, which was studied and promoted by the polar explorer A.E. Nordenskjöld. One reason for their interest was the richness of the region's natural resources [5, Kitagawa H., p. 12]. Unfortunately, most of these voyages were quite dangerous, so the probability of their success was not expected to be high [5, Kitagawa H., p. 12]. For example, in the period from 1874 to 1901, 87 expeditions were organized along the Northern Sea Route to the Ob-Yenisei basin, of which only 60 reached their goal, 22 more could not reach and returned to the port, and 5 were shipwrecked [5, Kitagawa H., p. 12]. By 1910, commercial flights along this route had completely ceased [5, Kitagawa H., p. 12].

The Russo-Japanese War of 1904–1905 forced the tsarist government to address the problems of the Northern Sea Route seriously. Diplomatic and other difficulties associated with sending a squadron of Admiral Rozhdestvenskiy across three oceans, and then the Tsushima tragedy, made the authorities think that there is a shorter way to the country's eastern possessions, completely passing through their own waters [7, Shirokorad A.B., p. 12]. The first icebreaker for the purposes of the Arctic navigation was the Yermak, built in the British port of Newcastle under the leadership of the Russian admiral S.O. Makarov, and on March 4, 1899, he brought him to Kronstadt [8, Belov M.I., p. 70]. Successful initiatives were associated with the fact that Admiral Makarov launched the purchase of icebreakers and the discovery of Novaya Zemlya (the Taimyr and Vaigach voyages) in 1913 [6, Zubkov K.I., Karpov V.P., p. 46–55]. This is the pinnacle of what tsarist Russia could achieve in studying the NSR, but it did not solve the problem of regular Arctic navigation [8, Belov M.I., p. 75–78]. Although many initiatives were put forward, no State Transport Policy for the development of the Northern Sea Route was made public during this period.

### ***Period after the Revolution of 1917***

After the October Revolution of 1917, the planned development of the NSR began, which became an urgent national economic task [6, Zubkov K.I., Karpov V.P., p. 56–57]. In 1921–1922, the White Guards brought hundreds of Russian ships abroad [8, Belov M.I., p. 6]. Some of these vessels were sold, including the Mikula Selyaninovich icebreaker (5.250 tons), which was sold to

Canada [9, Shirokorad A.B., p. 4]. Other icebreakers — Ilya Muromets (2.500 tons) and Volorets (3.600 tons) — were also sold and seized by Finland, respectively. Other smaller icebreakers with a displacement of 500–1.000 tons were also stolen and seized [9, Shirokorad A.B., p. 4]. Despite the loss of several icebreakers and merchant ships, the Soviet leadership was determined to develop the Arctic and the NSR [9, Shirokorad A.B., p. 6].

V.I. Lenin paid great attention to the development of Arctic shipping and scientific research in the Soviet North [10, Bulatov V.N., p. 23]. He initiated the transportation of food along the NSR in 1920 from Siberia to the central regions of Russia through Arkhangelsk. He also signed a decree dated March 10, 1921 on the establishment of a floating naval scientific institute (Plavomornin) [9, Shirokorad A.B., p. 5]. In 1920, the NSR Committee for planning the Kara expeditions was formed [9, Shirokorad A.B., p. 5]. The Kara expeditions (carried out since 1921) and the Kolyma voyages (since 1923) paved the way for the opening of navigation along the entire NSR route [9, Shirokorad A.B., p. 6]. By the Decree of the Presidium of the Central Executive Committee of the USSR of April 15, 1926, the territory of the USSR is declared to be “all lands and islands, both discovered and which may be discovered in the future, not constituting by the time of publication of this decree the territory of any foreign states recognised by the Government of the USSR, located in the Arctic Ocean, north of the coast of the USSR to the North Pole between the meridians thirty two degrees four minutes thirty five seconds east longitude ( $32^{\circ}4'5''$  E) from Greenwich, passing along the eastern side of Waida Bay through the triangulation mark on the cape Kekurskiy, and the meridian one hundred sixty-eight degrees forty-nine minutes thirty seconds west longitude ( $168^{\circ}49'30''$  W) from Greenwich, passing in the middle of the strait separating the Ratmanov and Kruzenshtern islands of the Diomed Islands group in the Bering Strait”<sup>1</sup>.

### *Glavsevmorput*

In December 1932, the state organization “Main Directorate of the Northern Sea Route” (abbreviated as Glavsevmorput) was created, the purpose of which was to ensure navigation along the NSR and the national economic development of the Arctic, the main duties of which are “finally lay the Northern Sea Route from Belyy to Beringov strait, equip this route, keep it in good condition and ensure navigation along this route” [11, Timoshenko A.I., p. 3]. Initially, O.Yu. Schmidt, head of the Sibiryakov Research Group, was put in charge of Glavsevmorput [5, Kitagawa H., p. 12]. In 1934, the Soviet government announced its plans to build icebreakers in the Soviet Union, which until then had been built only outside the country [12, Lloyd, T., p. 108]. In retrospect, the decision to build icebreaker steamships was controversial, although it seemed logical at the time, given the shortage of oil and availability of coal in the North [12, Lloyd, T., p.

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<sup>1</sup>SSSR. Ob ob'yavlenii territoriy Soyuzo SSR zemel' i ostrovov, raspolozhennykh v Severnom Ledovitom okeane. Prezidium Tsentral'nogo Ispolnitel'nogo Komiteta Soyuzo SSR ot 15 aprelya 1926 goda [USSR. On declaring lands and islands located in the Arctic Ocean as the territory of the USSR. Presidium of the Central Executive Committee of the USSR of April 15, 1926]. URL: <https://docs.cntd.ru/document/901761796> (accessed 05 February 2022).



108]. According to an article by a Western expert on the NSR, there was a crisis in 1937–1938 that forced 26 ships, including 7 out of 8 icebreakers, to stay at sea in the winter. This led to a sharp reduction in the powers of the Glavsevmorput [13, Amstrong T.E., p. 136–138]. In 1939, Ivan Papanin, an outstanding figure in the Arctic navigation, was appointed head of the organization [13, Amstrong T.E., p. 145]. Under his leadership, in addition to geological exploration, several new ports were opened, four Stalin-class icebreakers were built, and the merchant fleet was enlarged.

