

UDC [330.34+332.12](985)(045)

DOI: 10.37482/issn2221-2698.2020.39.75

Organizational Mechanisms for Implementing Russia's Arctic Strategy in the 21st Century*

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Abstract. The Arctic in the 21st century remains a popular topic in the natural-scientific, economic, socio-humanitarian, and political spheres. The relevance of studying the Arctic is determined by the fact that in recent decades, deep and irreversible transformations have taken place in this region, and a full understanding of the causes and consequences of which for the economy and environmental management has not yet developed. As a result of climate change and globalization, there is a growing interest in the Arctic macro-region on the part of many foreign countries that developed strategies and programs for the development of national Arctic zones at the beginning of the XXI century. Against the background of global competition for resources and transport communications, it seems relevant to analyze the features of the development of Russia's state policy for managing the Arctic zone of the Russian Federation in the XXI century. The article analyzes the mechanisms of implementation of Russian state policy in the Arctic based on the strategic planning system and reveals the bottlenecks in the system of state management of the Arctic region. It is concluded that the core of Russia's policy in the Arctic is innovative modernization that can ensure sustainable socio-economic development, infrastructure development, rational use of natural resources, protection of local ecosystems and development of indigenous communities.

Keywords: *Arctic zone of the Russian Federation, state policy, strategic planning, program-target approach, support zones of development, innovations.*

Introduction

The Arctic is a high-latitude region of the High North, except for the dry part, incl. the continental shelf and the exclusive economic zone of the seas of the Arctic Ocean, as well as the outlying territories of North America and Eurasia.

The deep interest of Russia in the development of the High North and the Arctic has existed for centuries. Changing forms and priorities, it reached a level when the Arctic territories become one of the means of ensuring national security and sustainable socio-economic development of the state. The formation and scientific justification of the development priorities of the

* For citation:

Zaikov K.S., Kondratov N.A., Lipina S.A., Bocharova L.K. Organizational Mechanisms for Implementing Russia's Arctic Strategy in the 21st Century. *Arktika i Sever* [Arctic and North], 2020, no. 39, pp. 75–109. DOI: 10.37482/issn2221-2698.2020.39.75

circumpolar territories of the Russian Federation is one of the critical tasks in the development and modernization of the economy. The role of science is increasing not only due to the influence of the natural-geographical factor in the Arctic region but also due to the differentiation of the natural and economic conditions of economic activity existing in this zone. Such distinction necessitates the development of specific Arctic-oriented regulatory legal documents to manage the development of the vast and non-standard Arctic zone of the Russian Federation (the Russian Arctic, the Arctic zone).

A study of the directions and problems of the development of the Russian Arctic shows the significant role of geographical science in the development and solution of national economic issues. The geographic approach creates the opportunity to justify the sustainable socio-economic development of not only the Russian Arctic but the entire state. It formulates strategic benefits for Russia both within the circumpolar zone and the Eurasian continent, and in the global economic space.

The contribution to the study of the nature, population and socio-economic sphere of the High North and the Arctic was made by domestic and foreign scientists, public and politicians: S.O. Makarov, V.A. Rusanov, A.P. Karpinsky, S.I. Chelyuskin, N.N. Urvantsev, A.E. Fersman, N. Norden-skiöld, R. Amundsen, and F. Nansen. Features and trends of the geo-ecological, socio-economic and geopolitical location of the northern and Arctic territories are highlighted in G.A. Agranata, V.I. Epiphany, V.N. Bulatov, A.G. Granberg, D.A. Dodin, I.F. Kefeli, V.M. Kotlyakov, T.M. Krasovsky, V.N. Lazhentseva, G.P. Luzin, Yu.F. Lukin, P.A. Minakir, V.I. Pavlenko, A.N. Pilyasov, V.S. Selin, S.V. Slav-in, and A.I. Chistobaev. Their studies describe the experience of developing natural resources of the High North and the Arctic, analyze the trends and problems of socio-economic and infrastruc-tural development of the peripheral northern territories under the conditions of continuing natu-ral, economic, and geopolitical risks. Extensive geographic studies of the seas of the Arctic Ocean were carried out during the North-East expedition (1785–1792), the expeditions of F. Wrangel (1821–1824), and J. De Long (1879–1881) [1], and contemporary history.

Factors determining the development of state policy in the Arctic zone of the Russian Federation at the beginning of the 21st century

Several circumstances determine the specifics of the development of natural resources of the Russian Arctic, the slow integration of this region into the economic and socio-cultural life of the state. Firstly, the need to adapt to the economy, population, and a training system for working in the High North and the Arctic to extremely harsh climatic conditions, incl. constant ice cover and drifting ice in the seas of the Arctic Ocean. Secondly, the need to overcome vast distances, linking the space with energy, transport, and information and communication infrastructure (in-frastructure). Thirdly, low population density and population density. Fourth, the remoteness of the subjects of the Arctic zone from industrial centers, the dependence of economic activity and livelihoods of the population on the supply of fuel, food, and essential goods from other regions of

Russia. Fifth, the low stability of ecological systems that determine the biological equilibrium and climate of the Earth, and their dependence even on minor anthropogenic impacts.

After ratification of the UN Convention on the Law of the Sea (1982), the Russian Arctic occupies more than 9 million square km, of which about 7 million km² falls on the water body, which is 45% of the Arctic Ocean. It is the largest indicator among countries with access to the Arctic Ocean. Within the Russian Arctic zone, the continental shelf reaches 6 million km², constantly under the ice 5 million km² (70% of the area of the sector), of which 1.5 million km² under pack ice. km (23%) [2]. In the Russian Arctic, one finds significantly developed territories beyond the Arctic Circle and near it, incl. areas of traditional nature management of the indigenous peoples of the North (indigenous peoples); tourist and recreational resources and natural reserves of wildlife are concentrated. "The Russian Arctic has huge natural gas resources; the share is about 30% of the world reserves. Resource provision is based on large and unique reserves of fuel minerals in Western Siberia and the Timan-Pechora oil and gas province" (TPOGP) [2, p. 118]. The total value of the explored reserves of minerals in the Arctic region of Russia is over 150 trillion rubles. The first place in the structure of the economy of the Russian Arctic is occupied by the gas complex (over 80% of Russian gas is produced in the Nenets and Yamal-Nenets Autonomous Okrugs), and the second is mining. Less than 1% of the country's population lives in the Russian Arctic. About 5% of GDP and over 20% of all-Russian exports are produced there¹.

The formation of state policy in the Russian Arctic is characterized by historical continuity and can be considered in the context of international activity in different periods. Conditionally dividing it into stages, one can distinguish the pre-Soviet (before the beginning of the 20th century), Soviet (1924–1991), and modern (Russian) stages of development of the Arctic zone [3].

The sources of purposeful state efforts for the socio-economic, transport and logistics, scientific, educational, cultural, and humanitarian development of the Russian Arctic should be sought at the beginning of the 20th century. Without making a detailed historical excursion, we note that before the beginning of the 20th century. Russia, Canada, the USA, Norway, and Denmark mastered only the coast of the Arctic Ocean without claiming their rights to its water area and seabed. In 1909, Canada became the first country to legally secure the territory from the coast (the easternmost and westernmost points of the country's coast) to the North Pole. The country declared all lands and islands to be its property: both already opened and opened in the future and lying west of Greenland between Canada and the North Pole. Thus, the beginning of the Arctic division into polar sectors was laid. This concept existed until 1982, when the UN Convention on the Law of the Sea (Montego Bay) was adopted.

In the 20th century, in Russia, the establishment of a list of municipalities related to the Arctic was the result of a political process and often had no scientific justification.

¹Federal'naya sluzhba gosudarstvennoy statistiki [Federal State Statistics Service]. URL: https://www.gks.ru/free_doc/new_site/region_stat/calendar1-2019.htm (accessed 07 January 2019).

In 1916, the Ministry of Foreign Affairs of Russia published a Note on the Russian property of all open lands and islands, “located north of the Asian coast of the Russian Empire.” It was the first attempt to consolidate Russia's sovereignty over the Arctic territories. The spatial limitation of this document is that it fixes the ownership of lands and islands, which are a direct continuation of the areas in the Asian part of the mainland.

The decree of the Council of People's Commissars (CPC) “On the protection of fish and animal lands in the Arctic Ocean and the White Sea” in 1921 confirmed the right of the RSFSR to the exclusive exploitation of fish and animal lands in the White Sea — south of the direct the line connecting the capes of Svyatoy Nos and Kanin Nos, in the Chessky (Czech) Bay and the Arctic Ocean along the coast from the state border with Finland to the northern tip of Novaya Zemlya, and inland — at a distance of 12 nautical miles from the tidal line along the mainland coast and the coast of the islands.

In 1925, the CPC of the USSR by the decision of April 17, No. 331-12 declared the Kara Gates, Ugra Shar, Matochkin Shar, Vilkitsky, Shokalsky, and Krasnoy Armii straits as territorial waters of the USSR, and the Laptev and Sannikov straits historically owned by the USSR.

The 1926 Decree “On the Declaration of the Territory of the USSR as Lands and Islands Located in the Arctic Ocean” establishes the USSR's ownership of the space between the 32⁰4' longitude meridians and 168⁰49'W, passing in the middle of the strait separating the islands of Ratmanov and Kruzenshtern in the Bering Strait. By the Decree of the Presidium of the Supreme Soviet of the USSR of February 21, 1979 No. 8908-IX, the eastern border of the polar possessions of the USSR was specified, it began to pass along 168⁰58.5 'W Later, the USA went along a similar path.

Signing the Paris Treaty in 1920 under the Norwegian sovereignty over the Svalbard archipelago was of great importance in shaping the policy of the USSR in the Arctic, but with the caveat: all interested countries that have ratified this treaty can participate in the development and use of Svalbard resources. Since then, this document has been repeatedly violated by Norway unilaterally, which in principle does not suit the Russian Federation [3].

Over the past 40 years, Russia has attempted to resolve the maritime state border with Norway in the Barents Sea. In 1976, countries unilaterally fixed boundaries in the Barents Sea. A controversial area has formed (according to Norwegian terminology — the “gray zone”). It contains reserves of aquatic biological resources, and the Fedynsky uplift, according to preliminary calculations, is promising for hydrocarbon production. As an alternative to the forceful mastery of space, its resources, and communications, the principle of “soft power” is used. It is expressed in the ability to achieve what is desired from negotiating partners using non-military tools. Probably, this approach was used in the conclusion of the Agreement on the delimitation of maritime spaces and cooperation in the Barents Sea and the Arctic Ocean in 2010. The delimitation of the Russian-Norwegian border, i.e., disengaged area of 175 thousand km² or about 12% of the Barents Sea. It is formed by the western border of the Arctic sector of Russia (Russian version) and the middle line (Norwegian version), drawn at an equal distance from the archipelagos Novaya Zemlya, Sval-

bard, and Franz Josef Land. Despite the apparent merit — the resolution of the territorial dispute, this document is ambiguously perceived in the public, expert, and scientific environment [4].

