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We will be glad to see you among the authors of "Arctic and North"!

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SOCIAL AND ECONOMIC DEVELOPMENT

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Preconditions for the development of Russian Arctic export, coastal (cabotage) transportation and project cargo for the arctic demand*

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Abstract. The article considers the concept and description of the Northern Sea Route (NSR), the main prerequisites for the development of Russian Arctic export by using the NSR. The concept and analysis of coastal shipping using Arctic vessels and the predictive conclusions on possible Arctic projects are also presented in the article.

Systems for the development of Russian Arctic export, coastal transportation, and project cargo for Arctic demand include freight transport systems by rail and sea transport fleet. The purpose of this article is to analyze the data of transport systems, as well as to identify key prospects for the development of this system in Russia, taking into account a new concept – the Northern Sea Transport Corridor. According to the fact that it is a national transport corridor of the Russian Federation, the development of the cargo traffic is mainly connected with the Arctic exploration projects.

Keywords: *the Northern Sea Route, short sea shipping, Russian Arctic, The Northern Sea Transport Corridor, transshipment, exports, arctic vessels, hydrocarbons, transport and logistics routes, transport infrastructure.*

Introduction

"In the 21st century, one of the national interests of the Russian Federation in the Arctic region is the use of the Northern Sea Route, which contains great strategic potential not only for the northern territories but for the entire state. This transport way, existing in especially extreme climatic conditions, has important geopolitical significance and has a high economic potential" [1, Osipova E.E., Shirikhina E.Yu., p. 639].

"Since the mid-80s of the 20th century, one can trace the trend towards increased attention of the world community to the Arctic territories. European states are interested in the development of international transit shipping along the Northern Sea Route since this route is a profitable solution to reduce the time of delivery of goods from Europe to the countries of the Asia-Pacific region. In this regard, international interest in the commercial use of the Northern Sea Route is growing. The Arctic and the Northern Sea Route are becoming new objects of international politics and the world economy" [2, Lukin Yu.F., p. 156].

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The prospects for the development of international shipping along the Northern Sea Route reinforce the need to intensify the activities of the northern territories of Russia, so the role of the Arkhangelsk Oblast in the development of the Arctic region is increasing.

For shipping companies, the Northern Sea Route opens the possibility of participating in various Arctic projects and carrying out freight transit, coastal, multimodal transportation.

“In shipping, the Northern Sea Route is defined as the “navigation-recommended route from Novaya Zemlya to the Bering Strait”, and in the legislation of the Russian Federation, it is “the historically developed national unified transport communication of Russia in the Arctic”¹.

“The water area of the Northern Sea Route is a body of water adjacent to the north coast of the Russian Federation, encompassing inland sea waters, the territorial sea, the adjacent zone and the exclusive economic zone of the Russian Federation and bounded in the east by the line of demarcation of sea spaces with the United States of America and the parallel to Cape Dezhnev in the Bering Strait, from the west by the meridian of Cape Zhelaniya to the Novaya Zemlya archipelago, the eastern coastline of the Novaya Zemlya archipelago and the western borders of straits: the Matochkin Shar, Karskie Vorota, Ugorskiy Shar”².

Inland sea waters of the Russian Federation are the waters located offshore from the baselines from which the breadth of the territorial sea of the Russian Federation is measured. Inland sea waters are part of the territory of the Russian Federation.

The territorial sea of the Russian Federation is a sea belt 12 nautical miles wide, adjacent to the land territory or internal sea waters, measured from the baselines.

“The adjacent zone of the Russian Federation is the sea belt located outside the territorial sea, adjacent to it, and whose outer border is at a distance of 24 nautical miles, measured from the baseline, from which the breadth of the territorial sea is measured”³.

The exclusive economic zone of the Russian Federation is a marine region located outside the adjacent territorial sea of the Russian Federation and adjacent to it, with a legal regime established by this Federal Law, international treaties of the Russian Federation, and international law. The internal border of the exclusive economic zone is the external border of the territorial sea.

A new concept of the Northern Sea Transport Corridor will appear in the Arctic development strategy until 2035 (Figure 1), because “The functions of a single operator of the Northern Sea Route (NSR) should extend to the territory from Novaya Zemlya to Kamchatka, and not to Chukotka, where the currently defined boundaries of the NSR end.” It was reported by TASS with reference to the Deputy

¹ Severnyy morskoy put' – glavnaya transportnaya arteriya Rossii [Northern Sea Route - the main transport artery of Russia]. URL: <https://будущее-арктики.рф/severnyj-morskoj-put-glavnaya-transportnaya-arteriya-rossii/> (accessed 04 November 2019).

² Kodeks torgovogo moreplavaniya (KTM RF), Glava I. Obshchie polozheniya (st. 1–11), Stat'ya 5.1. Plavanie v akvatorii Severnogo morskogo puti [Merchant Shipping Code (MShK of the Russian Federation), Chapter I. General Regulations (Articles 1–11), Article 5.1. Sailing in the water area of the Northern Sea Route]. URL: <https://base.garant.ru/12115482/c739ecf0943aabb2bfe9e5fa22e57a6/> (accessed 04 November 2019).

³ Severnyy morskoy put' v probleme mezhdunarodnykh transportnykh koridorov [The Northern Sea Route in the problem of international transport corridors]. URL: <http://rostransport.com/transportrf/pdf/3/05.pdf> (accessed 04 November 2019).

Minister of the Russian Federation for the Development of the Far East and the Arctic Alexander Krutikov. The existing regulation is not enough for the project, and the boundaries of the NSR are clearly defined following international law - from Novaya Zemlya to Chukotka. Therefore, in the strategy, we introduce a new concept of the Northern Sea Transport Corridor - the transport communication from Murmansk to Kamchatka, and we believe that the functions of a single NSR operator should extend to this entire corridor," he said at the parliamentary hearings" On the preparation of the draft Arctic development strategy zones of the Russian Federation until 2035." Krutikov noted that it was planned to make the Northern Sea Route a globally competitive transport corridor and to increase the volume of international traffic starting from the 2030s. "We need to ensure the regularity and predictability of such transportation, the cost of passing the NSR due to state support should be slightly lower than the cost of the southern route, at least in the first years. Transport companies and shippers must believe that goods can be transported safely and on time via the NSR", the deputy minister explained. He also added that work had begun on a project to create a regular container line between Murmansk and Petropavlovsk-Kamchatsky, "to which goods from Europe and Asia would be delivered by vessels, consolidated there on domestic container ships, by the way, they could also be nuclear or LNG and delivered under state guarantees"⁴.

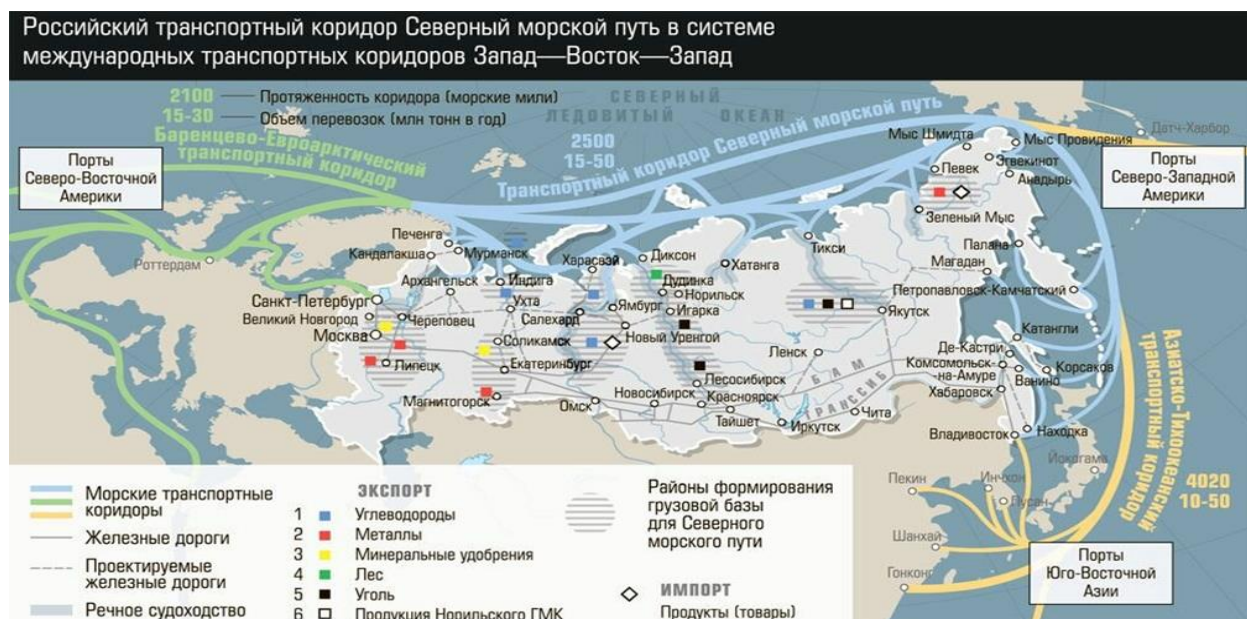


Fig. 1. Northern Sea Transport Corridor⁵.

Use of the Northern Sea Route for the export of goods by Russia

"The beginning of the first decade of the 21st century is characterized by a sharp actualization of the Arctic theme in world politics, a significant change in the geopolitical situation. It was due to several

⁴V strategii razvitiya Arktiki poyavitsya ponyatie Severnogo morskogo transportnogo koridora [The concept of the Northern Sea Transport Corridor will appear in the Arctic development strategy]. URL: https://www.korabel.ru/news/comments/d_strategii_razvitiya_arkтики_poyavitsya_ponyatie_severnogo_morskogo_transportnogo_koridora.html (accessed 04 November 2019).

⁵Rossiyskiy transportnyy koridor Severnyy morskoy put' [Russian transport corridor Northern Sea Route] URL: https://expert.ru/data/public/281963/281999/expert_734_138.jpg (accessed 04 November 2019).

factors. The main issues include the delimitation of legally marine areas and continental shelves. Besides, under the conditions of climate change and the reduction of ice cover in the Arctic, favorable conditions arise for the development of natural resources and hydrocarbon production, which in turn becomes an impetus for the development of transport communications. In this regard, increased attention is paid to the problems of the Northern Sea Route development. Climate change and melting ice open not only new opportunities but also create high risks, which have become visible on the world agenda. Another factor of increased attention to the Arctic region is the military-strategic importance of these territories. Thus, these aspects have led to the strengthening of the Northern Sea Route significance for Russia” [4, Problemy Severnogo morskogo puti].

It must be emphasized that the development of the Arctic in various aspects is becoming one of the critical areas both at the level of federal authorities and for large commodity companies operating in the Arctic region. A unique role in this process is played by transport communications, which provide a vital role in the implementation of Arctic projects. Sea routes make it possible to efficiently build up the development of resources concentrated in the Arctic. In this regard, the need for the further development of the Northern Sea Route is of importance.

Also, in the 21st century, the Arctic zone of the Russian Federation is becoming one of the priority areas for new development since it has significant mineral reserves, which in the future can form the resource base of the global economy. The transport and transit potential of the Arctic is increasing, which becomes the impetus for the development of its main transport artery - the Northern Sea Route. Fig. 2 provides information on freight traffic in the NSR in 1970–2017, according to the FSUE “Administration of the Northern Sea Route”⁶.

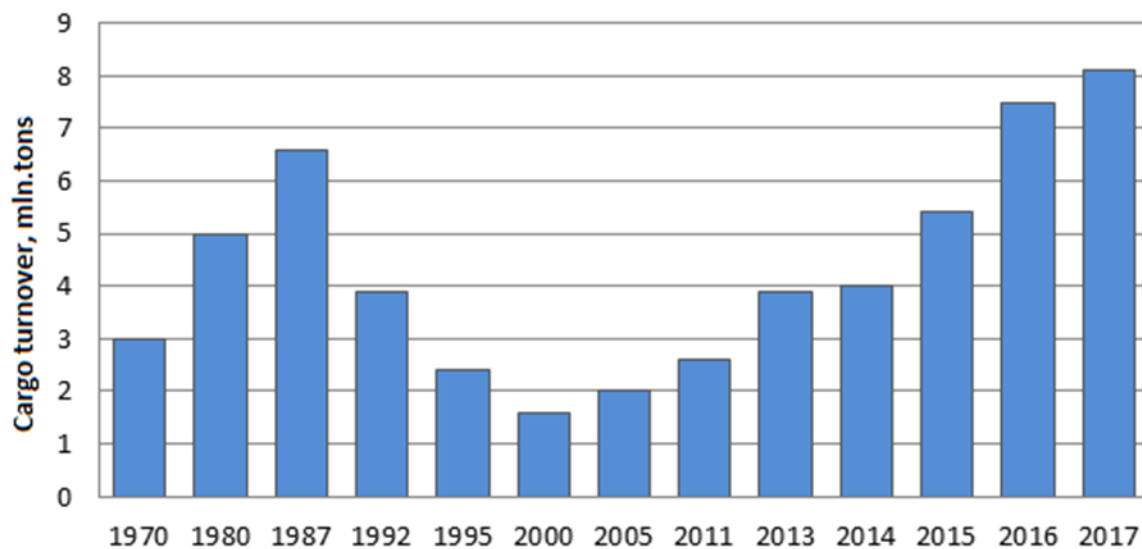


Fig. 2. Dynamics of cargo transportation along the NSR.

⁶ Strategiya razvitiya Arkticheskoy zony Rossiyskoy Federatsii i obespecheniya natsional'noy bezopasnosti na period do 2020 g. [Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period until 2020]. URL: [www.minregion.ru/uploads/ attachment/documents/.../200313_2.doc](http://www.minregion.ru/uploads/attachment/documents/.../200313_2.doc) (accessed 04 November 2019).

“The dynamics of freight traffic along the Northern Sea Route indicates its current revival, which is primarily due to the strengthening of Russia’s position in the world economic system, ensuring transport security, and economic integration of the Arctic territories gravitating towards the NSR. In 2016, the peak of the 20th century (1987) had been surpassed, and the total cargo turnover reached almost 7.5 million tons” [5, Østreng W., Jorgensen-Dahl A., Nansen F., p. 124].

“The development of the Northern Sea Route in the 21st century can be divided into several stages. So, the period 2000-2007 can be called the period of stabilization of the main parameters of the NSR. Initially, it was necessary to suspend the decline in the main parameters of the Arctic marine transport system. It was achieved through the implementation of “Priority Measures to Ensure the Sustainable and Safe Functioning of the Northern Sea Route”. That time, financial issues, economic and legal aspects of the NSR sustainable development were developed. It was completed under the “Program for the comprehensive development of the NSR and its commercial use”⁷.

In the Concept of State Support for Economic and Social Development of the North Areas, approved in 2000, the Northern Sea Route was noted as a priority object of state support for Arctic projects.

“Also, there is a clear intention to attract foreign freight carriers to the NSR routes, thereby turning transport communication into an international transit corridor. However, it is stipulated that international shipping will be carried out according to the rules provided for by federal legislation or international treaties of Russia. And, even though the NSR will be widely used for intercontinental transportation of goods, it will remain the national transport route in the Arctic” [6, Heininen L., p. 208].

In 2015, the project “Feasibility and Reliability of Shipping on the Northern Sea Route and Modeling of an Arctic Marine Transportation and Logistics System” was created to conduct a comprehensive analysis of the current state and prospects of the transit traffic on the NSR. The project brought together several partners and numerous participants representing industry, government bodies, and research groups from Europe, Asia, and Russia, which provided a unique and comprehensive review of the subject. Firstly, the project provided an exhaustive study of existing regulations and support services for the NSR. Secondly, its combined information on the current state of the route with feedback received from interested parties during the discussion of the project, to create several possible future operational models for transit traffic along the NSR. The most likely of the analyzed operational models is a combination of reinforced ice-class vessels and independent ice cargo vessels. This model requires a reduction in the severity of ice conditions to ensure year-round commercial shipping and further development of maritime infrastructure. Also, the creation of transshipment nodes at each end of the NSR with ice cargo vessels passing between them is considered a viable option in the future [7, Milakovic A.-S., Gunnarsson B., p. 53].

The Russian Federation, paying attention to the development of the Arctic, represents a set of interests and priorities in the Arctic, which is determined by the resource, transport, and military-strategic

⁷ International Northern Sea Route Programme. URL: <http://www.fni.no/insrop/defaultINSROP.html> (accessed 04 November 2019).

potential of the Arctic territories. “The new version of the State program “Socio-economic development of the Arctic zone of the Russian Federation for the period to 2020 and beyond” is called upon to become a vital tool in implementing the integrated development of the Arctic zone. In the framework of the new edition of the state program, it is planned to provide for the allocation of financing, and target indicators will be determined to monitor its effectiveness. The issues relate to the refinement of the list of priority integrated investment projects with significant multiplier effect and capable of becoming “drivers” of the integrated socio-economic development of the macroregion, their integration with national, sectoral and corporate strategies, programs and plans” [8, Smirnova O. O., Lipina S.A., Kudryashova E.V., Kreidenko T.F., Bogdanova Yu.N.].