Unfortunately, at the peak of the development of the NSR, the World War II broke out, and the NSR began to be used not only for national economic purposes, but also for military ones [11, Timoshenko A.I., p. 12]. During the Great Patriotic War, the NSR became more in demand compared to peacetime. This proved the effectiveness of the transport policy of the Soviet government [11, Timoshenko A.I., p. 12]. For example, in 1942, the first Soviet navy, supported by an icebreaker, managed to pass from Vladivostok to Polyarniy [11, Timoshenko A.I., p. 12], military auxiliary materials were delivered from the USA through the Bering Strait to the northern coast of Siberia [8, Belov M.I., p. 195–197].

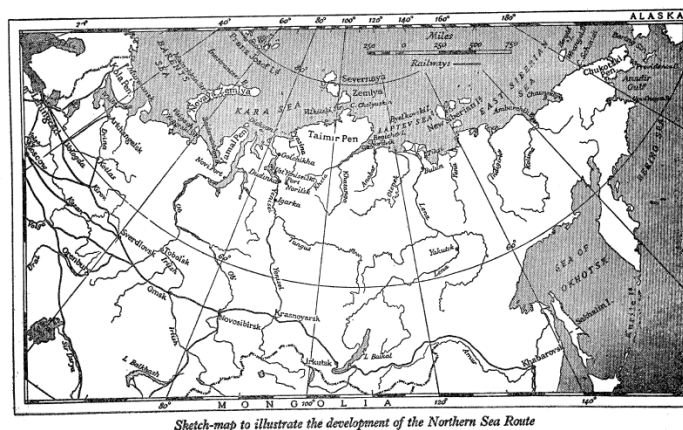


Fig. 1. Map sketch to illustrate the development of the NSR [12, Lloyd T., p. 100].

### ***Period after World War II***

After the end of World War II, the Soviet leadership, began to pay even more attention to the NSR for reasons of defense strategy. In 1959, a nuclear power plant was launched on the Lenin icebreaker, which opened a new stage in the development of the Arctic and the NSR. The USSR is the first state in the world to apply the above technologies in the Arctic, which made it possible to consolidate its leadership position in the region [14, Fomichev A.A., p. 123].

In the 1950s and 1960s, a major reorganization of the Main Directorate of the Northern Sea Route began [10, p. 120]. In March 1953, a law on the unification of the Ministry of the Navy of the USSR, the Ministry of the River Fleet of the USSR and the Main Directorate of the Northern Sea Route into a single Ministry of the Sea and River Fleet of the USSR was adopted [10, Bulatov V.N., p. 120]. In 1963, the following were separated from the Glavsevmorput system: polar aviation, which became subordinate to the Main Directorate of Civil Aviation, the Arctic Research

Institute, polar stations and observatories (which came under the control of the Chief Hydrometeorological Service Administration under the Council of Ministers of the USSR). Even earlier, various economic enterprises of the Glavsevmorput were transferred to the jurisdiction of the all-Union ministries. By 1969, the main functions of the management of the NSR were fully performed by the Ministry of the Navy of the USSR [10, Bulatov V.N., p. 120].

### ***International legal regime and the Northern Sea Route***

Contrary to popular belief, Canada was the first Arctic country to regulate shipping in its Arctic waters [15, Bankes N.D., p. 286]. In 1970, Canada took measures to strictly regulate all navigation in Canadian Arctic waters in order to protect the environment [15, Bankes N.D., p. 286]. Unlike the Canadian Arctic, where human presence was minimal, the Soviet Arctic for several decades was the object of large-scale, sustainable and systematic development by the state. Soviet claims to “all lands and islands” within certain geographical coordinates (excluding Svalbard), the so-called “sector theory”, are based on a decree of April 15, 1926 [10, Bulatov V.N., p. 1], which in turn was copied from a similar Canadian act of 1925 [16, Vylegzhanin V., Bunik I., Torkunova E., Kienko E., p. 289]. However, the waters in this sector outside the twelve-mile territorial sea were considered open seas in Soviet practice and were open to foreign shipping as ice conditions permitted [17, Butler W.E., p. 462–463]. The generally accepted norms of the sectoral method did not provide for any sovereign rights for countries outside the Exclusive Economic Zones. At that time, no country challenged the rights accepted by Canada and Russia [16, Vylegzhanin V., Bunik I., Torkunova E., Kienko E., p. 289]. Passage through Soviet territorial waters in the Arctic was governed by prevailing international law and laws or regulations of the Soviet government applicable to territorial waters in general [17, Butler W.E., p. 462–463]. This was the case despite various legal theories put forward in the Soviet legal media about sovereignty over ice, closed seas, or historical seas [17, Butler W.E., p. 462–466].

In September 1971, the Soviet government took the first of a series of measures aimed at preventing environmental pollution in the region [17, Butler W.E., p. 462–463]. The administration of the NSR was given additional powers to prevent and eliminate the consequences of pollution on the coast of the NSR [17, Butler W.E., p. 462–463]. In 1972, there was another organizational change in the management of the NSR. The Administration of the NSR under the Ministry of the Navy of the USSR was created in order to ensure the safety of Arctic shipping, as well as to take measures to prevent and eliminate the consequences of pollution of the marine environment and the northern coast of the USSR<sup>2</sup>. The administration of the NSR was given broad powers to develop and implement pollution control requirements (including minimum technical standards

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<sup>2</sup> USSR Statute. Administration of the Northern Sea Route attached to the Ministry of the Maritime Marine Fleet. International Legal Materials, 1972, vol. 11, no. 3, pp. 645-646. URL: <https://www.jstor.org/stable/i20690906> (accessed 05 February 2022).