The pre-Soviet and Soviet features of the development of the space of the Soviet (Russian) Arctic and the High North in the historical aspect of archival materials are described in detail in the publications of Doctor of Historical Sciences, Professor V.N. Bulatov (Arkhangelsk). His work has not lost relevance. However, it should be adjusted for the ideologization of the Soviet period [5].

In developing state policy concerning the Arctic in the USSR, military and geopolitical aspirations dominated economic, humanitarian, and even more ecological ones. In the Soviet period, accumulated environmental damage began to form on the islands and archipelagos of the Arctic Ocean, which Russia started to eliminate only at the beginning of the 21st century on the personal initiative of the President of the Russian Federation V.V. Putin.

One of the prerequisites of state policy in the Russian Arctic is that several decades transformations are taking place in the Arctic, a complete understanding of which has not developed. They are due to the influence of two interrelated factors — climate change and globalization, which, for their part, are followed by technological, geopolitical, organizational, and institutional changes. The meaning of the latter lies in the development of directions and the selection of public policy instruments in the Arctic region.

The Arctic is a region with dynamic and unstable climatic processes, the imbalance of which leads to climatic shifts throughout the northern hemisphere. The climatic doctrine of the Russian Federation states that climate change is one of the global problems of the 21st century, which should be considered from an interdisciplinary perspective, covering the environmental, economic, and social aspects of sustainable development².

It should be noted that the increase in air temperature in the Arctic region occurs at rates exceeding the world average [6]. A significant contribution to the formation of public consciousness is made by the media, creating visual images of the effects of increasing temperature, reducing the area and power of ice in the Arctic Ocean, the destruction of sea coasts, and threats to biodiversity. These processes are developing against the background of a lack of knowledge about them, which is due to an insignificant period of regular weather observations, a rare network of weather stations (especially in Russia after the collapse of the USSR), and fragmentation of data.

The Fifth Report of the International Panel on Climate Change (IPCC) states: changes in the climate system in modern times are an undeniable fact. With a “high probability” (over 90%), an increase in anthropogenic greenhouse gas concentrations is responsible for much of global warming, starting in the middle of the 20th century [7]. The report of the Arctic Council notes that during the 21st century, the average global temperature may increase by 2.8⁰ C (currently about 0.4-

² Klimaticheskaya doktrina Rossiyskoy Federatsii (utverzhdena rasporyazheniem Prezidenta Rossii ot 17.12.2009. № 861) [Climate Doctrine of the Russian Federation (approved by decree of the President of Russia of December 17, 2009. No. 861)]. URL: <http://www.kremlin.ru/events/president/news/6365> (accessed 17 June 2018).

0.6⁰ C), while in most of the land — by 3.5⁰ C, and the Arctic — by 7⁰ C [8]. According to the Federal Service for Hydrometeorology and Environmental Monitoring of the Russian Federation, an absolute minimum of ice has been recorded over 30 years, their area has decreased from 7.3 in 1979 to 5 million km² in 2007 (5.1 million km² in 2013)³ [6].

The relevance of “climate issues” is also since, in the Arctic, there is a transformation of natural and climatic problems into political ones. Such calls can become a factor in the destabilization of maritime (incl. naval) activities in this region.

In the 21st century, some foreign countries and their associations located both in the Arctic zone (Denmark⁴, Iceland, Canada⁵, Norway⁶, Finland⁷, Sweden⁸, USA⁹, European Union, Arctic council, Council of the Barents Euro-Arctic region), and outside it (China, India, Republic of Korea, Japan, Germany, Great Britain) have developed strategies and programs for the development of national Arctic zones. India and China, several European states, incl. Iceland, do not have clearly defined program documents regarding the development of the Arctic and its natural resources. However, it would be a mistake to ignore their interests in the Arctic. China and India are states with global economic, political, technological, and cultural influence. Asian countries should be considered as equal partners, full-fledged participants in the development of natural resources, and the use of Arctic spaces outside the national exclusive economic zones.

The interest of foreign countries is since the Arctic region is becoming a key at the global level. The economic development of the Arctic territories, the positioning of states, and their corporations are associated with the natural competitive advantages of the Arctic territories. It is especially noticeable in the strategies of Norway (which undoubtedly enters the Arctic compared with the continental neighbors Sweden and Finland with no access to the Arctic Ocean) and Canada (where the concept of “Arctic territories” is replaced by “northern territories”, i.e., more than 40% of the country's area or the second largest Arctic area after Russia). It is due to the availability of natural resources that are promising for development in the next 30-50 years, considering climate change, the development of innovative technologies, and international cooperation, as well as the passage of transport communications.

³ Global climate change. URL: <https://climate.jpl.nasa.gov/> (accessed 12 August 2018).

⁴ Denmark, Greenland, and the Faroe Islands: Kingdom of Denmark Strategy for the Arctic 2011–2020. 58 p.

⁵ Canada's Northern Strategy. Our North, Our Heritage, Our Future / Government of Canada, Ottawa, 2009, 48 p.

⁶ The Norwegian Government High North Strategy / Norwegian Ministry of Foreign Affairs, 76 p. URL: <https://www.regjeringen.no/en/dokumenter/> (accessed 10 September 2018).

⁷ Finland's Strategy for the Arctic Region. Government resolution on 2013 / Prime Minister Office, 2013 70 p. Finland to Increase Its Input in Arctic Region Cooperation. URL: <http://www.hs.fi/english/article/Finland> (accessed 10 October 2018).

⁸ Sweden's Strategy for the Arctic region / Government Offices of Sweden. Ministry for Foreign Affairs. Department for Eastern Europe and Central Asia. Arctic Secretariat, Stockholm, Sweden. 2011. 52 p.

⁹ National Strategy for the Arctic Region. May 2013. USA, Washington D.C. 13 p. United States Coast Guard. Arctic Strategy. May 2013. USA, Washington D.C. 48 p.

The content of the state policy of Russia in the Arctic zone

In the first quarter of the 21st century, the policy concerning the Russian Arctic is formed by state authorities. They prepare documents that allow strategic planning of the development of the Russian Arctic and ensure national security in the water and land of the macroregion, contribute to improving the living standard, and strengthening the role of the Arctic in the Russian economy. In the interests of sustainable socio-economic development, it is advisable to focus on the key elements that provide a multiplier effect in realizing the development priorities of the Russian Arctic.

The solution to the institutional problem takes priority in the complex of measures for the development of the Russian Arctic. The modernization of the economy considers the threats associated with Russia's lagging on the path of innovative development from leading foreign countries, the impact of sanctions on the economic and technological development of the country, puts forward the need to develop specialized approaches for managing the development of the Arctic zone. The Arctic, as shown by A.N. Pilyasov [9, 10] and other economic geographers and economists, needs to develop Arctic-oriented management models. One of the forms (according to international experience in the development of the Arctic territories) could be Arctic partnerships. In state-corporate and other varieties, there is an opportunity to build a consensus of the state, regional authorities, local governments, corporations, entrepreneurs, representatives of indigenous communities, educational and research organizations, civil society on the development and implementation of programs development of the Russian Arctic, to ensure access for the population and commercial consumers to information on the state of the environment.

The implementation of the state policy of Russia in the Arctic involves the solution of socio-economic problems. It is possible as part of the modernization of the economy, ensuring its diversification, rational nature management, the preservation of unique ecological systems, and the development of indigenous communities. When implementing investment projects for mining and developing transport infrastructure in the Russian Arctic (megaprojects), territorial-production complexes (TPC) will be created, as well as infrastructure facilities, united in clusters oriented towards commercialization and implementation in production of advanced research and development projects.

The *critical task* of ensuring sustainable socio-economic development of the Russian Arctic is to overcome the weakness of infrastructure. The key link in the emerging Arctic transport system is the Northern Sea Route (the NSR). It is explained by the fact that sea transport is a non-alternative means of transportation of the population and the delivery of goods to remote regions of the Arctic and a way of linking space. Often it is supplemented by air traffic (it is a non-alternative year-round action way of moving people in the Nenets Autonomous Okrug). The functioning of the NSR and the associated land transport network ensures the safety of the population living in the Russian Arctic, contributes to economic activity, and the development of cooperation with foreign countries (since the 1980s).

The scientific and innovative task is to organize and conduct fundamental and applied scientific research on the accumulation of knowledge and the creation of modern (incl. geoinformation) fundamentals of managing the Arctic territories, as well as the reliable functioning of the life support systems of the population in the Arctic, the development of new materials, technologies and equipment for the development of mineral deposits and aquatic biological resources, incl. in ice-covered areas. The urgent task of studying climate change and the impact of these processes on human economic activity. The introduction of advanced resource and energy-saving technologies in the energy sector, the housing and communal sector, the processing, and recycling of municipal waste will reduce fuel delivery costs and improve the quality of life of the population in the Russian Arctic.

The socio-cultural task involves the development of measures aimed at solving demographic problems in the subjects of the Russian Arctic, revitalizing the Arctic single-industry towns, developing entrepreneurship, creating high-tech jobs, maintaining social guarantees for people permanently residing in the Russian Arctic, coordinating the use of natural resources with the indigenous peoples' resources in areas of their traditional nature use, the development of targeted educational programs, the provision of medical, domestic and cultural services to the population.

The environmental task is to strike a balance between the need to use natural resources and the need to preserve the natural environment in the interests of present and future generations (Sustainable Development Concept, 1992). Ways to solve this problem are the use of a precautionary approach in the Arctic nature use, the prompt resolution of environmental issues, the development of protected natural areas, the elimination of accumulated environmental damage, land reclamation, the introduction of a separate collection of industrial and municipal waste, the development of ecological tourism, and the improvement of international security systems against natural and human-made threats.