At the federal level, the NSR development is also supported by subprogram 2 “Development of the Northern Sea Route and the provision of shipping in the Arctic” of the state program of the Russian Federation “Social and Economic Development of the Arctic Zone of the Russian Federation”. There it was called upon to create conditions for the NSR development since it was a national transport highway of the Russian Federation in the Arctic. The subprogramme is implemented in two stages. Phase I is planned for 2018–2020 and phase II - 2021–2025. The financing of the subprogramme at the expense of the federal budget is 35,423,031.9 thous rubles. Among the main expected results of the subprogram, it is worth highlighting the securing the interests of the Russian Federation in the capacity of the Northern Sea Route for international trade.

“The State Program of the Russian Federation “Development of Shipbuilding for 2013–2030” provides for state support measures aimed at creating conditions that stimulate high-tech production of civilian marine equipment for the domestic market. The construction and modernization of the ice-breaker fleet, the creation of new ports, the modernization of port infrastructure, the development of necessary production and port infrastructure are one of the priorities of the Transport Strategy of the Russian Federation for the period until 2030. The subprogram “Sea and river transport” includes measures to provide waterways and hydraulic structures, search and rescue support for navigation, navigation and hydrographic support for shipping on the NSR routes” [9, Plisetskiy E.E., p. 106].

Export of the Russian Arctic, transportation of hydrocarbons and natural resources

“The possibility of developing deposits located on the shelf, the seacoast and in the bays of the Arctic seas, remote from the railway and oil and gas pipelines, depends on the development of schemes for the sea transportation of products and the delivery of construction goods. In recent years, stable logistics schemes have been formed, in the implementation of which Russian, local, and foreign shipping companies took part” [10, Brigham L.W., p. 329].

Transportation is carried out in the western part of NSTC with convenient access to the Arctic seas and the flowing navigable rivers of the Russian Federation.

“One of the strategic tasks of the state and subsurface user companies in the framework of projects for the development of mineral resource centers is the acquisition of new competencies and experience in developing unique projects that require innovative technical solutions and further facilitate the

transfer of knowledge and technologies when implementing other projects in the Arctic, including international cooperation” [11, Lipina S.A., Cherepovitsyn A.E., Bocharova L.N.]. The specialized competencies of the crews of the ships, the clear and coordinated work of sailors, and transport workers operating in severe navigational and climatic conditions require the development of the mineral resources of the Arctic region.

Transportation of ore materials and coal:

1. “The export from Norilsk of ore concentrate and metals mined by the Polar Division of PAO MMC Norilsk Nickel is ensured by a fleet of five Arctic class ice container ships built ... at shipyards in Finland and Germany. Part of the products is directly exported by the company’s vessels to Western Europe; the concentrate is delivered to Murmansk for processing at the plants of AO Kola Mining and Smelting Company, including Finland ... Due to the negative environmental impact in Norilsk, the Nickel Plant was closed, which led to an increase in freight traffic from 0.7 to 1.5 million tons per year ... In Murmansk, the company opened a second berth ... A twofold increase in freight traffic will lead to the fact that in addition to its vessels, the company is more likely to attract third-party fleet since the construction of ships has not yet been envisaged ... An important circumstance is that the right of independent navigation in winter-spring navigation in the southwestern part of the Kara Sea is granted to ice-class vessels no lower than Arc 7 ... The rhythm and economy of year-round transportation of Norilsk Nickel products can only be provided with Arc 7 ships; the use of other vessels requires expensive ice piloting” [3, Grigoryev M.N., p. 53].

2. VostokCoal Company plans to develop coal in the west of the Taimyr Peninsula, as well as ... the construction of a terminal in the area of Cape Chayka. The projected supply market is the countries of Western Europe ... The company has entered into a long-term agreement with the Danish company Nordic Bulk Carriers AS for the transportation of Arc 4 ice-class vessels, which, following the RMRS rules, can sail only in summer and autumn navigation, and in winter and spring only light navigation conditions accompanied by an icebreaker” [3, Grigoryev M.N., p. 54]

3. PJSC First Ore-Mining Company plans to begin the development of the Pavlovsk lead-zinc deposit in 2020 and the construction of a mining and processing complex on Novaya Zemlya, which will also require year-round export of products by ice-class vessels no lower than Arc 5.

The successful development of the last two projects will allow their operators to finance the construction of high-ice class vessels.

Transportation of hydrocarbons:

“Oil and condensate are exported westward from terminals located in the western sector of the Russian Arctic - on the shelf and coast of the Pechora Sea, in the Gulf of Ob and on the Yenisei River” [3, Grigoriev M.N., p. 56].

1. The Peschanoozero field. Oil is shipped from the raid oil terminal to the island of Kolguyev since 1987. In 2016, two tankers of ice-class Arc 4 of the German company Offen Tankers were exported oil [3, Grigoryev M.N., p. 56].

2. Taimyrgaz ... takes out gas condensate from the Pelyatkinskoye field from the village of Dudinka to Western Europe, using the Arc 7 ice-class tanker owned by MMC Norilsk Nickel year-round [3, Grigoryev M.N., p. 56].

3. "Since 2008, Varandey SMLOP has been exporting oil year-round by three ice-class tankers Arc 6, DW 73 thousand tons, Sovcomflot. Since 2016, transshipment has been carried out on the Kola Bay raid (before that it was carried out in Norway) according to the on-board-to-board scheme to a storage vessel. Oil is exported by Russian and foreign tankers, attracted on a freight basis" [3, Grigoryev M.N., p. 56].

4. "Prirazlomnaya offshore ice-resistant fixed platform. The growing volume of shipments is provided by two Arc 6 ice-class tankers with a deadweight of 70 thousand tons of Sovcomflot, explicitly built for this project. Tankers operate according to a shuttle scheme, transporting oil to the RPK Nord on the Kola Bay" [3, Grigoryev M.N., p. 56].

5. "Novoportovskoe field (Gulf of Ob). For the export of products, it is planned to build six Arc 7 ice-class tankers - three are being built by Sovcomflot, three by Gazpromneft PJSC (with subsequent transfer to Sovcomflot). Sovcomflot tankers are already working on the line ... Foreign (Turkish and Greek) companies also operate on oil export, using two vessels, each previously built for Lukoil-Arctic with a deadweight of 19.8 thousand tons, ice-class Arc 5 / Arc 4. According to experts, after the commissioning of all six tankers, the need to rent additional vessels will remain" [3, Grigoryev M.N., p. 57].

6. Yamal LNG. "15 gas carriers were built to export products to the DSME shipyard in the Republic of Korea. The lead ship, Christoph De Margerie, was commissioned by Sovcomflot ... The remaining 14 vessels were commissioned by foreign shipping companies that received contracts for the transportation of products until 2045. Six ships were approved by Teekay LNG Partners (Canada) and China LNG Shipping (China), five vessels were built for the Greek alliance Dynagas and China LNG Shipping and Sinotrans (China), the remaining three for Mitsui OSK Lines (Japan) and China Shipping Development (China) ... Besides, an additional 11 ice-class vessels were announced to support the project Arc 4 ... Gas transportation Moisture build-up will deal with Dynacom, two tankers, which are currently being built in Finland and China" [3, Grigoriev M.N., p. 59].

Thus, about 40 vessels are currently transporting ore materials, coal, and hydrocarbons on the SMTK route regularly; according to the approved construction contracts, the number of vessels will increase in the future. It is necessary to ensure the regular export of products. So, there will still be a need to rent additional ships with a high ice class, and the construction of additional vessels of the ice-class Arc 7 in an amount of at least 20 units will be required.

Cargoes for Arctic projects and coasting

The market of shipowners of the Arkhangelsk Oblast developed many years ago. It is mainly focused on the transportation of goods via the NSR, providing the territories of the Far North of Siberia and the Far East of Russia with essential vital products, as well as the construction and arrangement of various facilities and deposits. Over the past five years, deliveries to the port of Sabetta have become year-

round, which has affected the shipping market. In 2014–2018, local shipowners purchased 18 new vessels with a displacement of 8 to 18 thousand tons of ice-class Arc4 and Arc5. Currently, the total fleet in the region is about 300 units, including river-sea vessels, tankers, icebreakers, etc. Of these, about 45 cargo ships of Russian shipowners perform year-round navigation.

Arkhangelsk and Russian enterprises are directly involved in Arctic projects.

The Yamal LNG project had a significant impact on the development of the industrial and transport infrastructure of the Arkhangelsk region. It allowed regional companies to gain experience in participating in a large international project in the Arctic. The project operator and general contractors in the early phase interacted with professional associations. For example, with the Association of suppliers of oil and gas industry “Constellation” regularly, technical meetings were held “Contractor Days” on the issues of work, the supply of materials, building an optimal logistics scheme for year-round cargo delivery by sea. More than 150 local enterprises were involved in the Yamal LNG project. They completed the construction of port infrastructure facilities, erected technological workshops at the LNG plant site, manufactured large-size reinforced concrete and metal structures, and delivered equipment and construction materials. Between 2014 and 2018, annually, there were about 160 flights Arkhangelsk - Sabetta, on average, for this project. Eight hundred thousand tons of cargo per year were delivered through the Arkhangelsk transport hub.

In the next project of Novatek - Arctic LNG 2, the regional enterprises - members of the Sozvezdie Association, shipping companies of the Arkhangelsk Oblast are aimed at increasing the cargo flow. It is associated with the logistics features of the project and the implementation of high-tech work on equipment production and expanding its participation in the construction of large-capacity construction center facilities marine structures.

About 36% of the cargo of the Arkhangelsk transport hub is comprised of coastal freight in the Arctic basin, which suggests that the Arkhangelsk transport hub has an established profile of activity - transportation in the Russian Arctic. This specialization is highly demanded and, in many ways, unique. In the media, analytical reviews, including foreign ones, the focus is primarily on transit and export traffic. However, the changing world market conditions may instantly jeopardize these types of transportation. At the same time, cabotage has an equally vital function to ensure the interests of the state in the Arctic, although it is often underestimated.

In particular, the facilities of the Ministry of Defense located in the Arctic zone of the Russian Federation, polar stations, national parks are served through the port of Arkhangelsk and its transport hub, and goods are also imported for the construction and maintenance of oil and gas projects. In recent years, traffic volumes and the need for products not only did not decrease but also increased many times. Arkhangelsk enterprises are successfully fulfilling this function — the coastal shipping service today. Favorable conditions have been created in the Arkhangelsk transport hub to carry out the transshipment of cargo in the seaside direction in an expanded volume. Local stevedoring companies and terminals are currently ready to receive, store, and transship more than 1.5 million tons of additional general cargo categories without significant investments.

Today, the fleet of shipping companies in the region and the Arkhangelsk branch of Rosmorport are gradually updating.

The owners of these ships are the Arkhangelsk transport enterprises of OJSC Northern Shipping Company, LLC Reskom Tyumen, which owns the Northern River Shipping Company, as well as Eco Shipping, a member of the Arctic Consulting Service group.

In 2013 - the beginning of 2018, new names appeared among the Arkhangelsk shipping companies: TK Severny Proekt LLC, Sevnor Management LLC, and Arctic Shipping Company LLC. They dispose of ships of reinforced ice class, with classification documents of the Maritime Register, which passed modernization, equipped with cranes with a lifting capacity of up to 60 tons.

An essential participant in various Arctic projects - OJSC Northern Shipping Company - is one of the largest Russian companies in the North-West of Russia, carrying out sea transportation not only in the Russian Federation but around the world. One of its first and promising directions is the Northern Sea Route.

“The mission of OJSC Northern Shipping Company is to take a leading position among sea carriers with a tonnage of up to 8,500 tons in the waters of the Northern Sea Route with the consolidation of leading positions in the North-West region of Russia.

The advantage of the Northern Shipping Company is a wide range of activities. The company provides linear, multimodal, and coastal shipping, cargo delivery to unequipped shore, towing of various facilities, technical management. It also includes simulator training for crews, carries out corrections of navigational charts, manuals, and guides for navigation, supplies navigational vessels with navigational charts of inland waterways.

The fleet of the Northern Sea Shipping Company mainly has ships designed for light ice conditions. Some of the vessels are reinforced, which allows the company to remain the leading year-round carrier in the port of Arkhangelsk, ports of Scandinavia, the Gulf of Finland, and successfully operate on the Northern Sea Route regularly. The presence of an ice-class allows vessels to operate in areas with severe ice conditions. Accordingly, all these advantages will enable the work in the Arctic, on the NSR routes. Currently, regularly, the company's fleet carries out sea transportation in the Arctic, performing unique flights and tasks professionally and competently, considering all challenging weather and technical conditions.

The experience of the participation of OJSC Northern Shipping Company in Arctic projects using the NSR routes allows the company to efficiently and efficiently provide shipping services in this segment. The fleet of the Northern Shipping Company has all the necessary characteristics for the placement and safe transportation of general cargo, bulk cargo, oil cargo, containerized cargo, as well as rolling equipment in the Arctic”⁸.

Since 2007, the vessels have been involved in arranging the Bovanenkovo-Ukhta gas trunk line system; they deliver concrete pipes to the Baydaratsky Bay of the Kara Sea.

⁸ OAO «Severnoe morskoe parokhodstvo» [OJSC “Northern Shipping Company”]. URL: <http://www.ansc.ru/ru/company/info.shtm> (accessed 04 November 2019).

In 2011, the sea transportation of goods along the Northern Sea Route by the vessels of the NSC acquired a new character due to the uniqueness of the transported goods. So, from Norway to Sakhalin in the polar port of Tiksi, the bulky cargo was delivered by two company ships - equipment for installing a hydrometeorological station. In the fall of the same year, a real Arctic trip was made with national economic cargo along the route: Franz Josef Land, Cape Zhelaniya, Solnechnaya Bay, Dikson, Belusha Bay, small islands of the Arctic Ocean. At the end of 2011, a cargo was delivered to Varandey with heavy equipment for oil projects.

In 2012, the cargo was transported to Yakutia by order of a mining company.

In August 2012, the long-term State program for the ecological rehabilitation of the islands of the Franz Josef Archipelago was launched. Heavy equipment was delivered from Arkhangelsk. For the first time, the Arctic scrap metal was exported from the Franz Josef Land archipelago in October 2012.

Since 2012, the vessels of the NSC have been actively involved in the transportation of goods to the port of Sabetta. And shortly, a significant increase in traffic volumes in this direction is expected. Since 2014, the company's fleet in the port of Sabetta (within the framework of the Yamal LNG project) has acquired a year-round rhythm. The volume of coastal shipping tripled.

The towing icebreaker Nord annually tows various offshore facilities from Arkhangelsk to Svalbard.

In 2013, the "Inzhener Trubin" motor ship took part in an experimental expedition along the route Tyumen - Sabetta - China – Noviy Port, making the first historical voyage from the port of Sabetta under construction.

In 2014, by order of the Ministry of Defense of Russia, OJSC Northern Shipping Company was actively involved in the process of arranging infrastructure in the Arctic, becoming an essential link in an extensive supply chain. As part of this program, the ships "Johann Mahmastal" and "Inzhener Veshnyakov" delivered construction materials to Wrangel Island and the Far Eastern Cape Schmidt. It is important to note that cargo was unloaded in severe climatic conditions on an unequipped shore. For the first time in the history of the NSR on the Novosibirsk Islands in November of the same year, the helicopter unloading of the "Inzhener Trubin" motor ship took place.

In 2015, there was continued growth in coastal shipping in the Arctic. It is realized mainly due to the continuous highly professional work of the crews of the vessels "S. Kuznetsov", "Inzhener Trubin", "Inzhener Veshnyakov", "Ivan Ryabov" and others. In November 2015, on the Franz Josef Land, in the region of the northernmost border post of Russia, Nagurskaya from the ship "S. Kuznetsov" carried out unloading by helicopters. A 20-day unique voyage of the ship "S. Kuznetsov" became possible in severe Arctic conditions thanks to the ice-class, it went all the way on his own without icebreaking support.

Yamal port of Sabetta in 2015–2016 provided the most significant volume of coastal transportation in the framework of the Yamal LNG project. During this time, OJSC Northern Shipping Company, due to year-round voyages in this direction, has established itself as a specialized and responsible carrier.

At the end of 2016, the NSC fleet made 36 flights in the Arctic region, more than 160 thousand tons of national cargo were transported. The geography of transportation also included Dudinka, Kha-

tanga, Pevek, Solnechnaya Bay, and Maud Bay, Franz Josef Land, Novaya Zemlya. The motor ships “Inzhener Veshnyakov”, “Inzhener Trubin”, “S. Kuznetsov”, “Ivan Ryabov”⁹.

In 2016, the “Kapitan Mironov” motor ship, for the first time in the Baltic liner service of a shipping company, made a call to the recently opened Bronka multifunctional sea transshipment complex (Bronka shipyard), delivering equipment, including oversized, from Antwerp.

When servicing the construction of the pier, the unique and only floating nuclear power plant Akademik Lomonosov in the world, the motor ships of the NSC “S. Kuznetsov” and “Johann Mahmastal” in January - November 2017 delivered more than 16,000 tons of cargo to the northernmost Russian port of Pevek from Arkhangelsk.