for ships intending to navigate the Northern Sea Route); with the power to send inspectors to ships to determine if these standards are being met, to suspend navigation in areas where pollution may be a problem, and to impose fines for violations [17, Butler W.E., p. 462–463]. The Administration did not formulate or enforce anti-pollution regulations in such a way that they would discriminate against foreign vessels [17, Butler W.E., p. 463]. However, no efforts have been made to make the Northern Sea Route a commercially attractive alternative for international shipping in the Atlantic and Pacific Oceans while protecting the environment [17, Butler W.E., p. 463]. Western analyst Armstrong wrote that there was an invitation to foreign shippers to use the Northern Sea Route in 1967 [18, Armstrong T.E., p. 123–124]. This is also noted by the Russian researcher [19, Gudev P.A., p. 133]. However, no foreign shipper took advantage of this offer. According to the Western analyst, it is possible that this proposal was tacitly withdrawn after the 1967 Arab-Israeli war [18, Armstrong T.E., p. 123–124]. When the United States sent icebreakers to the Vilkitskiy Strait in 1965 (Northern Wind) and in 1967 (Edisto and Eastwind), the Soviet Union refused to allow the ships to pass, citing a requirement under federal law that warships requested prior permission [16, Vylegzhanin A., Bunik I., Torkunova E., Kienko E., p. 289; 20, Franckx E., p. 270–275]. During the third UN Conference on the Law of the Sea (1973–1982), free passage was granted to both merchant and military vessels [20, Franckx E. p. 270–275]. However, the Soviet Union and the USA disagreed on what constituted innocent passage, but they agreed that the disagreement would be resolved diplomatically in accordance with a joint statement in 1989<sup>3</sup>. This joint statement does not mention the NSR, which was disputed by the two parties in the 1960s. According to Russian researchers, the Arctic was not the focus of the UN Convention on the Law of the Sea, despite the introduction of Article 234, which provides special rights to the coastal states of the Arctic [19, Gudev P.A., p. 132–133, 21, Vylegzhanin A.N., p. 27–29].

### *1970s and 1980s*

The Northern Sea Route was the main national communication of the USSR in the Arctic, and one of the main goals was to ensure the safety of Arctic navigation. In December 1970, the administration of the NSR was established under the Ministry of the Navy of the USSR, the main tasks of which were to ensure the safety of Arctic navigation and to exercise state supervision over the rational use of the Northern Sea Route as the main national communication of the USSR in the Arctic [10, Bulatov V.N., p. 120]. The task of the administration also included the organization of Arctic shipping in all aspects [10, Bulatov V.N., p. 120]. In subsequent years, the Soviet Union allocated large funds for navigation along the NSR. In December 1972 – January 1973, the cargo icebreaker “Indigirka” made its first passage along the NSR from Murmansk to Dudinka in just 12 days [5, Kitagawa H., p. 12]. From February 24 to March 5, 1976, the XXV Congress of the CPSU

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<sup>3</sup>USSR-USA. Joint statement with attached uniform interpretation of rules of international law governing innocent passage. URL: <https://www.jstor.org/stable/20693384> (accessed 05 February 2022).

was held [10, Bulatov V.N., p. 116]. In the new five-year plan, sailors, rivermen and polar explorers were given a responsible task: “To implement measures to extend navigation along the NSR and in freezing ports” [10, Bulatov V.N., p. 116]. Since 1978, the sea freight route between Dudinka and Murmansk has been expanded [5, Kitagawa H., p. 12]. Achievements in the development of the Northern Sea Route were truly impressive, and in the western sector of the Arctic, the navigation season was extended to a full twelve months [22, Barr W., Wilson E., p. 1]. Sailing along the NSR all year round did not seem like a dream. Progress in this direction was comprehensively summarized and analyzed by T.E. Armstrong (British polar geographer, sea ice specialist) in 1952 and 1980 [23, Barr W., Wilson E., p. 1].

By 1983, the Soviet Union had accumulated a very large fleet of icebreakers and cargo ships with ice reinforcement to operate in Arctic waters [22, Barr W., Wilson E., p. 1]. It consisted of more than 14 polar icebreakers, three of which were nuclear-powered. [22, Barr W., Wilson E., p. 1]. With this powerful fleet of ships and a sophisticated support system, including weather stations, ice reconnaissance aircraft and satellites, it turned out that year-round navigation along the entire Northern Sea Route is real and achievable. In the summer–autumn navigation of 1983, the ice conditions in the eastern Arctic region were extremely difficult [10, Bulatov V.N., p. 121]. Arctic ice could still seriously disrupt navigation: there were reports of very severe ice conditions in the Long Strait, between Wrangel Island and the mainland (Fig. 2), of a large number of ships stuck in the ice and a crushed and sunk ship [23, Barr W., Wilson E., p. 1]. This topic was widely covered in the Soviet press, interpreted as skill, heroism and devotion to the duty of sailors and scientists, but there were also articles in which accusations were made [23, Barr W., Wilson E., p. 1–2].

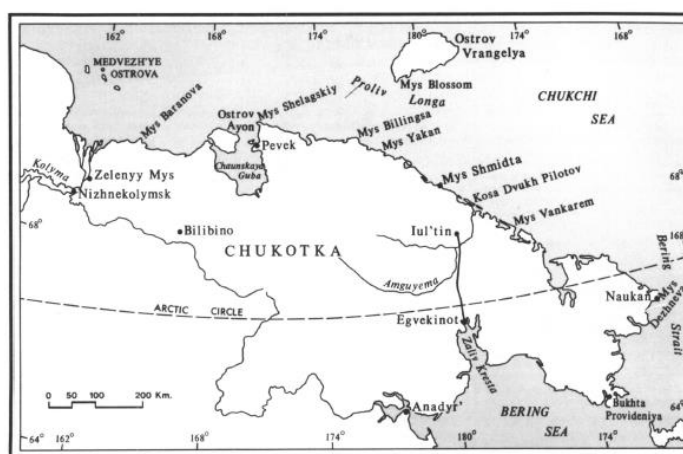


FIG. 1. Chukotka, showing the main locations associated with the 1983 shipping crisis.

Fig. 2. The main places of Chukotka associated with the crisis of the Soviet Arctic shipping in 1983 [22, Barr W., Wilson E., p. 1].