The solution to *the geopolitical task* should proceed from the recognition of the special status of the Arctic territories. The Arctic zone is key to maintaining the defense capabilities of our state: the forces and assets of the Northern Fleet are deployed here, and enterprises of the military-industrial complex are based. The length of the Arctic coast of the Russian Federation is 22 thousand km. It is the maximum figure among countries with access to the Arctic Ocean. The Arctic theater of operations is specific; the icy surface soldered to the shore is regarded as a continuation of the land territory of the state. In the interest of ensuring national security, Russia is working with foreign countries to improve existing standards and proactively develop new agreements within the framework of the Arctic Council, the Barents Euro-Arctic Region, the European Union, and the North Atlantic Treaty Organization (NATO).

The development of the system of state planning and development management of the Russian Arctic is based on Federal Law No. 172-FZ of June 25, 2014 "On Strategic Planning in the

Russian Federation”¹⁰, as well as the “Basic Principles of the State Policy of Regional Development of the Russian Federation to 2025”, approved by Decree of the President of the Russian Federation on January 16, 2017¹¹.

The objectives of regional development are to improve the quality of life of the population, scientific and technological progress and increase the competitiveness of the Russian economy based on a balanced and sustainable socio-economic development of the constituent entities of the Russian Federation, as well as involving civil society in solving regional and local tasks of territorial development. It is necessary to provide infrastructural support for the spatial development of the economy and the social sphere, attracting investment in the non-state sector of the economy, improving mechanisms for regulating internal and external migration, and developing mechanisms (incl. financial) to stimulate the subjects of the Russian Federation to build their economic potential, as well as to clarify the powers of federal bodies of state power, bodies of state power of subjects of the Russian Federation and local authorities.

The institutional basis for managing the Arctic region as an integral object with boundaries, composition, goals, and objectives of development, methods for their achievement, participants, characterized by a set of statistical indicators that allow controlling the dynamics of development, generates several documents.

The President approved the fundamentals of Russia's state policy in the Arctic for the period up to 2020 and a longer perspective in 2008. National interests have determined the use of the Russian Arctic as a resource base that provides solutions to the country's socio-economic development; preservation of the Arctic as a zone of peace and cooperation; conservation of ecological systems; use of the NSR as the national transport communication of Russia in the Arctic¹².

In the Basic Principles of State Policy of Russia in the Arctic until 2035, the Russian Arctic is “... land territory as defined by the Decree of the President of the Russian Federation of May 2, 2014 No. 296 “On land territories of the Arctic zone of the Russian Federation”, as well as inland marine areas adjacent to these territories waters, territorial sea, exclusive economic zone and the continental shelf of the Russian Federation”¹³.

¹⁰ Federal'nyy zakon «O strategicheskoy planirovaniy v Rossiyskoy Federatsii» [Federal Law “On Strategic Planning in the Russian Federation”]. URL: http://www.consultant.ru/document/cons_doc_LAW_164841/ (accessed 12 December 2017).

¹¹ Osnovy gosudarstvennoy politiki regional'nogo razvitiya Rossiyskoy Federatsii na period do 2025 goda. Utverzhdeny Ukazom Prezidentom RF 16 yanvarya 2017 g. [Basic Principles of the State Policy of Regional Development of the Russian Federation to 2025. Approved by Decree of the President of the Russian Federation on January 16, 2017]. URL: http://www.consultant.ru/document/cons_doc_LAW_210967/f938e46a4000bf25f99c70c69823278591395d7d/ (accessed 12 December 2017).

¹² Osnovy gosudarstvennoy politiki Rossiyskoy Federatsii v Arktike na period do 2020 goda i dal'neyshuyu perspektivu (utverzhdeny Prezidentom Rossii v 2008 g.) [The Basic Principles of the State Policy of the Russian Federation in the Arctic to 2020 and beyond (approved by the President of Russia in 2008)]. URL: <http://government.ru/info/> (accessed 22 February 2018).

¹³ Osnovy gosudarstvennoy politiki Rossiyskoy Federatsii v Arktike na period do 2035 goda (utverzhdeny Ukazom Prezidentom Rossii 5 marta 2020 g. № 164) [The Basic Principles of Russian Federation State Policy of in the Arctic to 2035. (approved by Decree of the President of Russia on March 5, 2020 No. 164)]. URL: <http://government.ru/info/> (accessed 22 March 2020).

In the Basic Principles of State Policy of Russia in the Arctic to 2035, the objectives of the state policy of the Russian Federation in the Arctic are the following:

- improving the quality of life of the population of the Russian Arctic, incl. indigenous peoples;
- accelerating the economic development of the territories of the Russian Arctic and increasing their contribution to the economic growth of the country;
- environmental protection in the Arctic, the security of the indigenous lands and traditional lifestyle;
- mutually beneficial cooperation and peaceful resolution of all disputes in the Arctic based on international law;
- protection of the national interests of the Russian Federation in the Arctic, incl. economic ones.

It should be noted that, unlike the Basic principles of Russia's policy in the Arctic to 2020, the document to 2035 got no stages, periods, and indicators to evaluate the effectiveness of its implementation.

The composition of the Russian Arctic is defined in the Decree of the President of the Russian Federation of May 2, 2014 No. 296 "On land territories of the Arctic zone of the Russian Federation"¹⁴. It should be noted that the lands and islands in the Arctic Ocean, indicated in the Decree of the Presidium of the Central Executive Committee of the USSR of April 15, 1926 "On the Declaration of the Territory of the USSR as Lands and Islands in the Arctic Ocean" and other acts of the USSR, are administratively a part of the Arctic regions. By the Decree of the President of Russia of June 27, 2017 No. 287, the Loukhsky, Kemsy and Belomorsky municipalities of the Republic of Karelia became assigned to the Russian Arctic¹⁵.

In 2015, the Government of the Russian Federation created the State Commission for the Development of the Arctic¹⁶. Its authority includes

- coordination of the activities of federal, territorial, and local authorities in solving the problems of socio-economic development and ensuring national security in the Russian Arctic;
- clarification of the goals of the policy of the Russian Federation in the Arctic following changes in the external economic and foreign political situation;
- increasing the efficiency of the development of sustainable development programs in the Russian Arctic and others.

Among the tasks of the Commission are:

¹⁴ «O sukhoputnykh territoriyakh Arkticheskoy zony Rossiyskoy Federatsii». Ukaz Prezidenta Rossii ot 2 maya 2014 g. № 296 ["On Land Territories of the Arctic Zone of the Russian Federation". Decree of the President of Russia No. 296 of May 2, 2014] URL: <http://www.kremlin.ru/acts/bank/38377> (accessed 22 July 2018).

¹⁵ Ukaz Prezidenta Rossii № 287 ot 27.06.2017 «O vnesenii izmeneniy v Ukaz Prezidenta Rossiyskoy Federatsii ot 2 maya 2014 goda «O sukhoputnykh territoriyakh Arkticheskoy zony Rossiyskoy Federatsii»» [Decree of the President of Russia No. 287 of June 27, 2017 "On Amending the Decree of the President of the Russian Federation dated May 2, 2014 "On Land Territories of the Arctic Zone of the Russian Federation"]. URL: <http://www.kremlin.ru/acts/bank/39411> (accessed 22 September 2018).

¹⁶ «Polozhenie o Gosudarstvennoy komissii po voprosam razvitiya Arktiki» (utverzhdeno Postanovleniem Pravitel'stva Rossii ot 14 marta 2015 goda № 228) ["Regulation on the State Commission for the Development of the Arctic" (approved by Decree of the Government of Russia No. 228 of March 14, 2015)]. URL: <https://arctic.gov.ru/info/> (accessed 22 August 2018).

- study and development of the Arctic, considering the needs of the country and global trends, ensuring fundamental and applied research;
- improving the training system, developing the system of vocational education;
- development and implementation of priority investment projects and programs providing the development of the Russian Arctic, the protection of its environment and population;
- creation of a comprehensive security system to protect the environment and the people from threats of emergencies of a natural and technogenic nature;
- improving the quality of life of the population, preserving economic activity and cultural heritage sites;
- use of political, diplomatic, economic, information, and other mechanisms to ensure Russia's national interests in the Arctic;
- coordination of strategies for the socio-economic development of the subjects of the Russian Arctic.

The creation of the Commission on the development of the Arctic in the Russian Federation seems timely and justified. Its work within the framework of working groups and a scientific and expert council has allowed involving experts on an interdisciplinary basis in discussing the development trends of the Arctic. It also allowed reducing the blurring of government functions in the Russian Arctic between ministries and departments, between the Government and the structures of the Federal Assembly of the Russian Federation. The coordination of efforts between different levels and branches of government in Russia has increased.

The Commission reflects state attention to the urgent problems of the development of the Arctic macro-region

- redistribution of excess revenues from hydrocarbon production in the interests of all subjects of the Russian Arctic,
- reduction of imbalances in the socio-economic development of the subjects of land territories of the Russian Arctic,
- rational spending of funds on megaprojects,
- creation of single Arctic-oriented information space to promote and protect Russian national interests in the Arctic. The priority of Russian policy is to preserve the Arctic as a territory of the world, stability, and constructive cooperation,
- implementation of initiative proposals of the Russian Federation in the framework of international cooperation in the Arctic,
- supporting traditional nature management of the indigenous peoples of the North and the Arctic.

Thus, the commission concluded that the federal budget funds provided to the regions to support the socio-economic development of the indigenous peoples had decreased three times — from 600 million rubles in 2009 to 205 million in 2015.¹⁷

- solving urgent environmental problems in the subjects of the Russian Arctic, the development of nature conservation, and tourism promotion.

¹⁷ Kompleksnaya informatsionnaya podderzhka interesov Rossii v Arktike [Comprehensive Informational Support for Russia's Interests in the Arctic]. URL: <http://www.arctic-info.ru/news/05-10-2015/dmitrii-rogozin—neobhodima-kompleksnaa-informacionnaa-podderjka-interesov-rossii-v-arktike> (accessed 10 January 2019).

The structure of the Federal Assembly of the Russian Federation includes the Committee on Regional Policy and Problems of the North and the Far East and the Expert Council on the Arctic and Antarctic. Their powers consist of the development of conceptual approaches of the Arctic policy, the preparation of documents specifying its goals, objectives, methods, and stages of implementation. Attention is paid to the development of mechanisms to increase the investment attractiveness of the Arctic region, the modernization of the tax base in the interests of corporations and entrepreneurs operating in the Arctic region, the development of the regulatory legal framework for the development of its natural resources, the modernization of the infrastructure, and the formation of the knowledge-based structure of the economy.