In 2018, OJSC Northern Shipping Company continued its active participation in Arctic projects. In the area of Cape Tanalau on the Yenisei River, the ship “Johann Mahmastal” was unloaded on landfast ice. For the first time, 2,500 tons of general cargo was delivered via the Yenisei landfast ice for the development and development of the Payakhskoye oil field in Taimyr. In close cooperation with specialists from the Arctic and Antarctic Research Institute and JSC Taimyrneftegaz, the specialists of the NSC developed the technical side of the cargo delivery project for the Payakhskoye oil field in Taimyr, taking into account the conditions for the need for ice wiring carried out by Atomflot, tight deadlines for unloading, severe climatic conditions. The clear and well-coordinated work of sailors and transport workers, realized in severe navigational conditions, testifies to the high readiness of the NSC for work in the Arctic region.

Another major participant in Arctic projects is Rosatomflot, its main task, which it successfully performs, is to provide icebreaking support to major national Arctic hydrocarbon projects. Participation in such megaprojects includes work for the nuclear icebreaker fleet for several decades. For example, the contract of Atomflot with Yamal LNG was signed until 2040.

“Since February 2015, Rosatomflot began piloting ships to export oil from the Novoportovskoye field. Currently, postings are made between December and June.

On May 25, 2016, the “Arctic Gate” terminal was opened for offshore crude oil shipment from the Novoportovskoye field. The Arctic Gate terminal, located in the Ob Bay area near the Mys Kamenny, is designed for year-round delivery of oil from the Novoportovskoye oil and gas condensate field to tankers. The terminal is in freshwaters, the thickness of the ice around it in winter can exceed 2 meters - this required the use of unique technical solutions that ensure its reliable operation in the Far North.

The maximum capacity of the terminal for the transshipment of raw materials is more than 8.5 million tons per year; its technological scheme ensures “zero discharge” of pollutants into the water area of the Gulf of Ob”¹⁰.

⁹Strategiya natsional'noy bezopasnosti Rossiyskoy Federatsii do 2020 g. [National Security Strategy of the Russian Federation until 2020]. URL: <http://www.scrf.gov.ru/documents/1/99.html> (accessed 04 November 2019).

¹⁰ International Northern Sea Route Programme. URL: <https://www.fni.no/projects/international-northern-sea-route-programme-insrop> (accessed 04 November 2019).

Table 1

Arctic projects with the participation of FSUE "Atomflot"

No	Project and Operator	Project capacity/year	Period, years
1	Yamal LNG, LNG tankers + port fleet	20.0 million tons of LNG and gas condensate	until 2040
2	Arctic SPG-2	20 million tons of LNG and gas condensate	2023–2045
3	Novoportovskoe field of Gazpromneft	8.5 million tons of crude oil	until 2040
4	Norilsk Nickel, Dudinka	1.5 million tons of non-ferrous and precious metals	until 2040
5	Coal of Taimyr Peninsula	3 million tons of coal	2020–2025
		10 million tons of coal	2025–2040
6	Payakhskoe field of crude oil	10 million tons of oil	2023–2040

Conclusion

Thus, the Northern Sea Route is a connecting thread across the country, between its western areas and the Russian Far East, and internationally - between Europe and Asia. The NSR integrates the largest river arteries of Siberia into a single transport system and creates conditions for the infrastructure of seaports, railway, and meridional river communications. It provides normal living conditions in the northern territories of Russia, mining, transportation and export, coastal, and transit shipping.

All studies of the past decade related to the NSR considered it a route where one could save a lot of transit time or reduce the number of ships [12, Xu H., Yin Z., Jia D., Jin F., Ouyang H., p. 543].

In general, based on the analysis, we can conclude that the system of oil and gas transport in the Russian Arctic is quite developed. Nevertheless, some recommendations could be made on the possible directions for the development of oil and gas transport systems in the Russian Arctic:

1. The global and paramount task is the restoration and development of the transport and logistics infrastructure of the Northern Sea Route, the further increase in the capacity of the icebreaking fleet. New development of the hub for the transportation of hydrocarbons along the NSR route on the Gulf of Ob, incl. using the capabilities of the port of Sabetta and involving the already existing infrastructure of the Yamal Peninsula, is seen as desirable. Also, an important and promising direction is the development of the NSR infrastructure on the eastern part of the route.

2. Considering the factor of climatic changes when working out a strategy for the development of the Arctic transport infrastructure based solely on scientifically grounded and reliable theories and scientific concepts developed with the participation of Russian research centers and institutes.

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The education system development as a factor in the demographic growth of the Far North of Russia*

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Abstract. The Far North is an important area that, to a great extent, determines the prospects for the socio-economic development of Russia. Nevertheless, no synthetic development program for these regions has been worked out. Existing programs for the development of the Arctic zone of the Russian Federation pay very little attention to demography and education. Based on Rosstat data and expert assessments, the author considers the dynamics of the age and educational structures of the population of the Far North. Special attention is paid to the group under 30 years old since it is the primary consumer of the education services. The author also addresses the question of how the development of the education system affects the demographic and economic development of the Far North. It has been argued that since 1990 the number and proportion of young people have declined significantly and will continue to decline until 2035. The European part of the Far North has a much worse dynamic compared to the Asian one. The educational structure of the population of the Far North is close to the total in the country. Still, the proportion of people with secondary vocational education is higher but declining. It reflects the economic features of this macroregion. The examples discussed in the article prove the development of education will have a positive effect on demographic and economic indicators.

Keywords: *Far North, level of education, educational system, state policy, youth, age structure of the population, educational structure of the population, social and economic development.*

Introduction

In recent years, the Far North¹ has been attracting more and more attention. The reasons for this interest are apparent: the presence of vast reserves of minerals, biological resources, and the exceptional geopolitical importance of the region. It means that the development of the Far North requires the highly-skilled labor force, prepared to live in harsh conditions.

Questions about how the labor market in the North should be arranged (whether it is necessary to attract as many migrants as possible or should the authorities to rely mainly on the local

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¹ Applying the term “Far North” we mean the regions indicated in the Decree of the Council of Ministers of the USSR of November 10, 1967 No. 1029 «O poryadke primeneniya Ukaza Prezidiuma Verkhovnogo Soveta SSSR ot 26 sentyabrya 1967 g. «O rasshirenii l'got dlya lits, rabotayushchikh v rayonakh Kraynego Severa i v mestnostyakh, priravnennykh k rayonam Kraynego Severa»» [“On the Procedure for Applying the Decree of the Presidium of the Supreme Council of the USSR of September 26, 1967 “On the Extension of Benefits for Persons Working in the Far North and in areas equated to the Far North regions”] and the Decree of the Council of Ministers of the USSR of January 03, 1983 No. 12 «O vnesenii izmeneniy i dopolneniy v Perechen' rayonov Kraynego Severa i mestnostey, priravnennykh k rayonam Kraynego Severa, utverzhdenyy Postanovleniem Soveta Ministrov SSSR ot 10 noyabrya 1967 g. N 1029» [“On Amendments and Additions to the List of Far North Regions and Locations Equated to the Far North Regions, approved by the Decree of the Council of Ministers USSR of November 10, 1967, No. 1029”] (modern version), following the administrative-territorial division of 2019.

population, what kind of share should be of each of the groups of the population, etc.) are still not resolved in the scientific literature. To a large extent, it is due to the sizeable interregional differentiation within the Far North for many socio-economic indicators. It does not allow us to consider these regions in a generalized way and forces us to search for each region its own path of development. Nevertheless, everyone agrees that the local population is one of the most important resources, and it must be used in the development of these regions. Despite all the advantages of the shift method of development, it has significant disadvantages. Among them are the depopulation of regions, the final collapse of the economic and socio-cultural infrastructure, predatory attitude to the environment, since this region is not native to newcomers, and they are not concerned about its development. Therefore, at present, one cannot ignore the local context of socio-economic development [1, Pilyasov A.N., Zamyatina N.Yu., p. 8]. To a large extent, it is determined by the behavior of households. Therefore, the development of the corresponding social infrastructure, which includes the education system, comes to the fore.

One of the main functions of the education system is the formation and improvement of the quality of the labor force. All the levels of the system are important since the higher ones are based on the previous ones. It means that its development, as well as its parts, should be one of the priorities of socio-economic policy. The development of the education system is particularly important in the context of population aging and a decrease in the working-age population. Nevertheless, among the development priorities in the official documents of the modernization of the education system, a little space is given.

Education as the priority for the development of the Far North regions

There is no specific concept paper devoted to the social development of the Far North. Therefore, how such a priority as education is fixed in socio-economic policy will be revealed by the example of the Arctic zone of the Russian Federation. In the “Fundamentals of the state policy of the Russian Federation for the period up to 2020 and for the future perspective” (approved by the Order of the President of the Russian Federation of September 18, 2008, No. Pr-1969)”, the main economic interest for the area is the “use of the Arctic zone of the Russian Federation as a strategic resource base of the Russian Federation, providing solutions to the problems of socio-economic development of the country”. However, the authorities of the Arctic regions believe sustainable socially-oriented development, which should affect all areas of life, is necessary. Specialists agree with this approach [2, Zuckerman V.A., Goryachevskaya A.S.].

Expanding the resource base is also the primary goal of the Fundamentals in the field of socio-economic development. In the field of education, the main objective concerns the development of higher education (“ensuring an adequate level of basic and applied research”). It may make it possible to raise the level of education and partially reduce the migration outflow of the population. Still, without the development of previous levels of education, this measure will be much less effective. Moreover, it is not necessary to attract local specialists to conduct research.

Therefore, this goal is rather conditionally aimed at the development of education. Strategic priorities also concern only higher education (“improving public administration ... by expanding fundamental and applied research in the Arctic”).

The modernization of the education system is one of the primary measures to implement the state policy in the field of socio-economic development of the Arctic zone of the Russian Federation. But this is only mentioned as one of the directions of modernization of the entire social infrastructure. These directions include healthcare organizations and housing construction. The second measure is the training and retraining of specialists in the system of higher and secondary vocational education for working in Arctic conditions. The third and final measure is the Improvement of educational programs for the indigenous peoples of the Arctic zone of the Russian Federation. As for the field of science and technology, one of the steps is to research various areas of knowledge. Too little is said about the development of the education system for such an important document. It is especially true given that the modern economy is a knowledge economy. The Fundamentals could include other measures related to the development of the education system, such as improving the quality of general education, developing a vocational guidance system, encouraging talented teachers to move to these regions, and others.

It should be noted separately that the “Fundamentals” do not distinguish demographic features and problems of these regions. It is rather strange because without solving demographic issues (e.g., is it necessary to increase or decrease the population, by how much, what demographic structure should it be, etc.), it makes little sense to talk about strategic priorities for the development of regions and the mechanisms for implementing state policy. E.g., in the field of education: in this case, it is impossible to predict the incoming and outgoing flows of the population, the costs of developing the education system, the required number of workers and many other indicators that have a significant impact on the choice of priorities and ways to achieve them.

To implement the “Fundamentals”, a “Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period until 2020 (approved by the President of the Russian Federation on 08.02.2013 No. Pr-232)” was developed; and it mostly repeats its provisions. Nevertheless, it notes negative demographic processes and the inconsistency of the network of educational organizations with the nature and dynamics of settlements, which is a threat in the social sphere. Another danger is the lack of an effective training system and the imbalance between the demand and supply of labor in a professional sense. However, among the directions of improving state management of the socio-economic development of the Arctic zone of the Russian Federation, measures aimed at developing the education system were not provided. Such actions were included in improving the quality of life of the population. It also included the modernization of educational infrastructure facilities, the development of education and training, retraining and advanced training in the system of higher and secondary vocational education in several areas, the improvement of educational programs for the indigenous population, and the balancing of the labor market, retraining of able-bodied unemployed. A significant number of are-

as were provided for the development of science and technology. However, they relate to research (incl. international), and not to the development of the education system. In the “Strategy”, the provisions of the “Fundamentals” were specified and supplemented, which made it possible to obtain a more suitable document for work.

The action Plans for the implementation of the “Strategy for the development of the Arctic zone of the Russian Federation and national security for the period until 2020” (approved by the Chairman of the Government of the Russian Federation on October 16, 2013, No. 6208p-P16 and on August 30, 2016 (was not published))” contains a list of activities, which will contribute to the achievement of the goals of the “Strategy”. However, these documents regarding the education system are incredibly modest. E.g., in the second Plan, only two measures are given that, moreover, have quite inaudible and streamlined formulations: creating conditions for the development of the education system in the Arctic zone of the Russian Federation and providing regions of the Russian Federation that are fully or partially parts of the RF Arctic zone with labor resources following their needs. Activities aimed at the development of science, high technology, and innovations do not include actions aimed at the development of the education system.

The last document that we will consider is the state program of the Russian Federation “Socio-economic development of the Arctic zone of the Russian Federation for the period until 2020” (approved by Decree of the Government of the Russian Federation on April 31, 2014 No. 366). It is one of the mechanisms for implementing the “Strategy”. Among the strategic priorities indicated in this program, the development of the education system is not mentioned separately. Among the priority areas, the development of science and technology stands out, but nothing is said about the development of the education system. Perhaps this is included in the comprehensive socio-economic development of the Arctic zone of the Russian Federation. Among the goals and objectives of the program, the development of the education system is absent. When discussing the characteristics of the regions of the Russian Federation related to the Arctic zone of the Russian Federation, and the prospects for their development, education issues are sometimes addressed. Still, they concern only with higher professional education.

In the Arctic zone of the Russian Federation, all other state programs operate (e.g., the programs “Development of education for 2013–2020” and “Development of science and technology for 2013–2020”). These programs operate on the territory of the Far North, but both are insufficiently represented in there.

The absence of a separate comprehensive development program, where the issues of developing the education system would be separately spelled out, can be explained by a sizeable inter-regional differentiation for the entire Far North. As a result, it is necessary to use regional programs, of which there are many, and they vary significantly in quality, but their consideration requires a separate article. Nevertheless, such a program is necessary because these regions are united by some parameters, especially in the social sphere.

We can conclude that the development of the education system is not among the main priorities, and many essential aspects are not adequately addressed. It primarily concerns the age and educational structures of the population, its dynamics, and characteristics, depending on gender and age. The second insufficiently considered aspect is the dynamics of the number of individual population groups under the age of 30 since they are the primary consumers of the services of the educational system. A knowledge of this information is necessary for predicting labor supply by educational level and development of the educational system. The literature does not explain in detail the impact of education on the socio-economic aspects of the life of the Far North population. When making decisions in the field of state and municipal administration, many nuances are not considered.

In this regard, this work has two objectives. First, we will consider the age and educational structure of the population of the Far North and, based on an analysis of their dynamics, and we will determine the main problems in the development of the education system in these regions, which depend on the demographic factor, as well as ways to solve them. Secondly, we will try to briefly highlight how the development of the educational system can affect the demographic processes of these regions.

Subject and method of research

The authorities in the Far North regions faced a difficult task: they need to provide a high-quality workforce, not only for current needs but also for large-scale economic projects important for the country. Internal and external migrants are actively involved, but the potential of the local population is not used enough to solve the problem. As we will discuss below, the age structure of the population in the Far North is younger than the average for Russia. Therefore, we can assume that a significant amount of emigration, which is much talked about, relates to getting an education. Consequently, increasing the level of education of the population, it is possible not only to cover part of the needs for labor resources but also to solve some social problems, primarily related to unemployment and emigration.

Based on the Rosstat data and expert estimates, we consider the dynamics of the population (incl. promising one, until 2035) of the Far North regions and its educational level. In the statistical bulletin "Social and economic indicators of the Far North and equivalent areas", data on five- and one-year age groups are not available. Therefore, our census data are from 2002² and 2010³, micro-census 2015⁴, as well as the information received from the Unified interdepart-

² Naselenie po polu i vozrastnym gruppam po sub"ektam RF [Population by gender and age groups by regions of the Russian Federation]. URL: http://www.perepis2002.ru/ct/doc/02-02_new.xls. (accessed 11 November 2019); Vse naselenie, gorodskoe, sel'skoe po urovnyu obrazovaniya, polu i vozrastnym gruppam [The entire population, urban, rural by level of education, gender and age groups]. URL: http://www.perepis2002.ru/ct/doc/TOM_03_01.xls (accessed 11 November 2019); Naselenie po urovnyu obrazovaniya, polu i vozrastu po sub"ektam RF [Population by level of education, gender and age by constituent entities of the Russian Federation]. URL: http://www.perepis2002.ru/ct/doc/TOM_03_03.xls (accessed 11 November 2019).

³ Naselenie po vozrastnym gruppam i polu [Population by age group and gender]. URL: http://www.gks.ru/free_doc/new_site/perepis2010/croc/Documents/Vol2/pub-02-02.xlsx (accessed 11 November 2019); Naselenie po

mental statistical information system (UISIS)⁵. We do not consider the number of students, but age groups to understand at what maximum students should count on the education system.

The statistics database of municipalities is very poor. In the micro-census micro-data database 2015, due to the small sample size for municipalities, there is no data, so we should consider the entire territory to compile dynamic data series. When analyzing the Amur, Tyumen (without AO) regions, the Altai Republic, Trans-Baikal, Perm, and Primorsky Krai were excluded, since the proportion of the population living in the Far North is small. These are mainly rural areas, in which indicators of socio-economic development differ markedly from the regional average. The rest of the regions for several reasons, we consider as the whole. Firstly, the proportion of the population living in the Far North is much higher, and the differences from the regional average are less. Secondly, the majority of residents study in the capital of their regions. Therefore, their education system works to a large extent for the development of the Far North.