### ***The posthumous crisis of Soviet Arctic shipping in 1983***

In his final assessment, Tolstikov, Deputy Chairman of the State Committee for Hydrometeorology and Environmental Monitoring, made a very eloquent conclusion that sending old,

less powerful cargo ships into heavy ice behind the stern of even the most powerful icebreaker would be a disaster [22, Barr W., Wilson E., p. 11]. Some analysts commented on the division of powers between various ministries, suggested re-creating a single organization, like the Glavsevmorput, which was abolished in the 1960s. The issue of annual ice reconnaissance and its possible addition with satellite images was also discussed. All analysts agreed that most of the blame is attached to the shippers. An excessive amount of time was wasted handling cargo, and there was excessive spoilage when the cargo was outdoors in the Arctic [23, Barr W., Wilson E., p. 1–2].

In 1976, the government declared the long-term goal of the Ministry of the Navy to extend the navigation of the entire Northern Sea Route [10, Bulatov V.N., p. 116], although this goal, as expected, would not be achieved before 1990, which would require time, money and new technologies [22, Barr W., Wilson E., p. 11–12]. The introduction of more powerful nuclear icebreakers made it possible to increase the navigation period, as well as to reduce the distances between ports due to the possibility of using routes located at higher latitudes [23, Selin V.S., Istomin A.V., p. 11–12].

In 1987, in a speech by M.S. Gorbachev at the solemn meeting dedicated to the awarding of the Order of Lenin and the Gold Star medal to the city of Murmansk, the words that the North Pole should become the Pole of Peace and Friendship were first spoken [10, Bulatov V.N., p. 137]. The “Polar Bridge” across the North Pole between the USSR and Canada was laid by the first ever Soviet-Canadian Trans-Arctic Skiing Expedition [10, Bulatov V.N., p. 137]. In 1987, the first domestic oil field in the Arctic Ocean started operating [10, Bulatov V.N., p. 137]. On August 15, 1987, the tanker Nefterudovoz-56 set a course from Kolguev Island to Kandalaksha. It carried 2700 tons of Arctic oil [10, Bulatov V.N., p. 137].

In 1988, the State Commission for Arctic Affairs under the Council of Ministers of the USSR was formed to intensify and coordinate scientific and economic activities in the Soviet Arctic [10, Bulatov V.N., p. 137]. Almost sixty years have passed since the establishment of the Glavsevmorput, shipping in the Arctic has gone through several stages during this time, with a new one in perspective — the most complex and the most necessary — ensuring year-round navigation in all Arctic seas [10, Bulatov V.N., p. 137]. The 1970s–1980s were also focused on quantitative economic indicators, rather than on quality and diversification, which led to the final desolation of towns on the NSR, such as Igarka, in the 1990s [24, Zamyatina N.Yu., p. 789]. Studies show that none of the party congresses set the task of making the NSR economically self-sufficient [10, Bulatov V.N., p. 116–156]. The transport policy of the USSR remained isolated from the changes in transport policy in the West.

### **1990s**

Strategic planning and public administration practices in relation to the territories of the Far North in the Russian Federation have undergone significant changes in the 1990s. The economic

technocratic approach prevailing in these years appealed to the need to reduce the costs of maintaining infrastructure in harsh climatic conditions, and called for “cost optimization” and an increase in the “efficiency of expenditure by the state and by companies” [25, Panikar M.M., Shaparov A.E., p. 33–44]. Government policy was dictated by Western countries and the World Bank [26, Melnikova, L.V., p. 34–47]. The political leadership accepted them without serious consideration of the socio-economic consequences for the Arctic [26, Melnikova, L.V., p. 34–47]. This led to the degradation of the infrastructure of the NSR, and research in the Arctic came to a standstill. It can be considered a lost decade for the NSR [24, Zamyatina N.Yu., p. 789]. However, in accordance with the Federal Law of the Russian Federation “On inland sea waters, the territorial sea and the adjacent zone of the Russian Federation”, adopted in 1998, the NSR is recognized as the historical national transport route of Russia in the Arctic <sup>4</sup>.

### *Changes in shipping volume*

*Table 1*

*Dynamics and directions of NSR cargo transportation in 1945–1995 (thous. tons) <sup>5</sup>*

	1945	1960	1970	1980	1987	1990	1991	1992	1993	1994	1995
Deliveries to the Arctic from other regions of the USSR, total	71.4	349.1	1563.0	2279.9	2943.6	2490.4	2261.6	1806.9	1413.6	795.3	829.3
Of which: from the West	63.9	188.1	932.0	1418.9	1808.1	1355.1	1193.8	974.4	768.9	573.5	576.8
Of which: from the East	7.5	161.0	631.0	861.0	1135.5	1135.3	1067.8	834.5	644.7	221.8	252.5
Deliveries from the Arctic to other regions of the USSR, total	116.2	113.4	392.7	1292.3	1684.7	1556.0	1450.7	1272.2	728.5	710.3	766.0
Inside the Arctic Coastal Shipment	85.4	88.0	340.7	398.6	358.6	136.2	170.0	169.7	95.3	18.3	10.8
External commercial supplies	171.1	412.0	683.6	980.6	1590.7	1212.8	745.5	456.1	520.3	636.0	655.5
Of which: export	51.3	412.0	616.9	888.1	1080.9	1201.0	743.6	450.8	517.3	578.9	606.0
Of which: import	119.8	0	66.7	92.5	509.8	11.8	1.9	5.3	3.0	57.1	49.5
Transit	0	0	0.1	0	1.0	115.1	176.2	202.3	208.6	140.2	100.2
Total	441.1	962.5	2980.1	4951.4	6578.6	5510.5	4804.0	3909.2	2966.3	2300.1	2361.8

Shipping along the NSR reached its highest volume in history in 1987 — 6.58 million metric tons [5, Kitagawa H., p. 90]. Since that time, shipping along the NSR has been declining (Table 1).