To increase the efficiency of state management of the development of the Russian Arctic, in 2019, the powers of the Ministry for the Development of the Far East were expanded. Based on considerations of budgetary funds for the functioning of the state apparatus, this decision of the President of the Russian Federation looks deliberate. The competence of the Ministry for the Development of the Far East and the Arctic includes the functions of state and legal regulation of the development of the Russian Arctic, which is of systemic importance for the development of the macro-region¹⁸. At the regional level, Decree of the Head of the Republic of Sakha (Yakutia) of December 30, 2018 No. 313, ensured an integrated approach to the development of the Arctic zone of the Republic of Sakha (Yakutia), sustainable development of indigenous peoples. Also, the Ministry for the Development of the Arctic and the Affairs of the Peoples of the North was formed. In the structure of the Administration of the Governor of the Arkhangelsk Oblast, the position of the representative of the Governor for the development of the Arctic has been introduced.

The development strategy of the Arctic zone of the Russian Federation until 2020 and features of its implementation

Strategy for Development of the Russian Federation's Arctic zone and Ensuring National Security until 2020¹⁹ was worked out to develop the Basic Principles of Russian Policy in the Arctic until 2020, approved by the President of the Russian Federation in 2013, and it is currently updating (expected at the end of 2020)²⁰. The plan for its implementation includes more than 80 measures aimed at the socio-economic development of the Arctic zone, the development of sci-

¹⁸ Postanovlenie Pravitel'stva RF ot 30 iyunya 2012 g. № 664 «O Ministerstve Rossiyskoy Federatsii po razvitiyu Dal'nego Vostoka i Arktiki» (s izmeneniyami i dopolneniyami) [Decree of the Government of the Russian Federation No. 664 of June 30, 2012 "On the Ministry of the Russian Federation for the Development of the Far East and the Arctic" (as amended)]. URL: <https://base.garant.ru/70196982/> (accessed 10 October 2019).

¹⁹ Strategiya razvitiya Arkticheskoy zony Rossiyskoy Federatsii i obespecheniya natsional'noy bezopasnosti na period do 2020 goda (utverzhdena Prezidentom Rossii v 2013 g.). [Strategy for Development of the Russian Federation's Arctic zone and Ensuring National Security until 2020 (approved by the President of Russia in 2013)]. URL: <http://government.ru/info/> (accessed 22 February 2018).

²⁰ The new Arctic strategy of the Russian Federation is being prepared with the participation of the authorities of the Arctic regions, the scientific community, and experts. In 2019, a special portal was launched to help any Russian citizen to make proposals to the strategy. In-person discussions of the document took place in each region of the Russian Arctic. The official presentation of the strategy was expected in June 2020 at the St. Petersburg International Economic Forum.

ence, technology and innovation, the information and telecommunication environment, infrastructure, environmental protection and environmental safety, the development of international cooperation, military security, stability and protection of the state border of Russia in the Arctic²¹.

The Strategy sets the procedure for addressing priority tasks in using the material, financial, personnel, scientific, technological, informational potential of Russia in the Arctic. Also, it is about the efficient use of natural resources, outstripping the development of infrastructure. Solving these issues will ensure the integrated development of the Arctic territories, their social sphere, education, science, will contribute to the preservation of unique natural complexes, and improving the quality of life of the indigenous population.

The content of the Arctic strategy is consistent with federal laws that govern the socio-economic development of the Russian North, e.g., Law of the Russian Federation of February 19, 1993 No. 4520-1 "On State Guarantees and Compensations for People Working and Living in the High North and Localities Equated to Them", "On Housing Subsidies to Citizens Leaving the High North and Equated Localities", "On Guarantees of the Rights of Indigenous Peoples of the Russian Federation" of June 19, 1996, No. 78 "On the Grounds of State Regulation of Social-economic Development of the North of the Russian Federation", of April 30, 1999 No. 82 "On Guarantees of the Rights of the Indigenous Peoples of the Russian Federation", of May 07, 2001 No. 49 "On the Territories of Traditional Nature Management of the Indigenous Peoples of the North, Siberia and the Far East of the Russian Federation" and several other legal acts. The Arctic strategy considers forecasts for the development of the TPC in mechanical engineering, energy, and mining. It is consistent with the priority provisions of the demographic and information policy of Russia, focuses on the concepts and development programs of the subjects of the European North, Siberia, and the Far East for the long term.

Alternative ways of socio-economic development of the Russian Arctic in the strategy are revealed in two scenarios. They differ like the hypotheses adopted in the formation of socio-economic trends, external and internal factors, as well as limitations, incl. random and difficult to predict. When developing them, the programmatic scenarios of the relevant ministries and departments of the Russian Federation, Arctic Council working groups, and foreign Arctic strategies were considered.

The *inertial scenario* reflects the conflict of interests of the circumpolar countries and the intensification of the struggle between them for natural resources, incl. increased pressure on the presence of Russian enterprises on the Spitsbergen archipelago. The conjuncture of world prices for the main groups of natural resources mined in the Arctic will be favorable, but unstable. The scenario reflects the extension of current trends in key sectors of the Arctic economy and is based on conservative estimates of the forecast growth of key indicators. For reasons of delayed imple-

²¹Strategiya razvitiya Arkticheskoy zony Rossiyskoy Federatsii i obespecheniya natsional'noy bezopasnosti na period do 2020 goda (utverzhdena Prezidentom Rossii v 2013 g.) [Strategy for Development of the Russian Federation's Arctic zone and Ensuring National Security until 2020 (approved by the President of Russia in 2013)]. URL: <http://government.ru/info/> (accessed 22 February 2018).

mentation deadlines, mega-projects have little effect on the economical parameters of the development of the region. It is assumed that the growth rate of the GRP included in the Russian Arctic, the per capita income of the population and budget revenues, the growth of labor productivity will be lower than the Russian average, and the expected structural changes in the Arctic economy and investment growth will occur slowly; the resource orientation of the Russian Arctic in the system of the international geographical division of labor will continue. Contrasts between the development of the dynamic western and depressed eastern sectors of the Russian Arctic will intensify²².

The *innovative scenario* is aimed at the broader cooperation between the polar countries in the development of Arctic shelf deposits and, therefore, at a much faster pace of growth than inertial scenario predicts. The innovative scenario grounds on optimistic assessments of the development of critical sectors and sectors of the Arctic economy, considering the implementation of megaprojects and the influx of investments, incl. foreign. As practice shows, the northern countries form regional GDP not only on the exploration and production of mineral raw materials but also on services, knowledge-intensive developments. They contribute to improving the energy and environmental safety of oil and gas production facilities.

The characteristic features of the innovation scenario will be, on the one hand, the consistent implementation of competitive advantages based on the rational use of the natural resource potential of the Arctic territories, on the other hand, the manifestation of a new quality of economic growth based on the influence of new technologies in various sectors of the economy and the accelerated development of the information and communication complex and subsector of Arctic intellectual services. The pace of development of the Russian Arctic will be higher than the national average due to the implementation of megaprojects: development of the Shtokman and Prirazlomnoye fields, Pomorskoe, Dolginskoe, Varandey-more, and Medynskoe-more sites; Bovanenkovo field, modernization of the NSR and increase of its cargo turnover up to 60 million tons per year due to the transportation of resource from offshore areas and the development of transit traffic with the participation of Europe and the Asia-Pacific region (APR) states. Megaprojects will continue in the Yamal Peninsula (development of the Sabetta port, the Northern Latitudinal Railway, etc.), the Urals (Ural Industrial — Ural Polar), the European North (Belkomur), etc. Innovation scenario grounds on the vocational education system training, institutional and scientific-technical environment adapted to extreme Arctic conditions, renovation of infrastructure, creation of production facilities for the deep processing of natural resources aimed at producing high value-added products, active implementation organizational innovation. Their implementation will be equally effective both in the civilian and in the military-industrial sectors of the economy.

²² Strategiya razvitiya Arkticheskoy zony Rossiyskoy Federatsii i obespecheniya natsional'noy bezopasnosti na period do 2020 goda (utverzhdena Prezidentom Rossii v 2013 g.) [Strategy for Development of the Russian Federation's Arctic zone and Ensuring National Security until 2020 (approved by the President of Russia in 2013)]. URL: <http://government.ru/info/> (accessed 22 February 2018).

An instrument for implementing the strategy and state policy in the Russian Arctic is the State program “Socio-economic development of the Arctic zone of the Russian Federation until 2020” (updated in 2017 and extended until 2025)²³. The state program is expected to be completed in three stages: I stage — 2015–2017, II stage — 2018–2020, III stage — 2021–2025. The amount of funding is approximately 190 billion rubles. The state program includes three subprograms: “Formation of support zones and ensuring their functioning, creation of conditions for advanced socio-economic development of the Arctic zone of the Russian Federation”, “Development of the Northern Sea Route and provision of shipping in the Arctic”, “Creation of equipment and technologies oil and gas and industrial engineering, necessary for the development of mineral resources of the Arctic zone of the Russian Federation”²⁴. In the previous edition, there was one subprogram — “Coordination of the activities of state authorities in the field of socio-economic development of the Arctic zone of the Russian Federation”.

Goals of the State program:

- improving the quality of life and social protection of the population in the subjects of the Russian Arctic;
- development of the NSR as the national transport route of Russia in the Arctic and the development of a hydrometeorological support system for navigation in its water area;
- development of science, technology and improving the efficiency of using the resource base of the Arctic zone and the continental shelf of the Russian Federation in the Arctic;
- improving the efficiency of public administration of the socio-economic development of the Russian Arctic.

The 2020 Concept for the Long-Term Socio-Economic Development of the Russian Federation defines priority areas for the development of our country: establishing a competitive knowledge-based economy, increasing the rate of innovative growth based on human capital, improving the welfare of the population²⁵. The critical points of the Arctic Strategy of the Russian Federation cover such categories as **knowledge, presence, growth**. The development of the Arctic region is based on the principle of building up and concentrating competitive scientific knowledge, investments, and production potential in the most promising areas in centers that form “centers of social and economic efficiency” in the Arctic zone. The State program provides several mechanisms for the sustainable socio-economic development of the Russian Arctic.

²³ О новов редаксии gosudarstvennoy programmy «Sotsial'no-ekonomicheskoe razvitie Arkticheskoy zony Rossiyskoy Federatsii» [“On the New Edition of the State Program “Socio-Economic Development of the Arctic Zone of the Russian Federation”]. URL: <http://government.ru/docs/29164/> (accessed 22 February 2018).