Thirdly, in these regions, more universities are in the Far North. By analogy with the Arctic zone of the Russian Federation, we distinguish the European and Asian parts of the Far North. The first includes the Arkhangelsk Oblast, the Murmansk Oblast, the Republic of Karelia, the Komi Republic, and the Nenets Autonomous Okrug. The Asian part of the Far North is the Irkutsk Oblast, the Magadan Oblast, the Sakhalin Oblast, the Tomsk Oblast, the Republic of Buryatia, the Republic of Sakha (Yakutia), the Tyva Republic, the Kamchatka Krai, the Krasnoyarsk Krai, the Khabarovsk Krai, the Khanty-Mansi Autonomous Okrug, the Chukotka Autonomous Okrug, the Yamal-Nenets Autonomous Okrug.

We consider all age groups, but we pay special attention to the dynamics of the population under 30 years. By this time, education has been mostly completed, and the number of those who move to the next level of the education system at older ages is small. The following age groups are most interesting for us: 0–6.5, 6.5–18, 18–23, 0–30 years. Like the other age groups, a group of people younger than 30 years old is subject to cyclical fluctuations associated with the dynamics of the sex and age structure of the population, and a change in the size of this group has a noticeable effect on public policy.

voznrastnym gruppam, polu i urovnju obrazovaniya po sub"ektam RF [Population by age groups, sex, and level of education by constituent entities of the Russian Federation]. URL: http://www.gks.ru/free_doc/new_site/perepis2010/croc/Documents/Vol3/pub-03-01.xlsx (accessed 11 November 2019).

⁴ Naselenie, prinyavshee uchastie v mikroperepisi po polu i voznrastnym gruppam [Population participating in the micro-census by gender and age groups.]. URL: [http://www.gks.ru/free_doc/new_site/population/demo/micro-perepis/finish/01/01-01_\(%D0%B0%D0%B1%D1%81\).xlsx](http://www.gks.ru/free_doc/new_site/population/demo/micro-perepis/finish/01/01-01_(%D0%B0%D0%B1%D1%81).xlsx) (accessed 11 November 2019); Naselenie, prinyavshee uchastie v mikroperepisi, po polu, voznrastnym gruppam i urovnju obrazovaniya [Population participating in the micro-census by gender, age group and level of education]. URL: [http://www.gks.ru/free_doc/new_site/population/demo/micro-perepis/finish/02/02-01_\(%D0%B0%D0%B1%D1%81\).xlsx](http://www.gks.ru/free_doc/new_site/population/demo/micro-perepis/finish/02/02-01_(%D0%B0%D0%B1%D1%81).xlsx) (accessed 11 November 2019).

⁵ Chislennost' postoyannogo naseleniya — zhenshchin po voznrastu na 1 yanvarya (chelovek) [The number of resident population - women by age on January 1 (persons)]. URL: <https://www.fedstat.ru/indicator/33459> (accessed 11 November 2019); Chislennost' postoyannogo naseleniya — muzhchin po voznrastu na 1 yanvarya (chelovek) [The number of resident population - men by age on January 1 (persons)]. URL: <https://www.fedstat.ru/indicator/31548> (accessed 11 November 2019).

The age structure of the Far North population

Fig. 1 represents the dynamics of the number of children in preschool age (0–6.5 years) in 1990–2018. Over the period under review, the number of children decreased throughout the country by 22.5%, but in the regions of the Far North, the decrease was higher - 36.5%. This number decreased notably sharply in the European part (by 51.0%) against 32.2% in the Asian part. Two main reasons for the decline can be distinguished: a decrease in the number of births and the migration of the population of reproductive age to regions with more comfortable living conditions. If we compare urban and rural areas, then in the second, despite a higher total fertility rate, the final decline is more significant due to the emigration of the population. In the Far North, there are fewer differences between the regions, since the population was actively leaving cities as well.

The figure shows three periods: 1990–2001, 2002–2016 (2015 for the European part) and 2016/2017–2018. The main occurred was in the first period when the socio-economic conditions were the most unfavorable. In the country, the number of children decreased by 45.5%, and in the Far North - by 51.6% (56.5% in the European part and 50 % - in the Asian one). Subsequent growth could not compensate for the contraction. By 2016/2017, the number of children in the country increased by only 46.2% and 36.4% in the Far North regions. Growth in the European part was small (only 20.4%). Growth in the Asian part was higher (by 40.7%), but was also below the average for Russia. In 2016/2017, due to a decrease in the number of births, the number of children in preschool age started declining.

Along with continued emigration, the reduction is affected by the fact that small generations born in the 1990s entered their reproductive age, and over time their share in the entire population in the reproductive age has increased. It suggests that in the next 10-15 years, the number of children in preschool age will reduce. In the country, losses in urban areas were much less than in rural areas (18.8% versus 31.4%). In the Far North, the gap was less, since losses amounted to 34.8% in urban areas and 41.3% in rural areas.

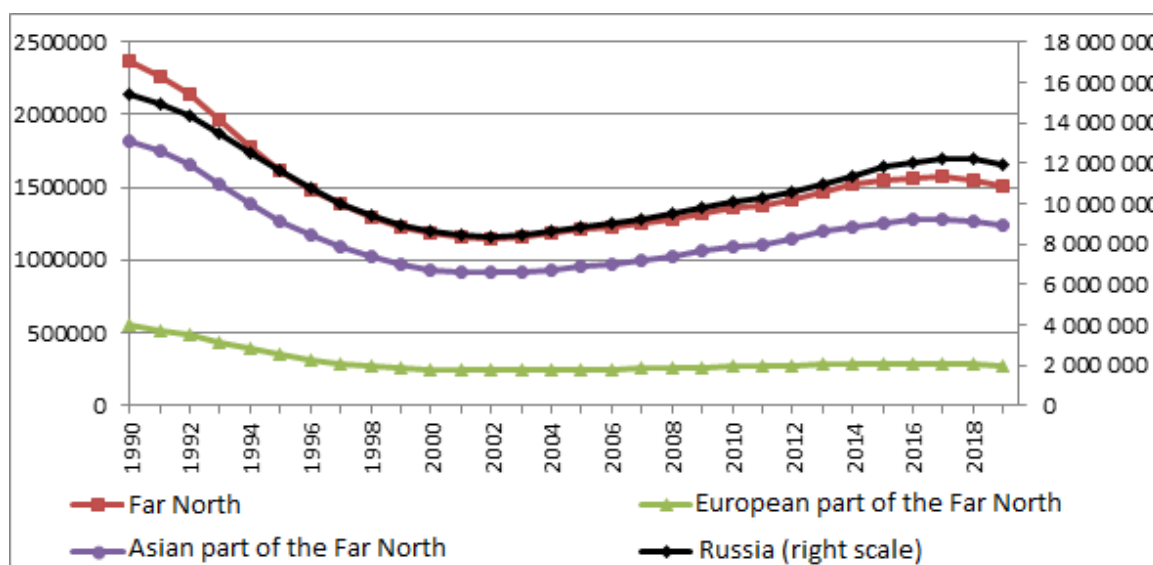


Fig. 1. The number of children in preschool age in the Far North as of January 1, 1990–2019.

If we consider the regional level, then the number of children for the entire period decreased less than in the country as a whole only in the mining Khanty-Mansi Autonomous Okrug (by 13%) and the Yamal-Nenets Autonomous Okrug (by 21.4%), where the extractive industries had a great share, as well as in the areas with a high birth rate - the Republic of Tuva (by 10.3%). In the Tomsk Oblast, with a focus on the mining industry, the decrease was 27.0%. In the remaining regions, the number of children decreased by more than 30%. The most significant decline was in underdeveloped extractive areas with severe living conditions - the Chukotka Autonomous Okrug (by 76.4%) and the Magadan Oblast (by 75.9%). The latter was the only region where the number of children decreased in every period under study. The number of children has also decreased by more than 50% in some extractive industries oriented regions. In Murmansk Oblast the decline was 56.4%, in the Republic of Komi it was 52.3%, and in the agrarian-industrial Kamchatka Krai it was 54.1%.

Concerning the number of children at school age (6.5–18 years), the picture is somewhat different. In the country, the number of children at this age increased until the beginning of 1997 (an increase of 9.8%), and only after the small generations of the 1990s began to enter school age, their number began to decline (Fig. 2). The reduction lasted until the beginning of 2013 and amounted to 41.6%. Since 2013, there has been an increase in the number of children in school age, which currently stands at 15%, but will still increase. In general, over the period under review, the number of children decreased by 26.2%, but in urban areas, the losses were slightly higher than in rural areas (27.3% vs. 23.2%).

The regions of the Far North showed more unfavorable dynamics. The initial growth continued only until 1994 and amounted to only 3.8% (2.6% in the European part and 4.2% in the Asian part). Moreover, in seven regions, a decrease was observed in this period. The reduction in the number of children, which began in 1994, continued until the beginning of 2011. This was probably due to the upward trend stopped in 1994, and the number of children did not manage to increase significantly. Compared to the average for Russia, the decline was stronger and amounted to 46.5% (54.9% in the European part and 44.0% in the Asian). Since 2011, growth has resumed, but over a more extended period, the number of children at school age increased less - by 14.2% (10.1% in the European part and 15.2% in the Asian part). For the Asian part, it is the only period when it was able to show values above the national average. In the European part, in all periods, the indicators were much worse than the average. For 1990–2018, the number of children of school age in the Far North decreased by 36.7% (49.1% in the European part and 32.8% in the Asian). However, the upward trend is continuing now. So, the final values will be better. It will be possible to clarify only in five-seven years.

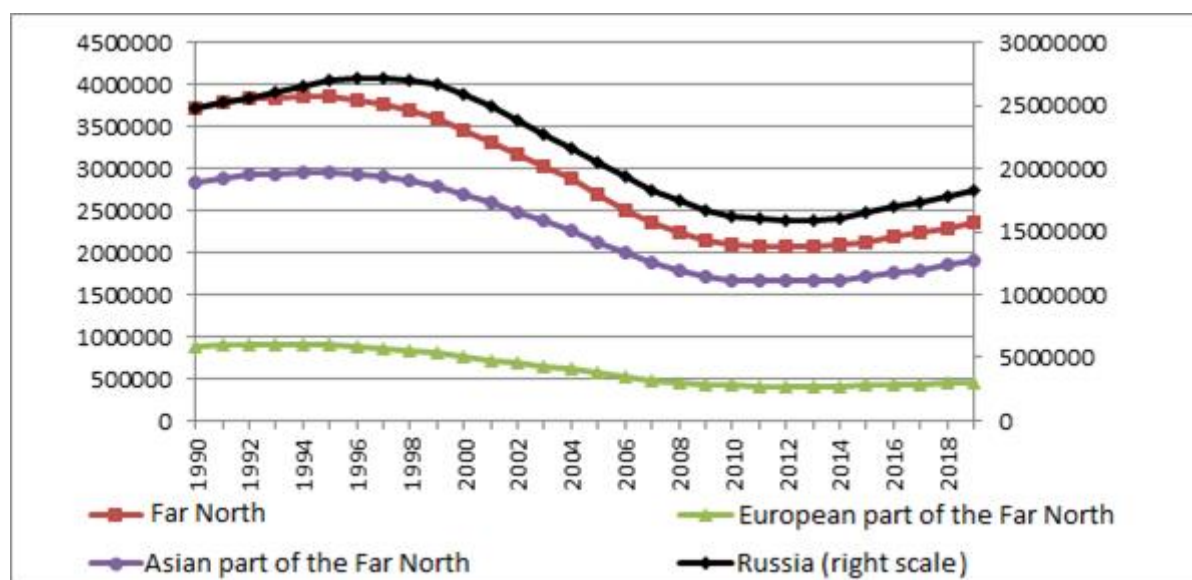


Fig. 2. The number of school-age children in the Far North as of January 1, 1990–2019.

Among the regions with the lowest losses, two should be distinguished: the Republic of Tuva (1.9%) and the Khanty-Mansi Autonomous Okrug (3.0%). In the first region, the high birth rate was decisive against the background of a low standard of living and a high proportion of the rural population. And in the second, a high standard of living was caused by the area's specialization in hydrocarbon production. In the economically prosperous Yamal-Nenets Autonomous Okrug, the losses amounted to 13.3%. In other regions, losses amounted to more than 25%. The most significant declines were in the mining-oriented Magadan Oblast (75.6%) and the Chukotka Autonomous Okrug (76.0%). They are associated with a considerable migration outflow in the 1990s. Losses were rather high in the mining Murmansk Oblast (54.5%), the Sakhalin Oblast (53.2%), the Komi Republic (51.0%), and the agrarian and industrial Kamchatka Krai (55.9%). Migration played a significant role there too. In other regions, losses were less than 50%. Since 2011, an increase in the number of children has been observed in all regions without exception.

The number of young people aged 18–23 (the most likely age for higher education) increased in the country until the beginning of 2006. It is explained by the dynamics of the birth rate (see Fig. 3). The growth was 28.8%, but then it was followed by a decrease of 44.6%. So, over the period under study, the number of young people decreased by 28.7%. In urban areas, the reduction was noticeably more significant compared to rural areas (33.4% vs. 12.2%).

In the Far North, the increase in the number of young people also continued until 2006, but the growth was less and amounted to only 19.2%. In the European part, the growth was very insignificant - only 6.9% vs. 24.1% in the Asian part. The subsequent decrease was higher than in the country (47.1%). Therefore, over the period under study, the reduction was 37.0%, which significantly exceeds the average Russian level. The decline in the European part (54.7%) was much more extensive compared to both the national average and the Asian part (45.4%). As a result, over the period under study, the number of youth in the European part decreased by more than half (by 51.5%), while in the Asian part, the decrease was only 32.3%. If we compare urban and

rural areas, the Far North regions had more losses in both cases, but the urban areas were closer to the average for Russia. For urban areas, losses amounted to 38.2%, for rural areas - 32.4%. In the European part, the indicators were noticeably worse in both urban and rural areas, as the losses were 50.5% and 55.7%, respectively. In the Asian part, losses in urban areas were close to the national average (34.0%), and in rural areas were higher than average, but much lower compared to the European part (25.7%).

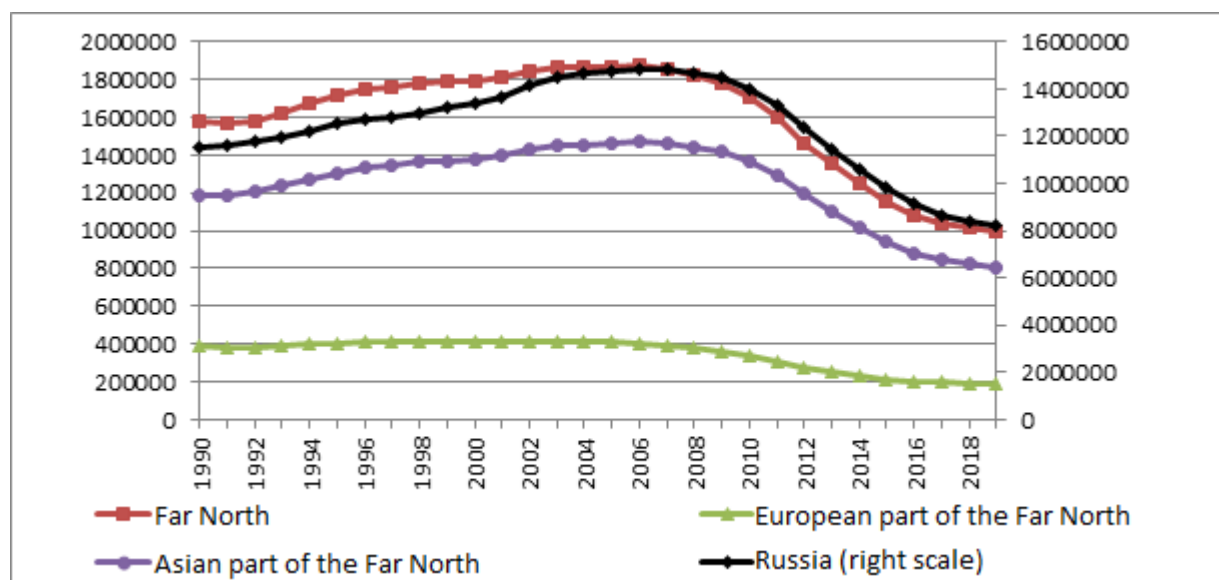


Fig. 3. The number of young people aged 18–23 in the Far North as of January 1, 1990–2019.

Interterritorial differences concerning the dynamics of the size of this group are the largest among all considered age groups. This situation can be explained by the fact that it is the most dependent on migration, which is associated with education. In the Khanty-Mansi and the Yamal-Nenets Autonomous Okrugs, a significant total increase was noted: 31.3% and 33.8%, respectively. It is the only case of the final rise in all regions and for all age groups. However, it was due to a growth of more than 120% in the first period. Relatively small losses were noted in the Nenets Autonomous Okrug (14.3%) and the Republic of Sakha (Yakutia) (20.7%). Other regions have lost more than a third of youth. The most significant losses were in the Magadan Oblast (75.8%) and the Chukotka Autonomous Okrug (66.7%). The Murmansk Oblast (57.1%), the Komi Republic (53.7%), and the Kamchatka Krai (56.5%) lost more than half of young people aged 18–23.