<sup>4</sup> RF. O vnutrennikh morskikh vodakh, territorial'nom more i prilozhashchey zone Rossiyskoy Federatsii ot 31 iyulya 1998 goda N 155-FZ [RF. On internal sea waters, territorial sea and contiguous zone of the Russian Federation dated July 31, 1998 N 155-FZ]. URL: [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_19643/](http://www.consultant.ru/document/cons_doc_LAW_19643/) (accessed 05 February 2022).

<sup>5</sup> Source: [5, Kitagawa H., p. 90].

With the exception of a slight rise in 1995 compared to the previous year [5, Kitagawa H., p. 90], this decline is not interrupted until 2000 (1.60 million metric tons) [27, Goldin V.I. p. 35]. The volume reached 2.36 million metric tons in 1995, then fell to 1.64 million metric tons in 1996, which is less than a quarter of the volume at the peak of the SMP in 1987 [5, Kitagawa H., p. 90]. The main reason for the growth in volumes in the late 1980s was the extraction of natural resources. In the West of the NSR, an increase in the volume of inland navigation was supported by the extraction of oil and gas, as well as copper, nickel and scarce metals in Norilsk [5, Kitagawa H., p. 90]. Scarce and non-ferrous metals, including gold, were shipped to the east from Chukotka and Yakutia, but their volume was significantly lower than in the West [5, Kitagawa H., p. 90]. The introduction of nuclear icebreakers led to the expansion of shipping along the NSR, but also made it economically viable only for more expensive cargoes, such as oil and nickel [24, Zamyatina N.Yu., p. 793–794]. A tax on the maintenance of icebreakers and navigational facilities along the NSR was introduced<sup>6</sup>. This also led to the decline of ports on the NSR, not associated with expensive cargo [24, Zamyatina N.Yu., p. 789]. Less expensive goods, such as timber, could no longer be transported along the NSR [24, Zamyatina N.Yu., p. 793–794].

Table 2 shows the breakdown of import and export items. The export of nickel and other metals from Norilsk began in 1968 and reached 2.5 million metric tons, accounting for 40% of the total supply [5, Kitagawa H., p. 90]. In 1976, gas fields began to be developed on the Yamal Peninsula, and by 1988, a total of 102 thousand metric tons had been produced [5, Kitagawa H., p. 90]. In connection with this project, equipment for the construction of pipelines was exported from Japan. Timber from Siberia, which was extracted mainly in the Igarka area, tended to increase up to 700–750 thousand tons in the 1980s [5, Kitagawa H., p. 90]. This export peaked in 1990 at 1.2 million metric tons, then declined significantly in 1991 and 1992, and then rose again in 1993 [5, Kitagawa H., p. 91]. Table 2 shows the breakdown of import and export items in 1990–1995. [5, Kitagawa H., p. 91].

Table 2

*Export and import of cargo along the NSR 1990–1995 (thous. tons)<sup>7</sup>*

	1990	1991	1992	1993	1994	1995
Export, total	1201.8	743.6	450.8	517.3	578.9	606.0
Which the:						
Forest from Igarka	711.3	448.2	247.2	296.5	297.6	272.7
Forest from Tiksi	147.6	47.6	67.2	95.9	42.4	19.6
Non-ferrous metals from Dudinka	164.1	90.7	80.3	116.7	222.8	302.4
Brushed nickel from Dudinka	29.3	17.1	13.7	6.0	2.6	-

<sup>6</sup> SSSR. Tarify na perevozki gruzov morskim transportom v kabotazhnom plavanii. Utverzhden Postanovleniem Goskomtsen SSSR ot 27 marta 1989 g. № 274. Moskva: Goskomtsen SSSR, 1989 [USSR. Tariffs for the carriage of goods by sea in coastal navigation. Approved by the Decree of the USSR Goskomtsen of March 27, 1989 No. 274. Moscow: USSR Goskomtsen, 1989]. URL: <https://docs.cntd.ru/document/568906074> (accessed 05 February 2022).

<sup>7</sup> Source: [5, Kitagawa H., p. 91].

Sulfur from Dudinka	106.6	15.1	-	-	-	-
Coal from Yakutia	25.9	108.7	39.0	-	-	-
Condensate from the Yenisei and Yamal	-	-	-	-	13.5	11.3
Import, total	11.8	1.9	5.3	3.0	57.1	49.5
Of which:						
Coal to Novaya Zemlya from Poland	8.9	-	-	-	-	-
Steel pipes in the Gulf of Ob	-	-	-	3.0	1.3	-
Steel pipes to Dudinka	2.9	-	0.1	-	30.5	20.4
Steel pipes in Pevek	-	-	-	-	30.5	20.4
Steel pipes in Cape Schmidt	-	-	-	-	14.4	19.5

### *Discussion*

#### *The development of the NSR by the Soviet government after the collapse until 2000*

The Soviet government considered it necessary to develop the NSR for the development of the country's economy and strengthening the military-political position of the state [28, Timoshenko A.I., p. 23]. Resources scattered over a vast territory, and constant disputes between neighboring countries and ideologies created conditions for unstable dynamic growth [28, Timoshenko A.I., p. 20].

During the first five-year plan (FYP), railway lines were built to gain access to natural resources and create domestic production [28, Timoshenko A.I., p. 23]. The plan of the second five-year plan called for a sharp reduction in capital investments, collectivization plans were more important [28, Timoshenko A.I., p. 20]. However, the Soviet government provided the Main Directorate of the Northern Sea Route with the necessary funds for the practical development of the great sea polar highway. As a result of the exceptionally large scale of work carried out according to the plan that was outlined by the government, the task of establishing merchant shipping along the Northern Sea Route was basically resolved within seven to eight years [29, Vize V. p. 106].

However, the NSR did not have the same priority as other modes of transport due to the changing geopolitical climate before the World War II [11, Timoshenko A.I., p. 7–12]. One of the important things that the Soviet government made was to provide higher wages in order to attract labor resources for the development of not only the Arctic region, but also the NSR [11, Timoshenko A.I., p. 7–12]. Adequate priority was given to the creation of social infrastructure, which continued throughout the Soviet period [11, Timoshenko A.I., p. 7–12].