²⁴ О новов редаксии gosudarstvennoy programmy «Sotsial'no-ekonomicheskoe razvitie Arkticheskoy zony Rossiyskoy Federatsii» [“On the New Edition of the State Program “Socio-Economic Development of the Arctic Zone of the Russian Federation”]. URL: <http://government.ru/docs/29164/>, <http://gov.garant.ru/SESSION/PILOT/main.htm> (accessed 22 February 2018).

²⁵ Kontseptsiya dolgosrochnogo sotsial'no-ekonomicheskogo razvitiya Rossiyskoy Federatsii do 2020 goda (utverzhdena Rasporyazheniem Pravitel'stva Rossii ot 17 noyabrya 2008 g. № 1662) [The Concept of Long-Term Socio-Economic Development of the Russian Federation Until 2020 (approved by Order of the Government of Russia of November 17, 2008 No. 1662)]. URL: <http://docs.cntd.ru/document/902130343> (accessed 12 July 2018).

1. The creation of advanced development zones, aimed at shifting the productive forces system in the High North . Such zones may appear in the areas of the Polar Urals, TPOGP, Kola, and the Belkomur (to be formed in uncertain future) industrial zones.

2. *The frame-cluster approach* involves the restructuring of industrial enterprises, creating modern processing industries, expanding the range of finished products, increasing the competitiveness of products through involvement in the development of new deposits, introducing energy-saving technologies, using a closed production cycle with minimal environmental impact.

3. *Selective state support* means particular approaches in tax and social policy, as well as the improvement of mixed (state-corporate) participation in the development of the Arctic territories, the creation and functioning of special economic zones (also in ports), attracting and using investments (incl. foreign).

4. *The creation of support zones* of advanced development means an integrated project of the socio-economic development of territories. It involves the simultaneous use of territorial and sectoral planning tools, as well as mechanisms for the implementation of megaprojects, incl. the ones based on state-corporate and other types of partnerships. Let us discuss this mechanism in detail.

Supporting zones of advanced development are not mentioned in the Basic Principles of State Policy of Russia in the Arctic to 2020 and the future perspective and in the Basic Principles of Russia State Policy in the Arctic to 2035. Meanwhile, the formation of support zones is a response to the development of peripheral Northern territories. The development of the Russian Arctic is based on the ideology of integrated industrial and transport development, rather than isolated deposits, using the program-targeted method, relying on innovation, and considering climate change trends.

In the industrial era, a set of strategies for the economic and social development of the northern periphery was based on the theory of exogenous growth. It meant the transformation of space on technological and organizational solutions of the old-developed areas, with the emphasis being on the injection of capital, material and technical and human resources, the dominance of the interests of the whole country over the economic and especially the ecological interests of the region. The advantages of this model were reduced to an ultrafast start of development and reaching peak production rates of strategically essential types of natural resources for the country [9].

In the 1990s, in the regions of the North, a transition was made from administrative-command to market principles of economic activity. Restructuring of the plants was carried out in the direction of reducing their size, increasing environmental friendliness. These processes are understood as an integral part of the trend of the transition from the dominance of employment in the extractive industry to the growth of employment in the service sector, environmental management sectors responsible for environmental safety.

Since the early 1990s, the concept of competitiveness of regions based on the theory of endogenous growth has been approved [9, 10]. The emphasis is placed on the development opportunities of the area itself. It seems it must be actively looking for points of competitive advantage in the context of climate change, globalization, interaction with neighbors, focusing on the needs of dynamically developing markets, encourages entrepreneurship, and stimulates officials to flexible economic behavior. In such a region, tools of state-corporate and other partnerships are used to solve socio-economic and environmental problems, encourage rational use of natural resources, seek the replacement of imported energy, develop services, tourism, and take comprehensive measures to develop human capital. International cooperation allows the exchange of knowledge, technologies, competencies to determine the most effective way of managing the extreme climatic conditions of the Arctic.

A key task in the field of socio-economic development of Russia is the transition from resource-based to an innovative model, considered from the perspective of import substitution. The most suitable is the model of a diversified economy, which combines non-renewable natural resources and reproducible human capital, which implies the use of both the raw materials and the intellectual capabilities of the region and the state. For this, scientific studies of the Arctic seas, the continental shelf, and the mainland of the Russian Arctic are regularly conducted, aimed at expanding knowledge about the region. The result of the research is the development and implementation of materials and technologies adapted to the Arctic conditions, incl. the development of independent sources of energy supply, development of alternative energy. Technical and technological innovations should be implemented in the industries on which the competitiveness of the Arctic region and the whole country depends.

The need to overcome the specific factors of the northern price growth necessitates fixing at the level of planning and programming measures of economic regulation. Also, it requires incentives that consider the peculiarities of extreme economic conditions, strategic national priorities of socio-economic policies, as well as restrictions imposed on climatic, social, and socio-cultural, environmental, technological, international legal and other foundations [11].

A new model of spatial socio-economic development and economic management should form the framework of regional (republic, oblast, krai, okrug) and territorial (city, district) centers of concentration of economic growth, capable of transmitting innovative impulses of economic development to adjacent subjects. This model should be able to manage these processes using market institutions and mechanisms, bringing to the trajectory of accelerated growth the deep and marginal regions and territories [12].

Due to the focal nature of economic activity in the Arctic, maintaining, developing and modernizing the existing centers of economic activity, as well as creating new ones and enhancing their integration among themselves, is of particular importance. Under the conditions of sanctions and budgetary constraints, this principle can be implemented by implementing large state, regional and corporate projects based on the principles of public-private partnership [13].

Thus, the support zone can be understood as a part of the territory of a constituent entity of the Russian Federation located in the Russian Arctic, where one or several megaprojects are implemented, requiring the creation of a common energy and transport infrastructure, and the attraction of highly qualified labor resources. In creating support zones, the state sees the paramount task in the formation of the infrastructure and energy framework of the Arctic territories, which will have a multiplier effect and will give impetus to the development of the entire Arctic zone. Support zones are formed around the centers of economic development based on administrative divisions, which allows focusing on megaprojects even in those regions that are not fully part of the Russian Arctic. The orientation of the support zones to the NSR will allow intensifying activities in remote and inaccessible areas, hinterlands of both the Russian Arctic and other regions of the Russian Federation, incl. shipbuilding and ship repair enterprises.

The following can be mentioned as priority areas of activity of the development support zones in the Russian Arctic

- Creation and development of the Arctic transport system, which includes the NSR and the transport routes and means of the sea and river fleet, aviation, pipeline, rail, road transport, seaports, and coastal infrastructure.
- Development of mining and processing facilities. Based on the goals of the state policy of using the Russian Arctic “as a strategic resource base of Russia, providing the solution to the problems of socio-economic development of the country”²⁶, priority is given to projects aimed at the development and development of hydrocarbon deposits, the development of the mining complex, the modernization of the fishing and fish processing industries, the development of aquaculture, and the development of tourism
- Development of energy infrastructure facilities, incl. alternative energetics. Almost all of the land territories of the Russian Arctic are energy-deficient, which inhibits their economic development. Initiatives aimed at reducing costs can be considered as a stimulating factor in the intensification of economic activity in the region. Such projects will contribute to improving the energy security of the population. Much attention is paid to the development of information and telecommunication services, incl. high-speed Internet and digital television in the municipal formations of the Russian Arctic.
- Reconstruction of the housing stock and housing and communal services and the social sphere. It is advisable to consider projects whose implementation will improve the quality of life as well as contribute to the formation of human resources for the needs of the region’s economy when forming support zones [11, 12] to overcome the outflow of the able-bodied population. In conditions of remoteness and climatic extremes, the provision of high-tech medical care to the people is relevant.
- AZRF is of strategic importance in terms of national security. One of the goals of state policy is to ensure a favorable operational regime, maintain the combat potential of the Armed Forces of the Russian Federation in the Arctic, as well as protect and protect the state border of Russia in the Arctic²⁷. The development and modernization of the Armed

²⁶ Osnovy gosudarstvennoy politiki Rossiyskoy Federatsii v Arktike na period do 2020 goda i dal'neyshuyu perspektivu (utverzhdeny Prezidentom Rossii v 2008 g.) [The Basic Principles of the State Policy of the Russian Federation in the Arctic to 2020 and Beyond (approved by the President of Russia in 2008)]. URL: <http://government.ru/info/> (accessed 22 February 2018).

²⁷ Osnovy gosudarstvennoy politiki Rossiyskoy Federatsii v Arktike na period do 2020 goda i dal'neyshuyu perspektivu (utverzhdeny Prezidentom Rossii v 2008 g.) [The Basic Principles of the State Policy of the Russian Federation in the

Forces facilities and the growth of industries of a dual-purpose use may become an incentive for the development of civilian sectors of the economy of the Arctic regions of Russia.

Support zones of development are diverse and include:

- territories of industrial development with the prospects of transition to post-industrial development, based on developed territories (Arkhangelsk and Murmansk Oblasts);
- territories of active development, relying on open fields and infrastructure, incl. ports, oil and gas pipelines (Yamal-Nenets and Nenets Autonomous Okrugs);
- territories of prospective development based on the studied deposits, developed transport routes (Chukotka Autonomous Okrug);
- wildlife territories are forming the environment for the conservation of natural space with a particular nature management regime.

The Kola support zone is formed on the territory of the Murmansk Oblast. This entity is developing an infrastructure for servicing hydrocarbon exploration and production offshore in the Barents and Kara Seas, as well as for the extraction and processing of aquatic biological resources and the development of tourism. Novatek plans to build large-capacity platforms and floating plants for the Arctic LNG-2 project. The Murmansk transport hub provides for the development of the Murmansk port, the construction of terminals, and the expansion of railway entrances (e.g., the Lavna coal transshipment complex and the Vykhodnoy — Lavna railway).

The goal of **the Yamal-Nenets support zone** is the development of hydrocarbon deposits on the Yamal and Gydan peninsulas and the shelf of the Kara Sea, as well as the creation of a port (Sabetta) and transport (“Bovanenkovo-Sabetta”, “Northern latitudinal railway”) infrastructure for liquefied natural gas (LNG) supplies for export.

In the Komi Republic, **the Vorkuta support zone** was formed. Its territory host deposits TPOGP and Pechora coal basin. Among the promising projects are the development of railway (Belkomur), automobile and air transport, and the solution of the Vorkuta single-industry town problems.

The Arkhangelsk support zone is considered as a transport corridor connecting industrial centers of the Urals, Siberia, and the European North with the NSR. There, one of the first territorial clusters in the Russian Arctic is developing (timber and shipbuilding), the creation of a fishing cluster is discussed, which corresponds to the industry specialization of the region. Promising projects are the construction of Belkomur, the deep-water area of the port of Arkhangelsk, the development of the Pavlovsky deposit of polymetallic ores in Novaya Zemlya and the creation of a mining and processing plant.