Although there were periods of increase for certain age groups, the overall population under 30 noticeably decreased between 1990 and 2018 (see Fig. 4). In the country, the reduction was 23.7%. At the same time, the size of this group increased only in 2014, when the population of the Republic of Crimea and the city of Sevastopol was considered. During all other years, the number declined. In urban areas, the reduction amounted to 23.5%, and in rural areas - 24.2%, which suggests a steady population decline in different regions. The share of the population under the age of 30 in the entire population also decreased over this period. If on January 1, 1990, it was 44.6%, then on January 1, 2019, it was only 34.2%. In urban areas, the share was initially lower (38.1%)

and decreased to 29.1%, while in rural areas it was higher (44.5%), but the decrease was close to (up to 35, 2%).

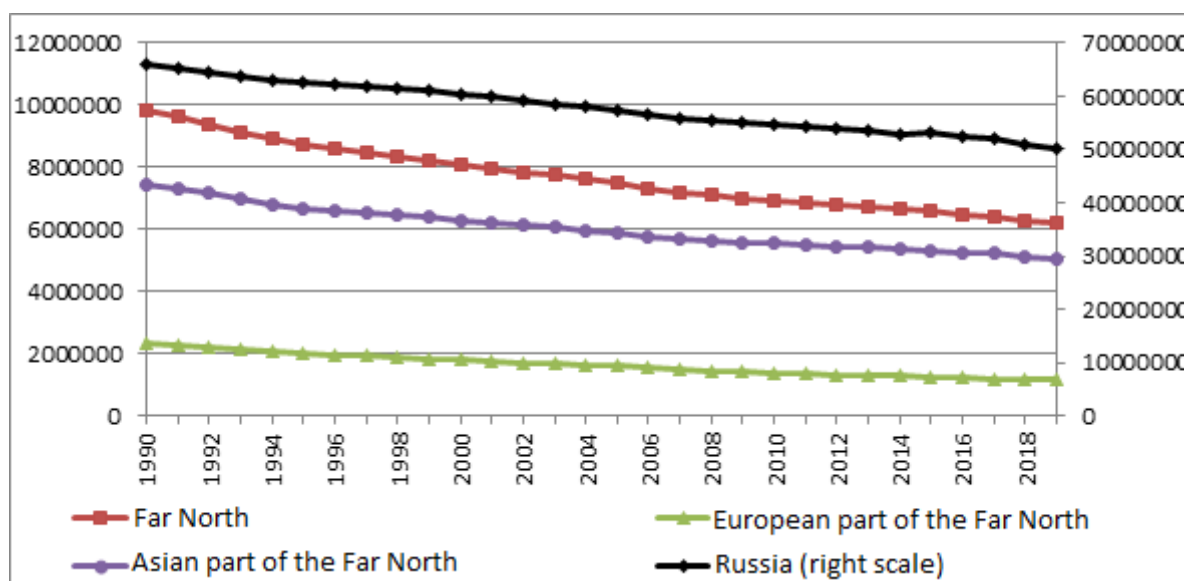


Fig.4. The number of people under the age of 30 in the Far North as of January 1, 1990–2019.

In the Far North, the share of youth also decreased. And the number of youth reduced every year under study without exception. The decrease was noticeably more significant and amounted to 36.7%. Regions lost 51.5% of youth in the European part, while only 32.1% in the Asian part, which is also a significant amount. In urban areas, losses were generally lower (35.9%). It applies to both the European and Asian parts, where losses amounted to 49.4% and 31.4%, respectively. In rural areas, the losses were higher (39.6%), but the regions located in the European part of the Far North lost 59.7% of the population under the age of 30, while in the Asian part, the losses were significantly less - 34.3% of youth.

The proportion of young people in the entire population in the Far North was initially much higher (50.3%), and the difference between the European (48.5%) and Asian (51.0%) parts was insignificant. In the period under study, the decrease in its share in the Far North was stronger. At the end of the period, it amounted to 37.5%. The differences between the European and Asian parts of the Far North increased due to a more considerable decrease in the share of youth in the European part, whereas of January 1, 2019, it amounted to 33.8% compared to 38.5% in the Asian part. The share of young people in the European part fell below the national average. The differences between urban and rural areas were insignificant throughout the entire period. At the beginning of the period, the share of youth in urban and rural areas was 49.9% and 51.6%, respectively, and at the end of the period - 37.1% and 38.7%. In urban areas, the differences between the European and Asian parts did not exceed three to four percentage points (48.5% and 50.4% in 1990, 34.4% and 37.9% in 2019), while in rural areas they increased from similar values to almost ten percentage points (48.3% and 52.6% in 1990, 31.0% and 40.3% in 2019).

At the territorial level, the smallest losses were noted in the Khanty-Mansi Autonomous Okrug (9.7%) and the Republic of Tuva (11.9%). In the first case, it is associated with a high stand-

ard of living, which prevented emigration. And in the second, it was due to a high birth rate. Relatively small losses were in the Yamal-Nenets Autonomous Okrug (20.7%) and the Republic of Buryatia (26.6%) - regions with a high share of extractive industries, as well as in the local center of attraction - the Tomsk Oblast (24.5%). In other regions, losses amounted to more than 30%. The most significant declines were in the Magadan Oblast (76.1%) and the Chukotka Autonomous Okrug (76.4%). They were caused by active emigration. Migration led to significant losses in the Murmansk Oblast (56.9%), the Sakhalin Oblast (50.9%), the Komi Republic (54.0%), and the Kamchatka Krai (55.7%). In other regions, youth losses were less than 50%.

Summing up the results of this section, we note that in 1990-2018, the Far North areas suffered a substantial demographic loss. It negatively affected the prospects for their development. At the beginning of the period, the share of youth and their age groups were higher compared to all country statistics. Active migration and a decrease in the birth rate led to the fact that at the beginning of 2019, its share became small. In regions with a high standard of living oriented toward mining, the situation is generally better. The transport accessibility helped to preserve the population since losses were predominantly higher in areas with lower transport accessibility. However, the deterioration of economic conditions had a more significant impact on the European part of the Far North. In the European part, losses are higher compared with the Asian part. Damages are also higher in urban than in rural areas.

Further prospects for the dynamics of this age group remain negative. Based on the population forecast until 2050, made under the direction of V.N. Arkhangelsky [3], and our revaluation, we can argue that its number until 2035 will continue to decline.

By the end of 2035 in the country, the number of young people under 30 will be approximately 44.7–48.0 million people, and its share will change from 32.4% to 34.8%. It means that the decline in numbers will continue. Until 2022, it will be very sharp (up to 48.5–49 million people). In 2026–2031, due to the demographic wave, the decline will slow down and will be insignificant (about 250-300 thousand people). After that, it will continue at a faster pace. If current trends continue, the main contribution to the decline will be made by a group younger than 6.5 years old (it will decline throughout the entire period and by the end will decrease by more than a third). The number of children at school age will increase until 2025, and then will decline rapidly. The number of young people aged 18 - 23 will increase from 2023 until the end of the period, and the growth will be significant.

Concerning the Far North, a slightly different picture is expected. Population under the age of 30 will decrease to 5.4–5.8 million people, but this decrease due to higher migration will take place without a flat site in the middle of the period. At the end of the period, the proportion of youth will be 36.1%–38.7%. The contribution of the main age groups to the overall youth population dynamics will be approximately the same as for the country as a whole.

The educational structure of the population of the Far North

As it was noted in the previous section, the age structure of the population of the Far North is younger than in the country as a whole, while the educational structure is close to the national average (see Table 1). It is necessary to consider the characteristics of the economy of the Far North that require a significant number of workers with secondary vocational education to understand whether it is good or not.

Table 1

The educational structure of the population of Russia and the regions of the Far North

	Postgraduate	Higher vocational	Incomplete higher	Secondary vocational	General (secondary full)	Lower education
All the population						
2002						
Russian Federation	0.3	15.7	3.1	39.8	17.5	22.5
Far North	0.2	14.5	3.0	42.5	17.9	21.2
European part	0.2	12.9	2.3	46.7	15.6	21.8
Asian part	0.2	15.0	3.2	41.2	18.6	21.1
2010						
Russian Federation	0.6	22.1	4.4	35.7	17.7	16.5
Far North	0.6	20.5	4.3	37.2	17.8	16.5
European part	0.5	18.1	3.3	41.4	15.9	17.0
Asian part	0.6	21.2	4.6	36.0	18.4	16.3
2015						
Russian Federation	0.4	25.3	2.8	40.1	17.8	13.2
Far North	0.4	24.3	2.9	41.1	17.7	13.2
European part	0.2	20.8	2.1	46.1	16.1	14.2
Asian part	0.5	25.3	3.1	39.5	18.2	12.9
Population under the age of 30						
2002						
Russian Federation	0.2	10.2	6.7	31.6	25.2	25.1
Far North	0.1	9.3	5.7	31.4	25.5	27.4
European part	0.1	8.3	4.4	36.0	22.3	28.4
Asian part	0.1	9.7	6.1	30.1	26.4	27.1
2010						
Russian Federation	0.6	19.7	11.8	27.0	20.3	17.8
Far North	0.6	17.4	10.1	27.5	21.1	20.2
European part	0.5	15.5	8.1	32.7	18.7	20.6
Asian part	0.6	17.9	10.6	26.2	21.8	20.1
2015						
Russian Federation	0.3	25.1	7.6	28.4	20.7	17.5
Far North	0.3	21.9	6.9	29.3	21.1	20.1
European part	0.1	19.5	5.1	36.0	17.9	21.1
Asian part	0.3	22.6	7.4	27.6	21.9	19.8

Note: if the sum per line is less than 100%, the balance falls on those who had not indicated their level of education.

The table proves that the proportion of the population with postgraduate education grew but continued to remain less than one percent, and the differences between the country and the Far North regions were insignificant⁶. Growth among those under 30 years old was slightly higher.

In higher vocational education, three trends can be distinguished, which explain the increase in the share of the population with such training with a decrease in the proportion of the population aged 18–23 years.

Firstly, Russia's entry into the Bologna process led to the emergence of two new levels in higher education (bachelor's and master's degrees). Each is a complete higher education, but the duration of studies for a bachelor's degree is shorter than for a specialist. As a result, the share of specialists is decreasing. So, if in 2010 the share of specialists among the entire population was 93.4%, and in the Far North it was 93.8%, then in 2015 it amounted to 91.5% and 92.8%, respectively. Among young people under 30 years old, the figures are even more revealing: 84.6% and 87.1% in 2010, and 80.3% and 82.2% in 2015. At the same time, not everyone has opportunities or want to be a master.

Secondly, it is an increase in the number of private universities and the introduction of the Unified State Exam, resulted in a decrease in the requirements for entering a university and made it easier to get higher education.

Thirdly, despite a certain devaluation of higher education due to a decrease in the quality of education, the prestige of higher education has increased both because of the requirements of employers and because of a reduction in the prestige of industrial worker jobs.

In the Far North, the proportion of people with higher education is below the national average by about one and a half to two percentage points. Still, it is due to low values in the European part, which are four to five percentage points lower than the national level, while the differences between the Asian part and the whole country do not exceed one percentage point. It should be noted that the differences in the age group younger than 30 were initially not so significant, but they increased significantly over time. This may indicate the emigration of the population with higher education from the Far North regions or difficulties with getting a higher education for the population that lives there. In the future, it will negatively affect the socio-economic development of this macro-region and the whole country.

The share of the population with incomplete higher education is stable, but overall it has increased slightly over the entire period. There are many reasons for the dynamics presented in Table 1, but the most likely is the financial one, esp. the 2008 crisis.

Despite a small increase in the share of the population with secondary vocational education in the country, in the Far North, it decreased. The specific of the northern areas is that their development requires, first and foremost, qualified workers and mid-level specialists. Therefore, such a decrease, along with the possibility of structural adjustment of the economy, the prerequi-

⁶ The decline in 2015, we tend to explain by a small sample, and not by a deterioration in the educational structure of the population.

sites for which are currently not visible, may mean a slowdown socio-economic development. This issue requires much closer attention, especially by professions, so that we will consider it briefly enough.

During the period under review, the share of the population of Russia trained for mid-level specialists increased from 27.1% to 30.9%. In the Far North, growth was less: from 29.2% to 31.5%. It is primarily due to a smaller increase in the Asian part (from 29.0% to 31.1%), while in the European part, the growth rate was close to the average for Russia: from 29.6% to 32.9%. Among young people under 30, the proportion of the population with specialized secondary education is expectedly lower, and the growth is less: in the country, it increased from 20.8% to 21.6%, and in the Far North - from 20.4% to 21.8%. The differences between both parts of the Far North in this indicator are considerable: in the European part, growth was from 21.4% to 25.2%, while in the Asian part - from 20.2% to only 20.9%.

The share of the population trained under the training programs for workers in the entire population decreased from 12.7% in 2002 to 9.1% in 2015. This negative trend was also noted in the Far North regions, where the share decreased from 13.3% to 9.6%. In both parts, the decrease was the same (by 3.8 percentage points): from 17.0% to 13.2% in the European part and from 12.2% to 8.4% in the Asian part. The proportion of the population with this level of education among young people under the age of 30 years is lower, and its decline is more significant. So, in Russia, it decreased from 10.8% to 6.7%, and in the Far North - from 11.0% to 7.5%: from 14.6% to 10.7% in the European part and from 9.9% to 6.7% in the Asian part.

The share of the population with complete secondary education is stable and is decreasing very slowly everywhere except the European North, where it is gradually increasing. As for the population under 30 years old, the proportion of people with complete secondary education decreased very rapidly. This is a positive trend because the economy needs professional workers.

During the period under review, the share of the population with a lower level of education decreased almost twice. In addition to the general increase in the level of education, the retirement of older people, many of whom had a low level of education, and a decrease in the share of young people in the entire population played a role. It is also a positive trend.

The table shows that the shares of the population with complete secondary education and lower levels of education in the country as a whole and the Far North are close. The main differences are concentrated in groups with vocational education and training. The lower share of the population with higher education is offset by those with secondary vocational education. It reflects the structure of the economy and its need for labor, that is, both demographic and economic factors influence the level of education. The decline in the share of the population with secondary vocational education is a negative trend, which carries significant risks for the economy, as an imbalance is formed between supply and demand in the labor market. As a result, the implementation of large economic projects will be in jeopardy due to a shortage of labor force with the required qualifications.

*The impact of the education system on the socio-economic and demographic
development of the Far North regions*

The development of the education system will positively affect the socio-economic and demographic indicators of the Far North. At the same time, it will help saturate the economy of these regions with young qualified specialists, because they experience a more acute shortage of workers than the country [4, Elizarov V.V. et al., p. 43]. Moreover, such saturation is necessary for the northern regions for the successful adaptation of local communities and economic systems to the requirements of the new global technological paradigm [5, Zaikov K.S. et al.].

The literature notes an inverse relationship between the level of education and birth rate [6, Maleva T.M., Tyndik A.O.; 7, Arkhangelskiy V.N., et al.]. However, such a connection is far more complicated. Moreover, it may be absent [8, Kravdal Ø., Rindfuss R.R.; 9, McRay J., Royer H.] (a more detailed analysis of the literature on this issue is in [10, Zhuravleva T.L., Gavrilova Y.A.]). We believe that concerning birth rate, the need for children, living standards and other factors (e.g., the level of development of the region) in the Far North has a stronger effect than the level of education, and its contribution to the decline in birth rate will be less significant, especially that people go to the Far North mainly to work. Our confidence is based on the fact that in regions with a high share of the urban population (e.g., the Murmansk Oblast and the Arkhangelsk Oblast), the birth rate is low. In the areas with a high birth rate, the process of raising the level of education will be extended over time. Such an impact will be less noticeable due to the significant migration movement and other factors.

The level of education of migrants and the host population can both stimulate migration and hinder it [11, Lee E.S.]. But in the case of the Far North, the low level of access to quality education is one of the important factors that stimulate emigration [12, Popova O.V.; 13, Rudenko D.Yu.] and contribute to the attraction of workers from other regions of Russia. The age structure of the population of the Far North is younger. Therefore, the outflow of the population caused by the insufficient development of the education system occurs in a larger volume, and it is a more severe threat to these regions than for the country. An additional complication is that the vast majority of those who left do not want to return to their homes after graduating.

This is evident by student survey data. Based on a survey of 2,797 students from 9 territorial universities, it was found that 51.6% of respondents intended to stay where they studied after graduation, and the volume of potential migratory flow of graduates was estimated at 30–33% [14, Varshavskaya E.Ya., Chudinovskikh O.S., p. 42]. Moreover, after graduation, no more than 16–18% of graduates planned to return home (to the city they lived before university) [14, Varshavskaya E.Ya., Chudinovskikh O.S., p. 46]. Returning home means economic losses, but higher chances of a job by profession, as well as housing and social connections. According to respondents, they are good enough reasons to take such a step [14, Varshavskaya E.Ya., Chudinovskikh O.S., p. 57]. However, the potential volume of external migration (from Russia) from regional universities is low and amounts to about 5–6% [14, Varshavskaya E.Ya., Chudinovskikh O.S., p. 44].