According to Western analyst T. Lloyd, the northern route was developed by the USSR government for practical reasons [12, Lyoyd T., p. 98–99]:



- the entire route lies within Soviet-controlled waters, well protected from enemies in wartime and protected from spying in peacetime [12];
- the natural resources of North Asia can be exploited with the help of long rivers flowing north and gathered in ports built at their mouths [Ibid.];
- the route itself, as well as seaports, polar stations and navigation aids, provide a base for exploration and occupation of the Far North, which is necessary to preserve sovereignty [Ibid.];
- the route provides a connection with the indigenous inhabitants of the northern coast and increases the degree of their participation in Soviet life [Ibid.].

According to the discussion of Western experts in 1954, the Soviet leadership realized that the priorities should be the following:

- improved meteorological reports,
- ice reports, etc.;
- improved maps and sailing directions;
- solving problems of transport, supply and communication between their various outposts.

These experts believed that the West had a lot to learn from the Soviet Union [30, Cornwall J.M., p. 146–148]. They also noted that after 1947, there was a lot of secrecy regarding information about the NSR, which probably indicated that its military use had become more important than economic aspects [30, Cornwall J.M., p. 146–148].

In the 1960s and 1970s, Soviet capital investments seem to have been allocated more to sea and river transportation [31, Bej E., p. 29]. Under the Soviet policy of “self-sufficiency” and central planning, less attention was paid to the development of transport in all areas on a rational basis, except for serving the needs of heavy industry or the extraction of natural resources. For example, from 1913 to 1956, capital investment in heavy industry increased 32.6 times, and in transport — only 8.2 times, while capital expenditures on transport decreased from 23% to 10% (in 1928 and 1955, respectively) [31, Bej E., p. 30]. Academician Khachaturov argued that such a policy is a normal feature of all socialist countries; however, to ensure efficient work in the future, it will be necessary to stop this downward trend and take more care of creating a strong transport reserve [31, Bej E., p. 22]. The share of transport in the national income is about 7%, in the gross domestic product (GDP) — only 4% [31, Bej E., p. 23]. Despite its cost-effectiveness, the share of transport is too low and could be increased through a more rational allocation of resources and/or productivity factors. [31, Bej E., p. 23]. However, efficient economic activity requires a strong and reliable transport system based on self-sufficiency.

During the Soviet era, significant progress was made in the development of the Northern Sea Route [8, Belov M.I.; 9, Shirokorad A.B.; 10, Bulatov V.N.]. However, not all Russian analysts

agree with this opinion [6, Zubkov K.I., Karpov V.P., p. 8–17]. Some say that the Soviet government received more than it returned to the regions, and it had a bad effect on the environment [6, Zubkov K.I., Karpov V.P., p. 313–323]. In addition, there are critics of the Soviet economic policy, which was based on maximum production at minimum cost [6, Zubkov K.I., Karpov V.P., p. 322]. It cannot be denied that everything that was received by the state was distributed among all citizens in the form of social benefits such as free housing, education, health care, and heavily subsidized food prices. This kind of system was unparalleled in the world. No single company profited in favor of a few privileged people.

The entire history of the Soviet period of the development of the Arctic, which was closely connected with the organization of navigation along the Northern Sea Route, was at the same time the history of the creation of a very expensive infrastructure [32, Mogilevkin I.M., p. 202–203]. The results have been impressive. However, one cannot but admit that this colossal work from an economic point of view was carried out “in advance”, in fact, prematurely [32, Mogilevkin I.M., p. 202–203]. Only now there comes an era when these investments of capital and human labor begin to pay for themselves commercially (in a purely market sense) due to the fact that the technical possibility of oil and gas production in the Far North in conditions when the level of prices for oil and gas on world markets has risen to an extent that justifies the production of energy resources in the Arctic [32, Mogilevkin I.M., p. 202–203].

However, with the exception of a few laws regarding the Arctic adopted in 1926 and 1971, as well as the creation of the Glavsevmorput and its subsequent reorganization at regular intervals in 1938, 1953, 1957, 1969 and 1970, no state transport policy related to the development of the Northern Sea Route was promulgated during this period. The tasks to be carried out were periodically announced by the party congress, but these tasks do not replace the State Transport Policy. A small number of researchers have considered the historical or organizational aspects of the development of the NSR, but until 1990 (before the collapse of the USSR) there were no works on economic evaluation or cost-benefit analysis of the NSR, comparing transport policies with Western countries.

In the 1990s, in the Russian Federation, the economic and technocratic approach was applied in strategic planning and public administration with regard to the territories of the Far North [25, Panikar M.M., Shaparov A.E., p. 35]. Its supporters emphasized the need to reduce costs and optimize the costs of maintaining infrastructure in harsh climatic conditions, due to which the efficiency of funds spent by the state and companies will increase [26, Melnikova L.V., p. 34–35]. However, this policy did not take into account that other Arctic states such as Canada also

receive subsidies<sup>8</sup>. The United States, a supporter of free market economics, also has a policy of protecting its merchant shipping<sup>9</sup>.

### **Conclusion**

The Arctic is a zone of Russia's strategic interests. This is due, firstly, to the historical past of the country and, in particular, its great contribution to the study and development of the region, and secondly, the scale of the presence of the Russian Federation in high latitudes (the largest share of the population, the largest territory and the most powerful industrial complex in world Arctic), thirdly, the share of the Arctic economy in the overall balance of the country and its prospects, fourthly, the huge potential of the Arctic mineral resource base, fifthly, the longest border in the Arctic (almost 60% of the world's Arctic coast).

One of the most interesting and, perhaps, the most spectacular events in the Soviet Arctic was the development of a cargo sea route along the NSR, which many sailors dreamed before. The transport system of the Soviet Union was determined by the harsh climate and economic geography, in which natural resources were located at great distances from markets. The state policy towards heavy industry and economic development has strengthened the geography of these resources and created a transport system with high traffic intensity per unit of GDP. Within modes of transport, the railroad was dominant, partly because of operating conditions, but also because of industrial policy choices and an emphasis on unit costs rather than quality or value of services. The NSR was promoted primarily to facilitate the development of the Arctic region and for military reasons. Incredible achievements were noted, such as the development of the Arctic region; a rich knowledge base of the NSR and cargo transportation has been steadily replenished. Important elements of the heroic Soviet effort to develop the NSR should not be forgotten. The leaders of the USSR did not forget about the growing role of the Arctic in world geopolitics. But prices and tariffs were kept artificially low, helped by energy prices that were much lower than world prices. This meant, for example, that transport innovations caused by the energy crises of the 1970s and 1980s and associated environmental problems largely bypassed the Soviet economy.