The main challenge for the Nenets support zone, which in the long term may become an advantage, is the development of TPOGP deposits on the shelf of the Barents and Kara Seas. Since the Nenets Autonomous Okrug has only aviation year-round communication with other constituent entities of the Russian Federation, the priority is the construction of ports along the NSR, their

Arctic to 2020 and Beyond (approved by the President of Russia in 2008)]. URL: <http://government.ru/info/> (accessed 22 February 2018).

connection to railways. E.g., the construction of the Indiga port, the final destination of the Barentskomur, the construction of the Indiga-Sosnogorsk railway, the Syktyvkar — Naryan-Mar road, which can be considered as an alternative to railway projects.

The Taimyr-Turukhansk support zone is developing based on the Norilsk mining region. One of the implemented investment projects was the opening of the Skalistaya mine and the development of the Syradasai coal deposit. It is planned to build a terminal in the port of Dikson to ship coal (about 3 million tons per year). Also, it is expected to develop oil and gas cluster deposits (Ust-Yenisei and Khatanga centers).

One of the strategic goals of **the North-Yakutsk support zone** is the creation of a logistics system that ensures the communication of the river system (Lena and Kolyma) with the NSR. It can be achieved by updating the infrastructure of the Tiksi port, building a Zhaithaiskaya shipyard, replenishing the fleet of river-sea vessels, and developing hydrocarbon deposits, incl. on the shelf of the Arctic Ocean (Ust-Oleneksky, Ust-Lensky, Anisino-Novosibirsk sections). The advantage of the Chukotka support zone is its location on the NSR. One of the main problems is remoteness from the federal center and persistent depopulation processes. Promising areas will be the improvement of logistics (incl. the reconstruction of airports and seaports), mining, and development of energy. The main projects are implemented within the Chaun-Bilibino and Anadyr industrial zones.

Features of the development of the Northern Sea Route as a national transport communication of Russia in the Arctic

The development of the NSR occurred during the 20th century, as the development of mineral, fuel, energy, and forest resources of the Soviet North. With the participation of the NSR, the mineral resources of the land part of the Russian Arctic, the shelf of the Barents and Kara Seas are being developed, the mining, chemical and metallurgical complexes of the Kola Peninsula, Norilsk, Yakutia, Chukotka, the timber industry complex of the Arkhangelsk Oblast and the Krasnoyarsk Krai are functioning. After the collapse of the USSR, the conditions of the NSR worsened. It is especially noticeable in decline in cargo turnover²⁸ (Table 1).

Table 1

Cargo transportation along the NSR, 1933–2020.

Year	Turnover, thousand tons	Year	Turnover, thousand tons	Year	Turnover, thousand tons	Year	Turnover, thousand tons
The initial period of the NSR development		The last period of the socialist state		The current stage of the NSR development			
1933	130	1980	4952	2003	1700	2015	5400
1934	134	1981	5005	2004	1718	2016	7200
1935	176	1982	5110	2005	2023	2017	9900
1936	201	1983	5445	2006	1956	2018	19800
1937	187	1984	5835	2007	2150	2019	28000
1938	194	1985	6181	2008	2219	2020	-
1939	237	1986	6455	2009	1801	2021	-

²⁸ EMISS. Gosudarstvennaya statistika. Ob'єм perevozok gruzov v akvatorii Severnogo morskogo puti [EMISS. State statistics. Volume of Cargo Transportation in the Waters of the Northern Sea Route]. URL: <https://www.fedstat.ru/> (accessed 10 March 2020).

1940	350	1987	6579	2010	2050	2022	-
1941	165	1988	6295	2011	3111	2023	-
1942	177	1989	5823	2012	3752	2024	-
1943	300	1990	4804	2013	3930	2025	-
1944	350	1991	3115	2014	3982	2026	-

For Russia, it seems vital to consolidate the legal regime of the NSR, which has a peculiarity due to climatic and hydrological factors: it does not have a fixed route.

Federal Law of July 28, 2012 No. 132 contains a definition of the NSR. The adoption of the law is associated with the ratification of the UN Convention on the Law of the Sea, and, consequently, the jurisdiction of Russia in the Arctic, with claims made by other countries regarding shipping on the NSR. Russia's position on the NSR is identical to that of Canada concerning most of the Northwest Passage. The NSR is the national transport communication of Russia in the Arctic. The NSR is defined as "... a water area adjacent to the northern coast of the Russian Federation, covering inland sea waters, the territorial sea, the adjacent zone and the exclusive economic zone of the Russian Federation and limited from the east by the line of delimitation of sea spaces with the United States of America and parallel I pour Cape Dezhnev in the Bering Strait, from the west 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, Kara Gate, Ugra Shar straits"²⁹. The White and Barents Seas are not assigned to the NSR water area, which is not justified from the organizational-economic point of view since the ports of these seas have the largest NSR ports in terms of cargo turnover.

By Decree of the Council of People's Commissars of the USSR of December 17, 1932 No. 1873, the Main Directorate of the NSR was formed, which functioned until 1969 and contributed to the transformation of the NSR into a single economic mechanism³⁰. The 2013 law provides for the establishment of the NSR Administration with functions for navigation and hydrometeorological support of shipping monitoring of the ice situation, prevention, and participation in the elimination of marine pollution, determination of the tariff policy.

The state task for the long term is the growth and diversification of cargo transportation through the NSR, incl. due to the construction of high-tech and competitive products, multifunctional civilian equipment for the domestic market, replenishment of the icebreaking, transport, fishing, emergency rescue fleets, as well as the development of hydro-technical, navigational-hydrographic, rescue support for maritime activities. Atomflot is the customer for the construction

²⁹ Federal'nyy zakon RF ot 28 iyulya 2012 g. № 132 «O vnesenii izmeneniy v otdel'nye zakonodatel'nye akty Rossiyskoy Federatsii v chasti gosudarstvennogo regulirovaniya torgovogo moreplavaniya v akvatorii SMP» [Federal Law of the Russian Federation No. 132 of July 28, 2012 "On Amending Certain Legislative Acts of the Russian Federation Regarding State Regulation of Merchant Shipping in the NSR"]. URL: <http://government.ru/docs> (accessed 22 August 2018).

³⁰ Since 1930s, the NSR administration was responsible for organization of marine, river and air communications in the Arctic, building and managing sea and river vessels, ports, shipyards, aerodromes, and developing navigation, meteorological and hydrographic support for navigation, radio communications, scientific research, and productive forces, ensuring the economic development of the indigenous peoples.

of icebreakers, as provided for by the Decree of the Government of Russia of August 19, 2013³¹. The relevance of the decision is also dictated by the steps to develop the Arctic fleet undertaken by foreign countries and their corporations.

In 2018, Rosatom was identified as a single infrastructure operator for the use of the NSR. Its powers are divided between the Ministry of Transport and the Ministry of Development of the Far East and the Arctic. Rosatom will be responsible for shaping the state policy on the development and sustainable functioning of the NSR, navigation, hydrographic and icebreaking support for shipping, as well as the preparedness of emergency rescue services and weather tracking services for navigation³². The authority of the Ministry of Transport is to create and modernize the regulatory framework for the use of the NSR and regulate its use. The Ministry for the Development of the Far East and the Arctic is engaged in the development of land territories of the Russian Arctic and deposits, and the provision of a cargo base for the NSR.

The Government of the Russian Federation adopted Decree No. 3120-r of December 21, 2019, to create infrastructural conditions for the NSR and coastal areas development³³. Until 2035, the development of coastal infrastructure and ports, construction of LNG transshipment terminals, and improvement of the regulatory framework for Arctic shipping are envisaged. The NSR development plan (the Plan) is formed based on the forecast of existing and promising groups of cargo flows, incl. cargo of raw materials projects implemented by PJSC Gazprom Neft, PJSC NOVATEK, PJSC MMC Norilsk Nickel, and projects planned by MC LLC VostokUgol, Independent Oil Company JSC, Baimskaya State Oil Company LLC, Vostok Engineering LLC, Severnaya Zvezda LLC, transported by the NSR for export and within the country; goods imported through the NSR for the needs of these commodity projects; life support supplies for the Arctic territories of the Republic of Sakha (Yakutia), the Nenets and Chukotka Autonomous Okrugs and the Krasnoyarskiy Krai using the NSR sections for transportation; cargo of export-import and transit cargo flows passing through the seaports of Murmansk and Arkhangelsk in the direction of the Asia-Pacific Region, incl. the ones redirected from southern routes to the NSR (84 events in total).

Following the Decree of the President of Russia of May 7, 2018 No. 204 "On National Goals and Strategic Tasks of the Development of the Russian Federation to 2024", by 2024, cargo flows through the NSR should increase to 80 million tons³⁴. Rosatom's forecasts are more ambitious,

³¹ «Ob osushchestvlenii byudzhetykh investitsiy v stroitel'stvo dvukh seriynykh universal'nykh atomnykh ledokolov». Postanovlenie Pravitel'stva Rossii ot 19 avgusta 2013 g. № 715 ["On Budget Investments in the Construction of Two Serial Universal Nuclear Icebreakers." Decree of the Government of Russia No. 715 of August 19, 2013]. URL: <http://government.ru/docs> (accessed 22 August 2018).

³² Podpisan zakon o nadelenii «Rosatoma» polnomochiyami v oblasti razvitiya SMP [A Law Was Signed on Empowering Rosatom In Developing the NSR]. URL: <http://www.kremlin.ru/acts/news/copy/59539> (accessed 02 April 2020).

³³ Plan razvitiya infrastruktury Severnogo morskogo puti do 2035 goda [Infrastructure Plan for the Northern Sea Route until 2035]. URL: <http://government.ru/docs/38714/> (accessed 22 February 2019).

³⁴ O deystviyakh po realizatsii Ukaza Prezidenta Rossii ot 7 maya 2018 goda № 204 «O natsional'nykh tselyakh i strategicheskikh zadachakh razvitiya Rossiyskoy Federatsii na period do 2024 goda» [On Actions to Implement the Decree of the President of Russia dated May 7, 2018 No. 204 "On National Goals and Strategic Objectives of the Development of the Russian Federation until 2024"]. URL: <http://government.ru/news/32567/> (accessed 22 February 2019).

reaching 93-100 million tons by 2024. Implementation of projects for the development of the NSR will cost approximately 735 billion rubles³⁵.