Researchers from Belarus came to similar conclusions. However, in their case, the capital university was considered⁷; therefore, the results obtained, even more noticeably illustrate this trend: only 11.4% of all nonresident students plan to return to their locality. At the same time, only every tenth student from the countryside and the small town, every sixth student from the district center, and every second student from the regional center plans to return home [15, Denisov A.Yu. et al., p. 319].

Studies in the Far North regions, in general, confirm the above trends and figures, although they also noted regional specifics. Based on a sample of 4,024 students, the proportion of people wishing to leave the region in which they studied was 54%. Moreover, in the Arkhangelsk Oblast and the Murmansk Oblast, where transport access is better, the proportion of people wishing to emigrate is higher. And in the Republic of Sakha, the Krasnoyarsk Krai and the Chukotka Autonomous Okrug, where it is more difficult to leave, this proportion is much lower [16, Maksimov A.M. et al., p. 71]. However, if you look at the answers about the desire to leave the study area, considering the place of residence before entering the university, the percentage of people who wish to do it, provided that the student lives in another settlement of the study region, is the lowest - only 48.9% [16, Maksimov A.M. et al., p. 73], although this figure is significant. Probably, the answers here also vary greatly depending on the region in question, but the article does not provide information in this section, which is a drawback. It is noted in the works that with an overall migration growth of the Russian population with higher and secondary vocational education in the Arctic regions, a significant migration outflow of such a population is observed [17, Sokolova F.Kh.]. Such a study could clarify the situation and answer the question of whether graduates leave other regions who have received education and return to their homes either in connection with employment, or whether residents of the Arctic and northern regions leave. In the meantime, we can assume that qualified young people are reluctant to travel to small settlements, which are quite a lot in the Far North due to the specifics of the economy, preferring to stay in larger ones. At the same time, at the expense of full-time graduates of Arctic universities, provided they are guaranteed employment, the economy of the Arctic zone of the Russian Federation receives only 30% of the total annual additional need for personnel with higher education [18, Sigova S.V., Stepus' I.S.]. And more than 40% of university graduates employed in the Arctic are graduates of universities of the other regions [19, Shabaeva S.V. et al.]. A good overview of this issue (the number of Arctic programs both in universities located in the Arctic zone of the Russian Federation and outside it, the number of students studying in them and other aspects) is given in [20, Gorokhov et al.]. The provision rate in secondary vocational education is 40-50% [21, Stepus' I.S., p. 74]. In the Far North, located outside the Arctic zone of the Russian Federation, the education system is also not able to satisfy all the needs of the economy.

⁷ In the article by Varshavskaya E.Ya., Chudinovskikh O.S., it is noted that for metropolitan universities, the figures they presented on the number of potential internal migrants would most likely be even lower.

Raising the level of education will also contribute to solving one of the most acute problems of modern Russia - increasing life expectancy. For the Far North regions, this problem is significant, since life expectancy there is lower than the average in Russia⁸.

It is not easy to assess the impact of the level of education on the socio-economic indicators that determine the level of health. And the presence of higher education does not mean that a person's health will necessarily be better compared to those who do not have one since a causal relationship largely depends on personal life circumstances [22, Hayward M.D. et al.]. Several studies argue that one can speak of a direct correlation between education and life expectancy [23, Lleras-Muney A.; 24, Lutz W., Skirbekk V.; 25, van Kippersluis H. et al.]. But most likely, the relationship between them is indirect. Education is only the basis for other factors to increase life expectancy [26, Arendt J.N.; 27, Clark D., Royer H.; 28, Davey Smith G. et al.; 29, Kröger H. et al.; 30, Lager A.C. J., Torssander J.].

Advances in medicine over the past 70–80 years have gone hand in hand with the increasing accessibility of education to a broader population. According to the theory, school education provides necessary skills (reading, writing, and communication), and teaches logical thinking, a critical approach to information and making plans. A high level of education allows getting a better-paid job, which helps to provide better living conditions, nutrition, and medical care. At the same time, based on their experience and knowledge, more educated people try to lead a healthier lifestyle. Besides, education affects health through emotional aspects [31, House J.S. et al.]. Finally, among more educated people, the proportion of married people is higher, which also positively affects life expectancy. We believe that adjusted for climatic features. These provisions are also applicable to the regions of the Far North.

There are enough works devoted to the influence of education on mortality [32, Pyankova A.I., Fattakhov T.A.]. Still, the question is to what extent the increase in life expectancy is caused not by a general decrease in mortality, but by a change in the educational structure of the population, rarely [33, Jasilionis D. et al.; 34, Luy M. et al.]. A significant number of these works are devoted to the realities of Russia [35, Kharkov T.L. et al.; 36, Shkolnikov V.M. et al.]. In the last one, based on the calculation of mortality tables by the level of education, conclusions are drawn about the significant effect of changes in the educational structure of the population on the increase in life expectancy. In Russia from 1988–1989 to 1998–1999, despite a general decrease in life expectancy, an improvement in the educational structure led to an increase in life expectancy in men aged 30 years by 0.79 years, and in women by 0, 65 years. [36, Shkolnikov V.M. et al.]. For the economically developed countries of the West, the growth was slightly more significant. For the period from 1990–1991 to 2010–2011 life expectancy in the population at the age of 30 in Italy, Denmark and the USA, due to changes in the level of education, increased in men by 1.1, 1.0 and 0.6 years, and in women by 0.7, 1.1 and 0.4 years [34, Luy M. et al.]. We can assume that in Russia,

⁸ Ozhidaemaya prodolzhitel'nost' zhizni pri rozhdenii [Life expectancy at birth]. URL: <https://www.fedstat.ru/indicator/55386> (accessed 11 November 2019).

the increase in life expectancy due to the improvement of the educational structure of the population for this period also amounted to about one year. For the Far North, it was more since the educational structure of the population there was initially worse, and mortality rates in Russia for people with low education is not only higher, but also deteriorating against the background of an increase in the life expectancy of a highly educated population [32, Pyankova A.I., Fattakhov T.A.].

The development of the education system will also have a positive impact on improving the economic situation in the regions of the Far North. It applies to both micro and macro levels. By the micro-level, we mean the increase in the incomes of the population. The macro-level implies the development of the economy in regions and localities with a higher share in the entire population of students at all training levels.

The level of education has a significant impact on the likelihood of employment in the Far North. In foreign northern European countries, the demand for highly skilled workers with specific competencies is growing. Still, due to higher wages, low-skilled migrants go there in large numbers [37, Giltman M.A., p. 106]. Concerning the Russian Far North, the question of what kind of workforce is the most demanded at present is not considered in detail. In this regard, the study of M.A. Giltman, based on a sample labor force survey for 2010–2015 using logit models, assessed the probability of being employed. It allowed determining conditions for the coincidence of supply and demand in the labor market of the northern areas. The level of education was one of the indicators of analysis. Despite the limitations associated with the structure of the Rosstat data, the author was able to draw several important conclusions. So, it was argued that economic activity in the North was higher, but the share of unemployed was slightly higher than the national average. At the same time, the initial hypothesis that less qualified and competitive workers are more likely to be employed in the North was rejected. The adoption of the hypothesis was probably influenced by the lack of all the necessary data. However, despite the structure of the economy, secondary and higher education increases, and primary education reduces the likelihood of being employed in the northern regions compared to the rest of Russia.

A survey completed in 2012 at two Mexican universities located in monofunctional cities (single-industry towns) revealed the contribution of higher education to the economy of the towns where they were found. A direct contribution is that everyday expenses that are invested in the local economy account for at least 67% of all student expenses. An indirect contribution is to create jobs for people who serve students (incl. education, since the integrated university community and students, make up 140% of their number), to sell goods and services to these people (in the USA, every 4–5 students create one additional place of work in the service sector). Also, due to the creation of educational organizations at universities (e.g., schools), the educational system is developing [38, Makagonov P.P. et al., p. 112–113].

Finally, there are significant social effects that arise when universities implement their “third function”. It is understood as “a combination of specific services based on actions and opportunities that serve for the good of society” [39, Markhl M., Pausist A., p. 7]. Examples of such

effects are in [40, Kudryashova E.V., Sorokin S.E.]. Among them are economic (creating workplaces and training), social (transforming the urban environment, holding cultural and social events, providing access to their infrastructure, socializing young people), and educational (implementing the principle of “education for all” - from a preschool child to a senior citizen).

Other examples can be cited (on the connection between the level of education and graduation and similar ones [41, Semenikhina V.A. et al.]). They will demonstrate the importance of raising the level of education for the Russian economy. For the Far North, the need to develop an education system (primarily professional) is even more urgent, since these regions are vital for the development of the country.

Main conclusions and recommendations for the state policy

The study showed that although the Far North is very important for the socio-economic development of Russia, the issues of social development of these regions are not a priority. So, in the primary conceptual documents devoted to the development of the Arctic zone of the Russian Federation, very little attention is paid to the education system, and there is no separate document on the Far North. It is a drawback of the program, since the number and proportion of young people under the age of 30 are declining, and the forecast for its dynamics is also negative. An additional complication is that the population changes in a wave-like manner and a period of low numbers follows a period of high numbers. The education system should be prepared for such fluctuations, and this cannot be achieved without considering the demographic factor in the development programs of this macro-region. Other demographic features (e.g., focal population distribution) have been known for a long time and are generally considered by the authorities.

The educational structure in the Far North regions is close to the national average, and the differences are noticeable only between population groups with vocational education. The proportion of the population with higher education is lower, which reflects the specifics of economic activity in the Far North regions. Nevertheless, the share of the population with secondary vocational education has declined, and the share of the population with higher vocational education has increased. It may threaten economic development, as it leads to a shortage of labor in the industry.

Specific efforts are made to develop the educational system in the Far North regions and provide them with labor. In general, what is being done is well known, so we will focus on what can help to solve the problems of improving the quality and quantity of the workforce, but it is affected in insufficient volume.

Firstly, both in the Far North and beyond, it is necessary to widely apply the practice of targeted recruitment in educational institutions of a professional level. The target recruitment mechanism provides a relatively high level of intention to return. However, without solving the socio-economic problems of the Far North, the likelihood of leaving such a person after the end of the contract is higher, since a change of residence for him is familiar. It will help to provide labor for

long-term projects that are being implemented in the Far North. In this case, educational institutions located outside the Far North should train specialists for special programs that take into account the specifics of the work process in appropriate conditions. The help of teachers from the Far North for their development and reading would not be superfluous.

Secondly, support is needed for individual subject areas, primarily mathematics, physics, chemistry, biology, computer science, and technology. Their importance for the creation of industry cannot be overestimated. Support should be provided not only to schools and vocational education organizations but also to institutions of additional education, as well as study groups on relevant topics. It can take the form of distance Olympiads, creation of libraries, attracting well-known specialists in their fields of knowledge to write literature, and encouraging talented children, students, and teachers.

Thirdly, further development of the Internet and simplification of access to it among the population is necessary. In the Far North, the implementation of such programs can have a significant effect, as it will increase the level of education of young people and reduce its outflow, which arises from the need to get an education in another region and improve the quality of the educational process. Educational organizations located in the Far North and beyond will be able to cooperate on a closing basis, e.g., using the portal “Open Education”⁹. For individual lecture courses to be fully or partially developed considering the features of the Far North and read by remotely recognized specialists from leading universities, whose works are published in leading foreign journals, there are no technical obstacles. This practice can be applied when creating a new branch of the university or when joining one university to another in the framework of reducing the number of weak universities. It can also be used to update the content of curricula and taught courses.

There are fewer similar projects for school education, but they also exist. E.g., there is a course of lectures “Science in the Regions”¹⁰, which was created with the participation of the Moscow Institute of Physics and Technology. It explains several topics in algebra, geometry, physics, chemistry, and biology for grades 8–10 of high school. In the lectures, not all the critical issues are discussed, but if there is an order from the state, these courses can easily be supplemented with missing material. It is not necessary to conduct all subjects and classes in a remote format, but such materials can significantly help teachers in the process of preparing for lessons.

Also, the development of digital technologies will improve access to knowledge not only for students but also for all the population. People will be able to not only listen to lectures given by high-level professionals (incl. in foreign languages) but also read high-quality scientific and popular science literature. In our opinion, the effect will be most significant if the state creates Internet portals in various subject areas, e.g., in the field of agriculture and veterinary medicine for small

⁹ Portal «Otkrytoe obrazovanie» [Portal “Open Education”]. URL: <https://openedu.ru/> (accessed 11 November 2019).

¹⁰ Nauka v regiony [Science to the regions]. URL: <https://www.youtube.com/channel/UCWyqrBRPgT33TUtBMQsyHqw/featured> (accessed 11 November 2019).

farms, farming, and financial literacy, or teaching the theoretical part of the basics of providing the first help (with the consolidation of practical skills under the control of physicians). Something similar in the form of magazines was implemented back in the Russian Empire and the USSR. Even in the 1990s, "Sdelay Sam" ("Do-it-yourself") magazines were published. At present, the development of the Internet will make it possible to bring such projects to a fundamentally new level and make them accessible to broader segments of the population.

At the end of this section and the whole article, it should be noted that the development of the education system in the Far North is necessary, as it increases the cultural and educational levels of the population, allows to solve some social problems and improve living conditions. Nevertheless, it is wrong to emphasize state policy only on the development of the education system. The regions of the Far North will not be able to benefit from this improvement without a comprehensive development of the economy as a whole, linking the parameters of supply and demand on the labor market and the availability of a system of subsidies that adequately reflects the harsh living conditions, as they will face the "brain drain". Their education system will train qualified personnel who will try to move to other regions after graduation. It means that all the costs of providing education will fall on the areas of the Far North while the labor force will be used in regions, which have been able to create more attractive conditions for work and life. As a result, the pace of socio-economic development in the areas of the Far North will be much lower compared to potential ones. It should also be noted that the incoming flow of specialists who are going to work in the Far North is significant, and it can be said that the regions of the Far North are partly in a favorable position, as they take advantage of the labor force trained in the other areas. However, this flow partially corrects the failures that are observed in the education system and can solve problems only partially. Without the modernization of the education system, the outflow of youth will continue as well as the imbalance in the labor market.

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Entrepreneurial activity in the Russian Arctic territories compared to the all-Russian situation*

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Abstract. The paper considers the entrepreneurial activity of the Russian Arctic territories and reveals its specificity compared to the all-Russian situation. The relevance of the scientific task is determined by the fact that ensuring economic growth and social development of the Russian Arctic is impossible without the necessary strengthening of entrepreneurial activity. The search for a mechanism for managing Arctic entrepreneurship is currently an urgent scientific task. The paper presents the authors' estimates of the entrepreneurial activity of the Russian Arctic territories compared to the all-Russian situation. The authors present the classification of the territories of the Russian Federation and the Russian Arctic by the principal business activity related to the subject of the market manifesting it. It is argued the Arctic specificity, and local conditions determine the development of entrepreneurial activity in the Arctic for such market actors as business and the state. This feature allowed us to offer and justify recommendations to stimulate entrepreneurial activity regarding the belonging of the Arctic to a classification group.

Keywords: *Russia, regions, Arctic, development, entrepreneurial activity, comparative assessments, public administration.*

Introduction

The scientific understanding of the phenomenon of the manifestation of entrepreneurial activity in certain territories is extremely relevant, diverse and multi-faceted. This is due to the fact that ensuring the economic growth of any country and any territory is not possible without the functioning of entrepreneurship [1, Minniti M., Levesque M., pp. 603-604; 2, Autio E., Kenney M., Mustar P. et al., p. 1098; 3, Sciascia S., De Vita R.]. Moreover, the features of doing business vary significantly not only between countries, but also between regions and even municipalities of one country [1, Minniti M., Levesque M., p. 607; 4, Stenholm P., Acs Z. J., Wuebker R., p. 179-190; 5, Verkhovskaya O.R., Alexandrova E.A., Bogatyreva K.A. et al.; 6., Skufina T.P., Bazhutova E., p. 77]. Therefore, issues related to entrepreneurial activity cannot be discussed outside the context of territorial particularities. The Arctic zone of the Russian Federation (AZRF) is a zone of priority development [1, Minniti M., Levesque M., p. 607; 4, pp. 179-190; 5, Verkhovskaya O.R., Alexandrova E.A., Bogatyreva K.A. et al.; 6., Skufina T.P., Bazhutova E., p. 77] and the corresponding increased

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attention of public administration [9, Zaikov K.S., Kondratov N.A., Kudryashova E.V. et al., pp. 184-185; 10, Porfiryev B.N., Leksin V.N., p. 630; 11, Samarina V.P., Samarin A.V., Skufina T.P., Baranov S.V., pp. 388-391], caused not only by geopolitical tasks, but also by the asymmetry of socio-economic development [9, Zaikov K.S., Kondratov N.A., Kudryashova E.V. et al., p. 187; 12, Baranov S.V., pp. 45-47], determining the specifics of entrepreneurship development [6, Skufina T.P., Bazhutova E., pp. 79-84; 13, Pilyasov A.N., Zamyatina N.Yu., pp. 14-15; 14, Toskunina V.E., Karma-kulova A.V., pp. 34-35]. It is obvious that it is entrepreneurship that largely determines the conditions and prospects for the socio-economic development of this territory [6, Skufina T.P., Bazhutova E., pp. 77-79; 15, Suopajärvi L., Ejdemo Th., Klyuchnikova E. et al., p. 39]. In this regard, the identification of the specifics of the entrepreneurial activity of the Russian Arctic is significant both from the point of view of the development of the theory and from the point of view of the scientific support of the processes of territorial management.