Perhaps the most important legacy of the Soviet system was an economic organization characterized by large state monopolies, controlled prices, and administrative directives. This structure created a transportation system with low rates of technological innovation and artificial government deficits, driven by the government's focus only on heavy industry, space and defense,

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<sup>8</sup> Touchette Y. Gass, P., Echeverría D. Costing Energy and Fossil fuel subsidies in Nunavut: A Mapping Exercise // International Institute for Sustainable Development. URL: <https://www.iisd.org/publications/costing-energy-and-fossil-fuel-subsidies-nunavut-mapping-exercise> (accessed 06 February 2022).

<sup>9</sup> United States Department of Transportation. Cargo Preference FAQs. Maritime Transportation.2020. URL: <https://www.maritime.dot.gov/ports/cargo-preference/frequently-asked-questions-faqs-cargo-preference> (accessed 06 February 2022).

and by subsidizing the economies of other countries considered friendly to Soviet interests by providing loans at heavily reduced rates. Prolonged isolation from the international market economy, extensive energy subsidies, and a lack of environmental concerns also meant that transport innovations were simply “missed” in the Soviet Union. This disparity has created both serious problems and opportunities for modernizing and integrating the economy into global transport systems.

The stagnation of the 1980s, economic restructuring since 1985 without proper planning or political control, the collapse of the USSR, a dramatic weakening of statehood and the breakdown of previous economic relations threatened the functioning of the Northern Sea Route. There was a rapid degradation of the NSR and its infrastructure; there was an outflow of people who worked here. As a result, its use in the 1990s and the first decade of the 21st century decreased sharply. The infrastructure has not been upgraded. According to the author, this prevented the achievement of year-round navigation along the NSR. Taking into account the previous planned structure of the economy, a large-scale transport reform was required, which made slow progress in the USSR and the Russian Federation in the 20th century. Transport, especially the Northern Sea Route, long subsidized and undervalued in the Soviet economy, must be used rationally. A reliable system is needed to assess the suitability of any new transport route, prepared by an independent government department. This will contribute to the adequacy of audits and the rationality of public spending. It is expected that this will also facilitate the adoption of corrective measures in relation to the State transport policy and plans, if deemed necessary. Taking into account the specifics of climate, socio-economic factors and strategic-political features, a self-sufficient transport system of the Northern Sea Route could contribute to the development of the economy and stand the test of time. Since transport has historical, social, political, economic and environmental ties, transport policy must take into account interdisciplinary aspects.

The conclusions drawn from the analysis of the state transport policy for the NSR in the 20th century can be applied to improve the current policy. For example, it seems worthwhile to establish a reliable system, preferably using the National Transport Modeling System, studying the methods used in different countries, both in West and Northeast Asia, to assess the suitability of the NSR, especially in relation to the ambitious goals of 80 million tons and 110 million tons to be achieved by 2024 and 2030, respectively. Given current trends, it seems important and necessary to involve the Transport Committee in greater depth in the study of the national transport model and the independent assessment report before they are translated into a government action plan. This will help to create appropriate checkpoints and balances before setting such ambitious public spending targets. Although the plan was drawn up in 2019, there is reason to believe that its reliability and cost-effectiveness should be subject to independent evaluation.