It is planned to build in 2022–2024. put into operation 16 rescue, 13 hydrographic vessels, dredging vessels, four nuclear icebreakers of the Arctic Project 2220 (2022–2026). In 2027–2032, Three nuclear-powered ships should be built, incl. the leading icebreaker of the “Lider” project with a capacity of 120 MW.

According to the Plan, by the end of 2020, reconstruction of facilities in the Pevek seaport (Chukotka Autonomous Okrug) will be completed. By the end of 2021, the sea channel of the Sabetta port will be reconstructed. The complex development of the Murmansk transport hub, reconstruction of airport complexes in Amderma (Nenets Autonomous Okrug), Pevek (Chukotka Autonomous Okrug), Cherskiy (Republic of Sakha (Yakutia), Keperveem (Chukotka Autonomous Okrug) are envisaged.

The plan provides for the development of the Arctic integrated emergency rescue centers of the Ministry of Emergencies of Russia and their equipping with modern rescue equipment. It is planned to create ten such centers; they will be deployed in the settlements of the Russian Arctic, on land and on the islands of the Arctic Ocean, which have transport, information and telecommunications infrastructure, human resources, taking into account the risks of emergencies and the development of emergencies of a natural and technogenic nature in the Arctic. Such centers are being created in Murmansk, Arkhangelsk, Naryan-Mar, Vorkuta, Nadym, Dudinka, Tiksi, Pevek, Provideniya, and Anadyr.

We can add that in the structure of the Ministry of Defense based on the Northern Fleet since 2014, a military structure has been operating — the Joint Strategic Command “Sever”. The Armed Forces create a permanent base for the Northern Fleet in the Novosibirsk Islands. Spetsstroy of Russia completed the reconstruction of the military camp of the first Arctic motorized rifle brigade, which was formed in the village of Alakurtti, Murmansk Oblast. Work is underway on the construction of facilities on the islands of Kotelnny, Wrangel, Aleksandra Land, Novaya Zemlya, and Cape Schmidt. The restoration of airfields on the Novosibirsk Islands and Franz Josef Land has begun, the airfields of Tiksi, Naryan-Mar, Alykel, Vorkuta, Anadyr, and Rogachevo are being reconstructed. Until 2020, more than ten airfields and radar departments should be built and restored in the Russian Arctic.

In 2020, proposals on a state order for training personnel, considering the need for the development of transportation in the NSR for 2020–2021 and subsequent years are expected to be formed [14, 15].

In 2020, it is necessary to develop and approve a program for geological exploration of the subsoil sections of the Russian Arctic, which will form a promising cargo base for the NSR for the

³⁵ Plan razvitiya infrastruktury Severnogo morskogo puti do 2035 goda [Infrastructure Plan for the Northern Sea Route until 2035]. URL: <http://government.ru/docs/38714/> (accessed 22 February 2019).

period until 2035. The program will include the creation of an international transport operator using ice-class container ships operating on nuclear fuel or using LNG.

Another public policy decision at the final stage of the implementation of the Basic Principles of Russia's policy in the Arctic to 2020 and the Arctic Strategy of Russia to 2020 was the Order of the Government of the Russian Federation in 2019, which established the possibility of using 28 foreign vessels until December 30, 2043. (Earlier, the Russian Federation made decisions on restricting the movement of ships flying foreign flags across the NSR). It was done to meet the need for gas carriers for the export of LNG and gas condensate from the projects of PJSC NOVATEK Yamal LNG (from the port of Sabetta and using sea transshipment complexes of year-round operation in the Murmansk Oblast and Kamchatka) and Arctic LNG – 2 (based on the Ytrennee Field on the Gydan peninsula)³⁶.

Particular points of the Plan are devoted to the development of information and communication infrastructure at the NSR. By 2024, uninterrupted satellite communications should be provided in territories located north of 70° N. By the end of 2025. And it is necessary to solve the problem of obtaining hydrometeorological data using the highly elliptical hydrometeorological satellite system “Arktika-M”. As part of the constellation, four spacecraft will be used, six satellites of the Resource-PM and Condor-FKA class, based on which automatic identification of objects in the NSR water areas and a remote sensing system will operate.

Problems and prospects for Russian policy in the Arctic

At the beginning of the 21st century, institutional challenges for the development of the Russian Arctic appeared. So far, federal law has not been adopted, and we got no concept and boundaries of the Russian Arctic. It makes it challenging to develop a regulatory framework governing nature management in the Arctic.

In 1998–2019 in the Federal Assembly of the Russian Federation, the draft law “On the development of the Arctic zone of the Russian Federation” (working title) was introduced. The law creates the legal basis for managing the Arctic space, updates the mechanisms for their implementation. The main goal of the bill is to establish the features of legal regulation of economic, social, cultural, educational, environmental, and other activities in the Russian Arctic. This “scope” partially explains why this law has not yet been adopted. In the law, the AZRF was first defined as an independent object of state administration with particular forms of statistical accounting.

The primary tool for implementing Russian state policy in the Arctic are state programs. In these documents, the AZRF is not identified as an independent object of state administration; it does not contain measures aimed at the development and considering the specific conditions for

³⁶ Ob ispol'zovanii inostrannykh sudov dlya realizatsii proektov po proizvodstvu szhizhennogo prirodnogo gaza. Rasporyazhenie Pravitel'stva RF ot 14 marta 2019 goda №435-r [On the Use of Foreign Ships for Liquefied Natural Gas Production Projects. Decree of the Government of the Russian Federation of March 14, 2019 No. 435-r]. URL: <http://government.ru/docs/36073/> (accessed 21 April 2020).

carrying out economic activities in the Arctic. An analysis of sectoral programs (incl. state programs of the Russian Federation and subjects of the Russian Federation implemented on the territory of the Russian Arctic) showed that the problems of the socio-economic development of the macroregion are currently being solved at the level of program-target planning in fragmented and non-systemic ways. It can be stated that the Russian Arctic is not a self-sufficient regional unit of the country, the center of a well-coordinated development process of dozens of municipalities. Activities of state programs and strategies do not cover the entire spectrum of tasks defined by the Development Strategy of the Russian Arctic, as well as the Fundamentals of State Policy of the Russian Federation in the Arctic. Often, sectoral and regional development programs overlap, which leads to inefficiencies in spending budget funds. The degree of knowledge and development of the Arctic territories depends not only and not so much on the amount of funding but the coherence, consistency, and interconnectedness of activities.

Ensuring the territorial unity of the Russian Arctic, the implementation of an agreed policy on its development is complicated by the fact that in the administrative plan, the Arctic zone is composed of entities belonging to different federal districts. In addition to state and municipal governments, the interests of state corporations are represented in the Arctic zone. Areas of traditional nature management are adjacent to the centers of industry.

In this regard, it can be considered justified to introduce changes in the structure of documents aimed at the development of the Arctic region. It is advisable to reflect in them sources of financing and activities specific to the Arctic territories. Such measures should be aimed at developing sustainable models of socio-economic development of areas that will ensure the development of production in extreme climatic conditions, high quality of life for Arctic residents, and minimize environmental threats. Particular attention should be paid to the preservation of the traditional way of life of indigenous peoples as examples of adaptation to the conditions of the High North. For this, it is necessary to expand the infrastructural support of the spatial development of the economy and the social sphere.

The practice accumulated over 30 years convincingly testifies to the inefficiency of assigning powers to manage the Arctic zone to individual federal government bodies — non-standard, with complex processes for developing resources, characterized by a specific geographical location, and the indigenous peoples living here. After 1991, the created structures did not have a positive impact on the development of the Arctic region, the formation of the right-field associated with it, the statistical accounting system (being formed now), and the implementation of mega-projects. A coordinating structure adequate to the tasks of modernization of the northern economy was not created. The actions of the federal departments on the development of the Arctic zone were not coordinated; the mechanisms of interregional interaction were not sufficiently developed. The result was underfunding of development programs, a lack of specialists, and the weakness of their competencies. As a result, the implementation of the provisions formulated in state programs for the development of the Arctic is delayed [16].

A feature of the national political culture is the presence in key areas of economic development of a particular body with coordinating functions that can solve the problems of promoting institutional transformations.

After the creation of the Ministry for the Development of the Far East and the Arctic, a platform for state-corporate partnerships appeared. Within its framework, the development strategy of the Russian Arctic and the integration of megaprojects into the national development strategy will be ensured, considering global trends and regional development features of the Arctic regions of the Russian Federation. At the proposal of the Ministry for the Development of the Far East and the Arctic, several additions will be made to the updated Arctic strategy of Russia:

- development of the Murmansk seaport as a backbone in organizing transportation along the NSR;
- formation of a cluster of shipbuilding technologies in the Murmansk Oblast;
- the establishment of centers for the extraction and enrichment of solid minerals in the Murmansk Oblast;
- creation of priority development territories in the Murmansk Oblast. It will include projects that can change the structure of the region's economy but do not fall under the provisions of the laws of the Russian Federation on state support for entrepreneurial activity in the Arctic. Thanks to these projects, about 15 thousand jobs will be created for not only residents of the Murmansk Oblast. It is necessary to analyze the challenges in the economic and geographical area, justify the adjustment of taxes, and the modernization of legislation that hinders the spread of multiplier effects in the Arctic economy and the service sector. It is a complex and painstaking work. It requires an answer to the questions: which territories will be subject to preferential regimes, how will privileged conditions vary depending on the characteristics of the Arctic territories. It can be assumed that the implementation of the proposed approach will help stimulate the socio-economic development of the Arctic territories of Russia, increase the economic connectivity of the subjects of the Russian Arctic;
- development in the Nenets Autonomous Okrug, in addition to the traditional oil and mineral resource centers, additional: Pechora LNG and Port Indiga;
- development of the ports of Pevek and Provideniya, as well as the development of the Baimsky gold-copper deposit in the Chukotka Autonomous Okrug, which will contribute to the development of infrastructure in the okrug;
- development of the construction industry, the formation of mineral resource centers based on the East Karelian copper-gold ore zone, aquaculture and forestry in the municipalities of the Republic of Karelia;
- finding ways to solve the problem of the "shrinking" city of Vorkuta, one of several single-industry towns of the Russian Arctic;
- updating the development directions of the Arctic uluses of the Republic of Sakha (Yakutia) when using the possibilities of the Anabar, Yana, Lena, Kolyma, and Indigirka rivers for navigation, the formation of trade and logistics centers based on the mineral resource centers of the Arctic part of Yakutia to ensure "northern delivery".