The purpose of the study is a comparative assessment and identification of the specifics of the manifestation of entrepreneurial activity in the regions of the Russian Arctic in the context of the all-Russian situation and the determination of the corresponding management mechanisms.

On the problem of entrepreneurship development in the Arctic zone of the Russian Federation

The territorial diversity of Russia determines the feasibility of diagnosing the phenomenon of entrepreneurial activity in a regional context. One of the most interesting territories from the standpoint of considering entrepreneurial activity is the regions of the Arctic zone of the Russian Federation (AZRF). This is due not only to unique economic and geographical conditions, but also to the declared strategic management goal, aimed at increasing the level of socio-economic development of the Russian Arctic [10, Porfiryev B.N., Leksin V.N., pp. 629-639; 11, Samarina V.P., Samarin A.V., Skufina T.P., Baranov S.V., p. 388]. This "Arctic" research context determines the feasibility of considering the problems of the development of Arctic entrepreneurship from two perspectives: first, from the perspective of the theory of entrepreneurship; secondly, from the standpoint of modern conditions for the development of the Russian Arctic. Consider the first component - the theory of entrepreneurship. For a long time, world scientific thought has been actively involved in the theory and practice of entrepreneurship. Classical representations of the theory of entrepreneurship define entrepreneurial activity through the term "entrepreneurial activity", considering these concepts to be identical [1, Minniti M., Levesque M., p. 604; 16, Moura M.G., p. 280]. Then the term "entrepreneurial activity" evolves into the category of personality traits, which in this case can have different types of manifestation [2, Autio E., Kenney M., Mustar P., Siegel D., et al., pp. 1098-1106; 17, Edoho F. M., pp. 280-293]. Further, the idea of the qualitative characteristic of entrepreneurial activity takes the form of an integral quantitative indicator combining the synthesis of the results of entrepreneurship [2, Autio E., Kenney M., Mustar P., Siegel D. et al., pp. 1098-1106; 5, Verkhovskaya O.R., Alexandrova E.A., Bogatyreva K.A., et al.; 6,

Skufina T.P., Bazhutova E., pp. 77–85; 15, Suopajärvi L., Ejdemo Th., Klyuchnikova E. et al., pp. 31–39; 16, Moura M. G., pp. 285–300; 17, Edoho F. M., pp. 279–294].

The activity and multidimensionality of studies of the phenomenon of entrepreneurial activity predetermined the versatility of this concept, its ambiguity. Therefore, questions of the essence of the category of “entrepreneurial activity” remain controversial, respectively, the composition of the main indicators, allowing to assess the level of entrepreneurial activity, is also debatable.

One of the most interesting and recognized research in the field of entrepreneurship is the Global Entrepreneurship Monitoring (GEM) project. Russia joined the project as early as 2006. In this project, entrepreneurial activity is the percentage of the population aged 18 to 64 years involved in entrepreneurial activity [5, Verkhovskaya O.R., Alexandrova E.A., Bogatyreva K.A. et al.]. However, even such a universally recognized definition within the GEM project contains a contradiction. So, on the one hand, all researchers note the versatility of the concept of “entrepreneurial activity,” on the other hand, the treatment under discussion characterizes it more as an entrepreneurial activity of the population. Numerous studies (both Russian and foreign) indicate a change in the approach to the study of entrepreneurial activity.

So, in most modern studies, entrepreneurial activity is considered as a property that is inherent in all business entities, regardless of ownership or job status [2, Autio E., Kenney M., Mustar P., Siegel D. et al., pp. 1098–1106; 15, Suopajärvi L., Ejdemo Th., Klyuchnikova E. et al., p. 39; 17, Edoho F. M., pp. 279–294]. Therefore, any entity of the market that functions to generate income from the use of emerging opportunities in the market can exhibit entrepreneurial activity [6, Skufina T.P., Bazhutova E., pp. 79–84]. Thus, entrepreneurial activity can manifest itself as a property of each market entity. That is, it can be shown both by households (population), and business (existing enterprises), and the state.

The prevailing approach to the study of entrepreneurial activity from the point of view of only the population leads to a unilateral consideration of the quantitative indicators that form the basis of its calculation methods [5, Verkhovskaya O.R., Alexandrova E.A., Bogatyreva K.A. et al.]. This approach does not allow a complete diagnosis of the manifestation of entrepreneurial activity in a certain territory. As a result, a decrease in the efficiency of the use of resources aimed at enhancing entrepreneurship.

In the framework of this study, we suggest entrepreneurial activity as a comprehensive indicator that reflects the intensity of participation in entrepreneurial activity of all business entities: households, business, the state, the synergistic effect of which will determine the level of development and the specifics of entrepreneurial activity in a particular territory.

1. This interpretation of entrepreneurial activity allows you to:
2. 1. comprehensively characterize the manifestation of entrepreneurial activity;
3. 2. determine the level and identify trends in the activity of a specific market participant in the territory of a region;

4. 3. classify the regions of the country according to the criterion of the manifestation of any type (specificity) of entrepreneurial activity.

Consider the second component - modern conditions for the development of the Russian Arctic. As rightly noted in a series of studies on current conditions and strategic priorities for the development of the Russian Arctic, “the search for answers to the challenges of the development of the Arctic is complicated by the high degree of uncertainty of the changes taking place in this region, due to the lack of our knowledge about their nature and consequences” [7, Zaikov K.S., Kondratov N.A., Kudryashova E.V. et al., p. 10]. This primarily concerns environmental factors, including both the natural-geographical component and the foreign policy [18, Skufina T.P., Samarina V.P., Krachunov H., Savon D., p. 18, 20; 19, Hamilton L.C., Saito K., Loring P.A., Lammers R.B. et al., pp. 115–117; 20, Hamilton L.C., Lammers R.B., pp. 120-123]. As for the internal factors of the development of the Russian Arctic, the processes and prospects here are naturally more defined [11, Samarina V.P., Samarin A.V., Skufina T.P., Baranov S.V., pp. 388–391; 18, Skufina T.P., Samarina V.P., Krachunov H., Savon D.Yu., pp. 18-21], scientific tasks are also more specific [9, Zaikov K.S., Kondratov N.A., Kudryashova E.V., Tamitskii A.M., pp. 184-185; 10, Porfiryev B.N., Leksin V.N., pp. 629-630]. So, the overwhelming majority of researchers, “north-scientists”, take a pragmatic position - to provide scientific support for management in order to achieve the declared task of the comprehensive socio-economic development of the Russian Arctic, based on the development of quality of life factors and the formation of conditions for the accumulation of human capital. It should be noted that the most multidimensional, having absorbed the scientific experience of the main schools of north science in Russia, modern ideas about Arctic management are presented in a collective monograph [21, Porfiryev B.N., p. 802].

Significant attention in modern studies is given to the task of ensuring the management of the Russian Arctic as a single system through the development of support zones. It emphasized that such a task as the development of the Russian Arctic as a single macro-project, as a single object of planning, has not been set and has not been set in any country in the world. Ensuring the effective management of the Russian Arctic is the most important task, in fact, the level of national security. This is since the resources of the Russian Arctic are decisive for the Russian economy, and the task of the comprehensive socio-economic development of the Russian Arctic is set by the management by virtue of ensuring the necessary synchronization with global processes.

The pragmatic position of providing scientific support for the management of the Russian Arctic is the only possible and actively implemented. The significance of such support and its relevance to practice is beyond doubt [9, Zaikov K.S., Kondratov N.A., et al., pp. 184–201; 22, Laverov N.P.]. Now the management tasks have been concretized to the practice of implementing the Arctic mega-project, the formation of support development zones is underway, the implementation of which determines not only economic development, but also an increase in the quality of life of the population of the Russian Arctic and the associated development of entrepreneurship as a factor in ensuring economic growth and social stability.

Despite the lack of official recognition in the state documents of the Russian Arctic policy, Arctic entrepreneurship is already an established phenomenon, due to the regional features of doing business and developing entrepreneurship in the Arctic.

Today, entrepreneurship in the Russian Arctic is a small share of small enterprises and a small number of able-bodied people employed in small and medium-sized enterprises (hereinafter referred to as SMEs), regarding the situation in Russia as a whole [5, Verkhovskaya OR, Alexandrova EA . et al., p. 66; 6, Skufina T.P., Bazhutova E., p. 85; 13, Pilyasov A.N., Zamyatina N.Yu., p. 4-15].

It is due to several reasons, most of which are interlinked. First, the dominance of large, including city-forming, enterprises in the system of regional economy of the Arctic, which determines the concentration of all types of resources, including human resources, in the system of large enterprises [6, Skufina T.P., Bazhutova E., pp. 77–85; 8, Samarina V.P., Skufina T.P., Samarin A.V., p. 705-716; 9, Zaikov K.S., Kondratov N.A., et al., pp. 184–201; 11, Samarina V.P., Samarin A.V., Skufina T.P., Baranov S.V., pp. 388–398; 13, Pilyasov A.N., Zamyatina N.Yu., pp. 4-15; 15, Suopajärvi L., Ejdemo Th., Klyuchnikova E., Korchak E. et al., pp. 31–32]. Studies show that it is large investment projects of large enterprises that determine the specifics of production processes and GRP production in the regions of the Arctic [7, Zaikov K.S., Kondratov N.A. et al., pp. 5-24; 12, Baranov S.V., p. 21].

Secondly, high salaries and the relative stability of work, the absence of the acuteness of the problem of the “turnover” of personnel of city-forming enterprises, when choosing the areas of labor activity, determine the preference for work in a large enterprise, rather than in the field of small and medium-sized enterprises [6, Skufina T.P., Bazhutova E., pp. 77–85; 9, Zaikov K.S., Kondratov N.A., et al., pp. 184–201; 13, Pilyasov A.N., Zamyatina N.Yu., pp. 4-15; 14, Toskunina V.E., Karmakulova A.V., pp. 27–35].

Thirdly, the lack of historically developed developed entrepreneurship in the Arctic (compared to the all-Russian situation, starting from the period of the collapse of the USSR) and, at the same time, the orientation of a significant part of the population to migration to more climate-friendly regions of the country [8, Samarina V.P., Skufina T.P., Samarin A.V., pp. 705–706; 9, Zaikov K.S., Kondratov N.A., Kudryashova E.V., Tamitskii A.M., pp. 184-185; 12, Baranov S.V., p. 21]. Fourth, the increased costs of doing business in the Arctic lead to higher risks of doing business [12, Baranov S.V., p. 21; 13, Pilyasov A.N., Zamyatina N.Yu., pp. 4-15].

At the same time, the development of the mineral and raw materials sector of the Russian Arctic on the basis of modernization of production limits the employment opportunities at large mining enterprises. The same trends are also characteristic of the transport industry, services, etc. The growing unemployment problem, exacerbated by increased living costs in the Arctic, can initiate an increase in outflow of the population, which leads to a deepening of the problem of “empty space” [8, Samarina V.P., Skufina T.P., Samarin A.V., pp. 705-716; 9, Zaikov K.S., Kondratov N.A. et al., p. 184–201; 12, Baranov S.V., p. 21]. We note that the migration problems of the Arctic are

characteristic of all states that include Arctic territories [19, Hamilton L.C., Saito K., Loring P.A. et al., pp. 115-133; 20, Hamilton L.C., Lammers R.B., pp. 107-108]. Therefore, to ensure a comprehensive study of the trends and prospects of socio-economic development of the Russian Arctic, it is necessary to consider the specifics of the manifestation of the phenomenon of entrepreneurship as a factor and result of the development of this territory. The relevance of such a study is also determined by the strategic management goal declared in Russia, aimed at increasing the level of socio-economic development of the Russian Arctic.

In addition, the listed regional features of entrepreneurial activity in the Arctic, which have developed today, determine the need to find the appropriate management mechanism, which, undoubtedly, due to the indicated Arctic specificity, will differ from the all-Russian tools to support and stimulate entrepreneurial activity.

Methodical specifics of research

To develop an integrated indicator of assessing entrepreneurial activity, the present study used the simple multidimensional average method. This method makes it possible, on the basis of dimensionless quantities, to carry out a comprehensive quantitative assessment of the entrepreneurial activity of a particular territory. The method allows considering a set of statistical indicators that characterize various types of manifestations of entrepreneurial activity. The properties of the method fully correspond to the revealed essence of entrepreneurial activity, understood as a complex property distributed between the entities exhibiting it (entrepreneurial business activity (EA business), entrepreneurial activity of the population (EA population), entrepreneurial activity of the state (EA state)).

$$\bar{p}_j = \frac{\sum_{i=1}^k p_{ij}}{k} = \sum_{j=1}^k \left(\frac{x_{ij}}{\bar{x}_j} \right) : k, (1)$$

где

\bar{p}_j – multidimensional average for i-unit;

x_{ij} – sign value x , for i-unit;

\bar{x}_j – average value of x_i ,

k – amount of signs;

j – number of signs;

i – aggregate unit number.

The feature under study is entrepreneurial activity, considered as a set of indicators characterizing the forms of manifestation of entrepreneurial activity for each distinguished type: EA population, EA business, EA state.

EA of the population - the integral value of the following indicators: 1) the number of registered individual entrepreneurs and legal entities belonging to the category of small and medium-sized businesses; 2) the participation of individuals as founders in the total authorized capital of organizations.

EA business - the integral value of the following indicators: 1) participation of legal entities in the authorized capital of organizations; 2) the creation of entrepreneurial structures as a result of the processes of separation, separation, merger, acquisition, etc.

EA state - the integral value of the following indicators: 1) creation of state-owned unitary and municipal enterprises, as well as the number of business companies created as a result of the transformation of state and municipal unitary enterprises, units; 2) state participation in the authorized capital of organizations.

The calculation algorithm includes calculating the level of entrepreneurial activity for each selected type at the regional level and comparing the obtained values with each other within one region to identify the prevailing type of entrepreneurial activity in it. The calculation is carried out for all regions of the Russian Federation, therefore, further research consists in comparing the group of regions included in the Russian Arctic, by the type of entrepreneurial activity prevailing in them relative to the overall Russian situation. Based on the identified features of the manifestation of entrepreneurial activity in the regions of the Russian Arctic, recommendations will be made for managing it in order to increase it in order to stimulate their socio-economic development.

The territories of the regions included in the Russian Arctic are normatively fixed by Decree of the President of the Russian Federation dated May 2, 2014 No. 296 "On land territories of the Arctic zone of the Russian Federation" (with subsequent amendments). So, the Arctic zone includes regions that are completely located in the Arctic (the Murmansk Oblast, the Yamal-Nenets Autonomous Okrug, and the Chukotka Autonomous Okrug), as well as regions whose territories are partially located in the Arctic zone (the Arkhangelsk Oblast, the Republic of Karelia, the Komi Republic, the Krasnoyarsk Krai, the Republic of Sakha (Yakutia)). In Russia, according to prevailing management and regulatory practice, all these territories are considered areas of the Russian Arctic.

Results and discussion

As a result of calculations of the level of entrepreneurial activity by types of its manifestation in the regions of the Russian Federation and subsequent comparison of the results to identify the prevailing type of entrepreneurial activity in each particular region (Table 1), all regions of the Russian Federation were divided into the corresponding groups according to this criterion (Table 2).

Table 1

Summary results of calculations on the distribution of entrepreneurial activity (EA) depending on the market entity in the territories of the Russian Federation ¹

Territory	EAS	EAB	EAP	Common EA	Prevailing EP
Belgorod Oblast	0.558	0.494	0.717	1.77	EA population
Bryansk Oblast	0.492	0.266	0.891	1.65	EA population
Vladimir Oblast	0.418	0.523	1.014	1.96	EA population
Voronezh Oblast	0.687	0.585	1.170	2.44	EA population
Ivanovo Oblast	0.333	0.623	0.443	1.40	EA business

¹ Source: developed by the authors.