## References

1. Rodrigue J.P., Comtois C., Slack B. *The Geography of Transport Systems*. Tokyo, Routledge, 2020, 456 p. DOI: 10.5860/choice.44-1075
2. Oster C.V., Strong J. Transport Restructuring and Reform in an International Context. *Transportation Journal*, 2000, vol. 39, no. 3, pp. 18–32.
3. Mackie P., Worsley T. *Transport Policy, Appraisal and Decision-Making*. London, RAC Foundation, 2015, 50 p.
4. Joffe S. *The Northern Sea Route as a Transportation Problem*. Institute of Pacific Relations, 1936, pp. 1–22.
5. Kitagawa H. *The Northern Sea Route: The Shortest Sea Route Linking East Asia and Europe*. Tokyo, The Ship and Ocean Foundation, 2001, 238 p.
6. Zubkov K.I., Karpov V.P. *Razvitie rossiyskoy Arktiki: sovetskiy opyt v kontekste sovremennykh strategiy (na materialakh Kraynego Severa, Urala i Zapadnoy Sibiri)* [Development of the Russian Arctic: Soviet Experience in the Context of Modern Strategies (Based on the Materials of the Far North, the Urals and Western Siberia)]. Moscow, Political Encyclopedia Publ., 2019, 367 p. (In Russ.)
7. Shirokorad A.B. *Bitva za Russkuyu Arktiku* [Battle for the Russian Arctic]. Moscow, Veche Publ., 2008, 429 p.
8. Belov M.I. *Put' cherez Ledovityy ocean* [Path Across the Arctic Ocean]. Moscow, Morskoy Transport Publ., 1963, 237 p. (In Russ.)
9. Shirokorad A.B. *Arktika i Severnyy morskoy put'* [The Arctic and the Northern Sea Route]. Moscow, Veche Publ., 2017, 412 p. (In Russ.)
10. Bulatov V.N. *KPSS — organizator osvoeniya Arktiki i Severnogo morskogo puti (1917–1980)* [The CPSU is the Organizer of the Development of the Arctic and the Northern Sea Route (1917–1980)]. Moscow, MSU Publ., 1989, 156 p. (In Russ.)
11. Timoshenko A. The Soviet Experience of the Mobilization Decisions in Developing the Arctic and the Northern Sea Route in 1930–1950 Years. *Arktika i Sever* [Arctic and North], 2013, no. 13, pp. 150–168.
12. Lloyd T. The Northern Sea Route. *The Russian Review*, 1950, vol. 9, no. 2, pp. 98–111.
13. Armstrong T.E. The Soviet Northern Sea Route. *The Geographical Journal*, 1955, vol. 121, iss. 2, pp. 136–146.
14. Fomichev A.A. Politicheskiy vektor razvitiya Severnogo morskogo puti [Political Vector of Northern Sea Route Development]. *Vestnik MGIMO-Universiteta* [MGIMO Review of International Relations], 2015, vol. 3, no. 42, pp. 122–127.
15. Bankes N.D. Forty Years of Canadian Sovereignty Assertion in the Arctic, 1947–87. *Arctic*, 1987, vol. 40, iss. 4, pp. 285–291. DOI: 10.14430/arctic1785
16. Vylegzhanin V., Bunik I., Torkunova E., Kienko E. Navigation in the Northern Sea Route: Interaction of Russian and International Applicable Law. *The Polar Journal*, 2020, no. 10:2, pp. 285–302. DOI: 10.1080/2154896X.2020.1844404
17. Butler W.E. Soviet Maritime Policy in Legal Perspective. *The World Today*, 1972, vol. 28, iss. 10, pp. 457–466.
18. Armstrong T.E. The Soviet Northern Sea Route in 1967. *Inter-Nord*, 1970, vol. 1, iss. 2, pp. 123–124.
19. Gudev P.A. The Northern Sea Route: Problems of National Status Legitimization under International Law. Part II. *Arktika i Sever* [Arctic and North], 2020, no. 41, pp. 130–147. DOI: 10.37482/issn2221-2698.2020.41.130
20. Franckx E. Non-Soviet Shipping in the Northeast Passage, and the Legal Status of Proлив Vil'kitskogo. *Polar Record*, 1988, vol. 24, iss. 151, pp. 269–276. DOI: 10.1017/S0032247400009530
21. Vylegzhanin A.N. *Primenimye pravovye istochniki* [Applicable Legal Sources. Volume 3]. In: *Arkticheskii region: problemy mezhdunarodnogo sotrudnichestva: khrestomatiya v 3 tomakh* [The Arctic Region: Problems of International Cooperation: In 3 Volumes]. Moscow, Aspect Press Publ., 2013, 662 p. (In Russ.)
22. Barr W., Wilson E. The Shipping Crisis in the Soviet Eastern Arctic at the Close of the 1983 Navigation Season. *Arctic*, 1985, vol. 38, no. 1, pp. 1–17.

23. Selin V.S., Istomin A.V. *Ekonomika Severnogo morskogo puti: istoricheskie tendentsii, sovremennoe sostoyanie, perspektivy* [Economics of the Northern Sea Route: Historical Trends, Current State, Prospects]. Apatity, KSC RAN Publ., 2003, 202 p. (In Russ.)
24. Zamiatina N.Yu. Igarka kak frontir: uroki «pionera» Sevmorputi [Igarka as a Frontier: Lessons from the Pioneer of the Northern Sea Route]. *Zhurnal Sibirskogo federal'nogo universiteta. Gumanitarnye i sotsial'nye nauki* [Journal of Siberian Federal University. Humanities and Social Sciences], 2020, vol. 13, no. 5, pp. 783–799. DOI: 10.17516/1997-1370-0607
25. Panikar M.M., Shaparov A.E. Imperatives of the Current State Policy of the Arctic Countries on Far North Development. *Vestnik Severnogo (Arkticheskogo) federal'nogo universiteta. Ser.: Gumanitarnye i sotsial'nye nauki* [Humanitarian and Social Sciences], 2016, no. 6, pp. 33–44. DOI: 10.17238/issn2227-6564.2016.6.33.
26. Melnikova L.V. Osvoenie Sibiri v zerkale liberal'noy ekonomicheskoy nauki. Glava 1 [The Development of Siberia in the Mirror of the Liberal Economic Science. Chapter 1]. In: *Problemye regiony resursnogo tipa. Aziatskaya chast' Rossii* [Problem Regions of the Resource Type. The Asian Part of Russia]. Novosibirsk, Publishing House of the Siberian Branch RAS, 2005, pp. 34–47.
27. Goldin V. Cevernyy morskoy put' v arkticheskoy politike Rossii: istoricheskiy opyt, sovremennost' i perspektivy [The Northern Sea Route in Russia's Arctic Policy: Historical Experience, Modernity and Prospects]. *Rossiya XXI* [Russia XXI], 2019, no. 1, pp. 32–57.
28. Timoshenko A.I. Transformatsii v rossiyskoy gosudarstvennoy politike osvoeniya Arktiki i Severnogo morskogo puti (XVIII–XXI vv.) [Transformations in the Russian State Policy for the Development of the Arctic and the Northern Sea Route (XVIII–XXI Centuries)]. *Gosudarstvennaya politika Rossii v Arktike: strategiya i praktika osvoeniya v XVIII–XXI vv. Sbornik nauchnykh trudov* [State Policy of Russia in the Arctic: Strategy and Practice of Development in the 18th–21st Centuries]. Novosibirsk, Siberian Scientific Publishing House, 2012, pp. 4–35. (In Russ.)
29. Vize V. *Morya Rossiyskoy Arktiki. Tom II* [Seas of the Russian Arctic. Volume II]. Moscow, Paulsen Publ., 2016, 256 p. (In Russ.)
30. Marshall-Cornwall J., Roberts B., Courtney A. The Soviet Northern Sea Route: Discussion. *The Geographical Journal*, 1955, vol. 121, iss. 2, pp. 146–148.
31. Bej E. Soviet Transportation Policies, 1922–1965: A Survey of Irregularities in Passenger Traffic. *International Journal of Transport Economics*, 1987, vol. 14, no. 1, pp. 19–43.
32. Mogilevkin I.M. *Global'naya infrastruktura: mekhanizm dvizheniya v budushchee* [Global Infrastructure: a Mechanism for Moving into the Future]. Moscow, Magistr Publ., 2010, 317 p. (In Russ.)

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