Most of the planned NSR development, the construction of icebreaking, emergency rescue, and auxiliary fleets, the creation of advanced vehicles, and aviation equipment for work in the Arctic have not yet been implemented. The reasons for this situation are underfunding or its complete absence, as well as sanctions against Russian industrial and transport companies operating in

the Arctic. The capacity of the new icebreakers should be concerning climate change and, consequently, the ice situation, as well as the likely long-term production of hydrocarbons in the eastern sector of the Arctic, which may require fundamentally different types of ice-class vessels in comparison with existing samples.

In the Arctic regions of the Russian Federation, it is planned to develop a scientific and educational space, which so far looks dispersed, does not fully cover all subjects of the Russian Arctic. In the Arkhangelsk Oblast and the Republic of Sakha (Yakutia) — based on existing federal universities, research centers for the study of the Arctic (Arkhangelsk) and seven institutions of secondary vocational education, in the Murmansk Oblast — based on existing educational organizations of secondary and higher professional education, federal research centers. Particular attention should be paid to improving the educational level of the indigenous population, as well as to the Nenets Autonomous Okrug, where there is not a single higher educational institution [14, 15]. In Chukotka, it is planned to create an Arctic University. Training there will be carried out using distance educational technologies and the Internet³⁷.

In 2016, based on the Northern (Arctic) Federal University named after M.V. Lomonosov, Association “National Arctic Scientific and Educational Consortium” (NASEC) was created. The purpose of his activity is the consolidation of public and private resources (incl. scientific initiatives) in the field of personnel and scientific support for sustainable socio-economic development and development of the northern and Arctic territories of the Russian Federation. NASEC is focused on the creation of a joint scientific and educational space that provides information and analytical support for the development of the Russian Arctic, incl. the coordination of scientific and educational activities. NASEC is an association of universities, scientific organizations, and enterprises that implement training programs for the Russian Arctic, conducting research, economic and economic activities in the Arctic territories and on Arctic topics. Among the participants are the NASEC, Autonomous Non-Profit Organization Scientific and Information Center “Polar Initiative”, the Association of Oil and Gas Industry Suppliers “Sozvezdie”, the Institute of Informatics and Mathematical Modeling of Technological Processes of the Kola Science Center of the Russian Academy of Natural Sciences, the Institute for Advanced Training of Executive Workers and Specialists of the Fuel and Energy Commission, Russian Arctic National Park, Far Eastern Federal University, National Research Tomsk State University, Northeast Federal University named after M.K. Ammosov, Siberian Federal University, Tyumen State University, Ural Federal University named after the first President of Russia B.N. Yeltsin, Murmansk Arctic State University, State University of the Sea and River Fleet named after Admiral S.O. Makarova and other educational, research, and production organizations³⁸.

³⁷ Minvostokrazvitiya oboznachilo priority razvitiya kazhdogo regiona Arktiki [The Ministry for the Development of the East has outlined the development priorities of each region of the Arctic] URL: https://minvr.ru/press-center/news/24381/?sphrase_id=1245639 (accessed 20 February 2019).

³⁸ Assotsiatsiya «Natsional'nyy arkticheskiy nauchno-obrazovatel'nyy konsortsiy» [Association “National Arctic Scientific and Educational Consortium”]. URL: <http://arctic-union.ru/contacts/> (accessed 28 March 2020).

In 2020, a package of draft laws on state support for private investment and entrepreneurial activity in the Russian Arctic should be prepared by the Ministry for the Development of the Far East and the Arctic. Investors who are ready to invest at least 10 million rubles in commercial projects in the Russian Arctic will receive tax and other preferences. After the adoption of these laws, the Development Corporation and the Agency for Attracting Investments and Export Support in the Far East and the Arctic zone should earn money. Tax revenues from residents of commercial project activities in the Arctic zone can be used to improve the quality of life of the local population.

In 2020, the Agency for the Development of Human Capital will begin its activities. The tasks of this structure subordinate to the Ministry for the Development of the Far East and the Arctic will be the comprehensive provision of AZRF personnel and support of the economic activities of the indigenous peoples. According to preliminary estimates, by 2035, at least 200 thousand jobs will be created in the Russian Arctic. In 2020, the agency will analyze the staffing requirements in each Arctic region. Together with educational institutions of higher and secondary vocational education, it will create career development centers for students and schoolchildren. Also, it will work to improve the numbers for labor market conditions and will facilitate the opening of new specialties, targeted training for work in the Arctic [14, 15]. Since 2020, medical workers moving to the Arctic zone, following the instructions of the President of the Russian Federation, the so-called "lifting payments" have been doubled up to 2 million rubles for doctors and up to 1 million rubles for paramedics.

Since January 1, 2020, the Far East Development Fund has begun work in the subjects of the Russian Arctic. It is already considering investment projects in the field of tourism and increasing transport accessibility to remote areas with a total value of 87 billion rubles with potential participation of the fund for 27.5 billion rubles. In 2020, up to 15 billion rubles can be allocated for financing Arctic projects³⁹.

According to international experience in developing sites located in areas with extreme climatic conditions, it can be argued that almost all work begins within a few decades from the start of exploration, and not by single companies, but by their consortiums. A feature of the organizational structure of the global oil and gas sector is the significant role of small companies in the initial and final stages of development and development of raw material provinces. However, the Russian reality rejects this rather general and obvious regularity. In Russia, the idea of admitting private companies to work on the shelf in the interests of multi-client research funded by large companies is being discussed. In Russia, such an approach lacks a legislative framework (in the field of creating and supporting small companies in the oil and gas sector), which does not con-

³⁹ Ministerstvo po razvitiyu Dal'nego Vostoka i Arktiki. 2020: chto zhdet Araktiku v novom godu [Ministry for the Development of the Far East and the Arctic. 2020: what awaits the Araktic in the new year]. URL: <https://minvr.ru/press-center/news/24175/> (accessed 10 January 2020).

tribute to intensifying the study and development of the shelf. In 2020, it is planned to complete the preparation of a bill to expand companies' access to unallocated sections of the Arctic shelf⁴⁰.

Conclusion

Currently, the Arctic from the world periphery is turning into a zone of close attention to many countries. In the 21st century, in Russia, the development of the state policy for managing the Arctic zone continues non-standard, extensive, with vast distances, with extreme climatic and socio-economic conditions of management.

The regulation system for the development of the Russian Arctic is characterized by historical continuity, and now it fits into the federal system of strategic planning. According to Decree of the Government of Russia dated December 26, 2015 No. 1449, action plans for the development of the Russian Arctic are reflected in the activity plans of the federal executive bodies, which should include a schedule of activities for the implementation of strategic planning documents⁴¹. Decree of the Government of the Russian Federation "On the organization of project activities in the Government of Russia"⁴². In conjunction with the order of the Ministry of Economic Development of the Russian Federation dated April 14, 2014 No. 26R-AU "On the Approval of Methodological Recommendations for the Implementation of Project Management in Executive Bodies", they allow managing the development of the Russian Arctic on the principles of project management, incl. the formation and implementation of support development zones in the Arctic.

In current conditions, the task of adapting to the global economic trends in the economies of the Arctic regions of the Russian Federation, and state support for private and state projects for the development of the Arctic space is of particular importance. Currently, unified approaches to providing such support for projects implemented in the Russian Arctic are not developed. The solution to the problem may be the formation of support zones of development, which should ensure the establishment of a multiplicative effect not only for the Arctic but also for nearby territories. Thanks to measures of state and corporate support, the core of Russia's policy in the Arctic is knowledge, innovative modernization in the name of national security interests, sustainable nature management, conservation of unique ecosystems, and the viability of local communities.

The basis of state policy aimed at sustainable socio-economic development of the Arctic region should be based on the following approaches:

⁴⁰ Ibid.

⁴¹ Postanovlenie Pravitel'stva RF «O poryadke razrabotki, korrektyrovki, osushchestvleniya monitoringa i kontrolya realizatsii planov deyatel'nosti federal'nykh organov ispolnitel'noy vlasti, rukovodstvo deyatel'nost'yu kotorykh osushchestvlyayet Pravitel'stvo Rossiyskoy Federatsii» ot 26 dekabrya 2015 g. № 1449 [Decree of the Government of the Russian Federation "On the Procedure for the Development, Adjustment, Monitoring and Control of the Implementation of Plans for the Activities of Federal Executive Bodies, which are Managed by the Government of the Russian Federation" dated December 26, 2015 No. 1449]. URL: <http://www.garant.ru/products/ipo/prime/doc/71196062/#ixzz4d8HPyoCG> (accessed 10 February 2019).

⁴² Postanovlenie Pravitel'stva RF «Ob organizatsii proektnoy deyatel'nosti v Pravitel'stve Rossiyskoy Federatsii» ot 15 oktyabrya 2016 goda № 1050 [Decree of the Government of the Russian Federation "On the Organization of Project Activities in the Government of the Russian Federation" dated October 15, 2016 No. 1050]. URL: <http://government.ru/docs/24918/> (accessed 10 February 2019).

- development of research activities, i.e., accumulation of knowledge about climate change, the impact of these processes on the socio-economic systems of the Arctic;
- resource efficiency, i.e., integrated extraction and use of fuel and energy, mineral and raw materials, aquatic biological and tourist and recreational resources;
- environmental conservation: the use of Arctic-oriented ecological standards and technologies, incl. international standards for assessing the environmental impact of ongoing and planned business activities;
- human orientation: provision to the public, incl. indigenous people, opportunities to meet social and cultural needs, the involvement of indigenous representatives in the process of making managerial decisions in the field of nature management and socio-economic development of their territories;
- innovation: creative solutions and innovative technologies based on international experience, interdisciplinary research, and education will ensure the safety of the population. Research superiority, the pace of creating new knowledge, and introducing innovative products into production are critical factors in ensuring the competitiveness and sustainable development of the Russian Arctic.

It seems appropriate to develop further Arctic-oriented approaches to the development of programs, regulatory legal, tax, financial, economic and administrative-organizational mechanisms to ensure the effective development of the Arctic spaces, attract investment, protect national interests, create new highly qualified jobs, and develop infrastructure, ecological safety of the population and the environment in the Arctic macro-region.

At the same time, the prevailing trends in the socio-economic development of the Russian Arctic, the need to diversify the region's economy, and attract investments against the backdrop of sanctions and budgetary constraints determine the need to find new effective approaches to managing the region.

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Received on February 24, 2020