Kaluga Oblast	0.566	0.699	0.850	2.12	EA population
Kostroma Oblast	0.312	0.247	0.358	0.92	EA population
Kursk Oblast	0.538	0.234	0.400	1.17	EA state
Lipetsk Oblast	0.378	0.365	0.515	1.26	EA population
Moscow Oblast	3.142	4.384	3.554	11.08	EA business
Oryol Oblast	0.232	0.225	0.351	0.81	EA population
Ryazan Oblast	0.467	0.351	0.495	1.31	EA population
Smolensk Oblast	0.488	0.271	0.440	1.20	EA state
Tambov Oblast	0.354	0.232	0.322	0.91	EA state
Tver Oblast	0.686	0.444	0.732	1.86	EA population
Yaroslavl Oblast	0.382	1.001	0.994	2.38	EA business
Moscow	32.333	22.862	13.326	68.52	EA state
Republic of Karelia	0.300	0.248	0.271	0.82	EA state
Komi Republic	0.430	0.325	0.340	1.10	EA state
Arkhangelsk Oblast and the Nenets Autonomous Okrug	0.937	0.444	0.646	2.03	EA state
Vologda Oblast	0.554	0.465	1.054	2.07	EA population
Kaliningrad Oblast	0.356	0.465	0.741	1.56	EA population
Leningrad Oblast	0.514	0.949	1.182	2.65	EA population
Murmansk Oblast	0.366	0.384	0.275	1.03	EA business
Novgorod Oblast	0.236	0.232	0.248	0.72	EA population
Pskov Oblast	0.234	0.206	1.198	1.64	EA population
St. Petersburg	2.276	7.044	4.338	13.66	EA business
Republic of Adygeya	0.142	0.065	0.199	0.41	EA population
Republic of Kalmykia	0.175	0.095	0.084	0.35	EA state
Krasnodar Oblast	1.985	1.771	3.860	7.62	EA population
Astrakhan Oblast	0.314	0.200	0.359	0.87	EA population
Volgograd Oblast	0.923	1.055	1.013	2.99	EA business
Rostov Oblast	1.239	1.325	2.106	4.67	EA population
Republic of Dagestan	1.273	0.466	0.532	2.27	EA state
Republic of Ingushetia	0.152	0.054	0.071	0.28	EA state
Kabardino-Balkarian Republic	0.250	0.190	0.446	0.89	EA population
Karachay-Cherkess Republic	0.162	0.143	0.507	0.81	EA population
Republic of North Ossetia - Alania	0.244	0.193	0.239	0.68	EA state
Republic of Chechnya	0.744	0.097	0.220	1.06	EA state
Stavropol Oblast	0.629	0.717	2.172	3.52	EA population
Republic of Bashkortostan	1.307	1.172	1.563	4.04	EA population
Mari El Republic	0.226	0.187	0.277	0.69	EA population
Republic of Mordovia	0.496	0.122	0.313	0.93	EA state
Republic of Tatarstan	1.452	2.078	2.231	5.76	EA population
Udmurt Republic	0.520	0.512	0.854	1.89	EA population
Chuvash Republic - Chuvashia	0.528	0.323	0.563	1.41	EA population
Perm Oblast	0.880	0.856	1.565	3.30	EA population
Kirov Oblast	0.609	0.418	0.681	1.71	EA population
Nizhny Novgorod Oblast	0.948	1.764	1.195	3.91	EA business
Orenburg Oblast	0.721	0.449	0.622	1.79	EA state
Penza Oblast	0.536	0.346	0.533	1.41	EA state
Samara Oblast	0.970	1.469	1.710	4.15	EA population
Saratov Oblast	0.784	0.608	0.963	2.35	EA population
Ulyanovsk Oblast	0.422	0.482	0.653	1.56	EA population
Kurgan Oblast	0.301	0.236	0.260	0.80	EA state
Sverdlovsk Oblast	1.825	2.606	2.592	7.02	EA business
Tyumen Oblast without autonomous districts	0.485	1.012	0.751	2.25	EA business
Khanty-Mansiysk Autonomous Okrug - Yugra	0.488	2.751	1.050	4.29	EA business
Yamal-Nenets Autonomous Okrug	0.276	1.019	0.234	1.53	EA business
Chelyabinsk Oblast	0.875	1.627	1.765	4.27	EA population
Altai Republic	0.165	0.100	0.104	0.37	EA state

Republic of Buryatia	0.503	0.115	0.315	0.93	EA state
Tyva Republic	0.262	0.070	0.069	0.40	EA state
Republic of Khakassia	0.255	0.230	0.254	0.74	EA state
Altai Oblast	0.663	0.577	1.014	2.25	EA population
Transbaikial Oblast	0.552	0.317	0.284	1.15	EA state
Krasnoyarsk Oblast	1.389	1.586	1.699	4.67	EA population
Irkutsk Oblast	1.047	1.414	1.050	3.51	EA business
Kemerovo Oblast	0.672	0.846	1.520	3.04	EA population
Novosibirsk Oblast	0.871	1.921	1.689	4.48	EA business
Omsk Oblast	0.626	0.552	0.971	2.15	EA population
Tomsk Oblast	0.272	0.586	0.472	1.33	EA business
Republic of Sakha (Yakutia)	1.247	0.504	0.593	2.34	EA state
Kamchatka Krai	0.240	0.174	0.151	0.57	EA state
Primorsky Krai	0.889	0.760	1.250	2.90	EA population
Khabarovsk Oblast	0.406	1.361	0.577	2.34	EA business
Amur Oblast	0.266	0.287	0.323	0.88	EA population
Magadan Oblast	0.098	0.250	0.151	0.50	EA business
Sakhalin Oblast	0.330	0.309	0.320	0.96	EA state
Jewish Autonomous Oblast	0.089	0.046	0.060	0.20	EA state
Chukotka Autonomous Okrug	0.130	0.060	0.012	0.20	EA state
Republic of Crimea	0.988	0.269	1.117	2.37	EA population
Sevastopol	0.160	0.068	0.212	0.44	EA population
Tula Oblast	0.428	0.621	0.742	1.79	EA population

Table 2

Classification of regions of the Russian Federation by type and level of entrepreneurial activity (EA) manifestation

EA Level			
EA type	Low EA	Middle EA	High EA
EA population	Karachay-Cherkess Republic Astrakhan Oblast Amur Oblast Kabardino-Balkarian Republic Kostroma Oblast Lipetsk Oblast Ryazan Oblast Chuvash Republic - Chuvashia Ulyanovsk Oblast Kaliningrad Oblast Pskov Oblast Bryansk Oblast Kirov Oblast Belgorod Oblast Tula Oblast Tver Oblast Udmurt Republic Vladimir Oblast Vologda Oblast Kaluga Oblast Omsk Oblast Altai Oblast Saratov Oblast Republic of Crimea Voronezh Oblast Leningrad Oblast Primorsky Krai	Kemerovo Oblast Perm Oblast Stavropol Oblast Republic of Bashkortostan Samara Oblast Chelyabinsk Oblast Rostov Oblast Krasnoyarsk Krai Republic of Tatarstan Krasnodar Oblast	
EA business	Magadan Oblast Murmansk Oblast Tomsk Oblast Ivanovo Oblast Yamal-Nenets Autonomous Okrug Tyumen Oblast without autonomous districts Khabarovsk Oblast Yaroslavl Oblast Volgograd Oblast	Irkutsk Oblast Nizhny Novgorod Oblast Khanty-Mansi Autonomous Okrug - Yugra Novosibirsk Oblast Sverdlovsk Oblast Moscow Oblast	St. Petersburg

EA state	Jewish Autonomous Region Chukotka Autonomous Okrug The Republic of Ingushetia Republic of Kalmykia Altai Republic Tyva Republic Kamchatka Krai Republic of North Ossetia - Alania The Republic of Khakassia Kurgan Oblast Republic of Karelia Tambov Oblast Republic of Mordovia Republic of Buryatia Sakhalin Oblast Republic of Chechnya Komi Republic Transbaikal Oblast Kursk Oblast Smolensk Oblast Penza Oblast Orenburg Oblast Arkhangelsk Oblast and the Nenets Autonomous Okrug Republic of Dagestan Republic of Sakha (Yakutia)		Moscow

The results of calculations and comparison of the obtained values by the prevailing type of entrepreneurial activity in each of the Arctic territories are presented in Table 3.

Table 3

*Consolidated Entrepreneurial Activity Assessment (PA) Results
in the regions of the Russian Arctic*

Territory	EAS	EAB	EAP	Common EA	Prevailing EP
Republic of Karelia	0.300	0.248	0.271	0.82	EA state
Komi Republic	0.430	0.325	0.340	1.10	EA state
Arkhangelsk Oblast and the Nenets Autonomous Okrug	0.937	0.444	0.646	2.03	EA state
Murmansk Oblast	0.366	0.384	0.275	1.03	EA business
Yamal-Nenets Autonomous Okrug	0.276	1.019	0.234	1.53	EA business
Krasnoyarsk Krai	1.389	1.586	1.699	4.67	EA population
Republic of Sakha (Yakutia)	1.247	0.504	0.593	2.34	EA state
Chukotka Autonomous Okrug	0.130	0.060	0.012	0.20	EA state

A review of data for all Russia indicates that the largest group is the group of territories where EA population prevails (it includes 42 territories of Russia). Common features of the economies of these territories: developed manufacturing industry, wholesale and retail trade, transport and communications, real estate operations, construction and agriculture. In the Arctic, only the Krasnoyarsk Krai was included in this group. Despite its pronounced industrial character, which makes it related to other territories of the Russian Arctic, today the Krasnoyarsk Krai is one of the leading Russian areas in terms of investment activity. It is one of the top ten subjects of the Russian Federation for the GRP production. The territory is distinguished by a high level of devel-

opment of agriculture, processing and food industries, a developed construction and fuel and energy complex, and transport and communication infrastructure.

The next largest is the group with a predominance of EA state (it includes 26 territories of Russia). Common features of their economy are metallurgy, mining of minerals, woodworking, and the fuel and energy complex predominate. Most territories of the Arctic belong to the lower segment of this group, which is determined by the participation of the state in large entrepreneurial structures that carry out activities in the main sectors of the economy of these regions.

The smallest group of Russian territories is dominated by EA business (it includes 15 territories of the Russian Federation). The economies of this group are diverse, qualitative assessments indicate that these regions are characterized by favorable business conditions. Two regions of the Arctic - the Murmansk Oblast and the Yamal-Nenets Autonomous Okrug - entered the lower segment of this group.

The prevailing influence of the entrepreneurial activity of business and the state corresponds to the above-mentioned specific features of the development of the Russian Arctic, which consists in a high degree of corporatization of the Arctic economy and the active participation of a state with deep historical roots in the formation and development of the economy of the northern territories. The emphasis on this feature of the territories of the Russian Arctic makes it possible to comprehensively consider the specifics of its socio-economic situation and development trends and form an appropriate management mechanism.

Suggestions for the state management

The mechanism for managing entrepreneurial activity in specific territories should depend on the type and level of entrepreneurial activity manifestation of in the territory. It is generally recognized that it is the population that should become the driver of the economic growth of the country's economy and ensure the growth of small and medium-sized enterprises. Therefore, strategies for the development of entrepreneurship in the regions should be aimed not only at enhancing entrepreneurial activity, but also at redistributing entrepreneurial activity in favor of an increase in the EA population. A striking example of this is the advantageous difference between the Krasnoyarsk Krai and other regions of the Russian Arctic. In it, entrepreneurial activity of the population predominates. The Krasnoyarsk Krai was able to achieve this situation through the implementation of an active policy of supporting investment activity, which emphasizes the implementation of public-private partnership mechanisms, the provision of state guarantees, subsidies, budget investments and tax benefits to existing businesses.

Thus, the mechanism of managing entrepreneurial activity in the Russian Arctic economy is based on the redistribution of the current prevailing types of entrepreneurial activity of the state and business in favor of entrepreneurial activity of the population through the implementation of interconnected management concepts involving the joint participation of business and the population, the state and the population, or all entities market at the same time.

So, it can be concluded that for the territories of the Arctic characterized by the predominance of EA states (Chukotka Autonomous Okrug, Republic of Karelia, Komi Republic, Arkhangelsk Oblast and Nenets Autonomous Okrug, and Republic of Sakha (Yakutia)), an effective tool for the implementation of the “conjugate activities” of the state and business is a public-private partnership. Moreover, the forms of manifestation of partnership can be the most diverse: service contracts (outsourcing), management contracts, lease and temporary transfer of rights, concession agreements (various types). The transfer of EA state to EA population is possible due to support and incentive to implement the concepts of social outsourcing, investment in the creation of small and medium-sized businesses, and the development of state franchising. Investments in the innovation sphere are especially important and fruitful.

In the regions of the Arctic with a predominant EA business, to redistribute it to the side of the EA population, it is necessary to implement state policy aimed at stimulating business to involve entrepreneurial initiatives of the population. The forms and tools of this policy may include the application of concepts of intra-coaching by large businesses, support and stimulation of private business investment in newly created entrepreneurial structures, outsourcing and the creation of subsidiaries and affiliates based on the parent company, incl. franchise network development.

Conclusion

It is proved that entrepreneurial activity is an important factor in ensuring the integrated, balanced socio-economic development of the Russian Arctic.

The analysis of entrepreneurial activity of the Arctic territories in the all-Russian context is carried out. Based on the estimates obtained, the regions of Russia are classified by the type of entrepreneurial activity prevailing in them, and the place of the Arctic territories in this classification is established. It was revealed that entrepreneurial activity in the regions of the Arctic differs not only in the level of its manifestation, but also in the prevailing type of entrepreneurial activity in them both with respect to the overall Russian situation and between the Arctic territories.

Thus, it was revealed that the dominant force of influence in the regions of the Russian Arctic is the entrepreneurial activity of business and the state, which meets the current features of the development of the Russian Arctic, which consists in a high degree of corporatization of the Arctic economy and the active participation of the state in it. Since the Arctic belongs to a certain classification group, recommendations on the management of entrepreneurial activity and its stimulation are proposed.

The emphasis on this regional feature made it possible to form a mechanism for managing Arctic entrepreneurship, which comprehensively considers the specifics of the socio-economic situation and development trends of the Arctic territories. It consists in enhancing the entrepreneurial activity of the population in the Arctic as a target and ensuring its stable socio-economic development through the implementation of state policy aimed at stimulating business and the state to

involve entrepreneurial initiatives of the population in the contour of their management zones. In regions classified as belonging to territories with a predominant entrepreneurial activity of the business, this is achieved by applying management concepts such as intrapreneurization, support and stimulation of private business investments in newly created entrepreneurial structures, outsourcing and the creation of subsidiaries and dependent companies based on the parent company, including the development of networks of franchising companies. For regions with a predominant influence of state entrepreneurial activity, support and incentive to implement the concepts of social outsourcing, investment in the creation of small and medium-sized businesses, and the development of state franchising are necessary.

The application of the recommendations will strengthen and redistribute the current entrepreneurial activity in favor of revitalizing the population, which will become the basis for the development of entrepreneurship as a factor in ensuring economic growth and social stability in the Arctic.

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The Republic of Korea and the Arctic region: from policy formulating to policy making*

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Abstract. The following article is a policy review paper devoted to the general analysis of the Arctic policy of the Republic of Korea. The analysis includes the explanation of the country's demand for conducting its own policy in the Arctic that mostly resides in the peculiarities of South Korea's geographical position and economic conditions and demands. The policy of South Korea in the Arctic region is highlighted in the three stages: before joining the Arctic Council, during the first master plan for the Arctic, and after the updated Arctic policy was issued. The brief history of the Korea's participation in the Arctic activities is highlighted. Also, the provisions of Korea's first master plan for the Arctic are highlighted, and some conclusions are made regarding its implementation. Then the updated Arctic policy of South Korea is examined. The core conclusion is that during 20 year of participation in the Arctic-related activities, the Republic of Korea has transformed its Arctic policy from being research-oriented only to providing national economic benefits from the multilateral inclusion in the Arctic cooperation institutions and events. Some further reflections on Korea's further Arctic policy are provided at the conclusion.

Keywords: *Republic of Korea, Arctic Council, Arctic policy, non-Arctic actors in the Arctic, economic benefits from the Arctic activities, Arctic research cooperation.*

Introduction

Currently, the relevance of numerous fundamental and applied research related to the Arctic is traditionally associated with the strategic importance of the region for the globe. Among the widespread reasons for the global significance of the Arctic are promising transport opportunities of the Northern Sea Corridor (incl. the NSR), the Northwest Passage and even the North Pole [1, Zhang Z., Huisin D., Song M.], as well as the growing demand for mineral resources (mainly hydrocarbons and rare-earth metals) [2, Swain F.], and the global impact of climate change in the Arctic, which is of great concern to environmentalists and researchers [3, Overland J. et al.]. Thus, these points constitute a sophisticated argument for vigorous activity in the Arctic and create the basis for research in economics, society, and the environment.

The creation of the Arctic Council marked the beginning of the active participation of non-Arctic states in developing policies in the Arctic through the granting of observer status. Since 1996, 13 non-Arctic states have received observer status in the Arctic Council. It is worth emphasizing that from the Arctic policy perspective, the year 2013 was characterized by the appearance of a full pool

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of observers - Asian states. Japan, China, India, Korea, and Singapore received observer status at a meeting of the Arctic Council, held at the ministerial level in Kiruna.

The Arctic Council membership requires the relevant policy development and practice in the non-Arctic states¹. It is also evident that the Arctic policy of observer states has different vital points and the level of state involvement, and, consequently, the distinct role of the country in the global Arctic cooperation. Although the position and prospects of China's activities in the Arctic region are widely covered in political and research discourse, we believe that so much attention is not paid to the other countries of the "Asian Pool" in the Arctic Council. As for the other Asian observers in the Council, it seems quite interesting to consider the case of the Republic of Korea and its Arctic policy. The government and business circles of the country seek the extensive use of the economic and research potential of the Arctic and thereby influence the structure of global governance of the Arctic and economic activity. So, they should be clear for all the interested parties.

South Korea's Arctic Policy Development Issues

Despite participation in the Arctic Council, which allows South Korea to gain more considerable political influence at the global level, it is evident that this is not an aim. A complex interrelation of the reasons why the Arctic region is of interest to South Korea reveals.

First, it is essential to study the geographical position of the country, which affects the following economic phenomena. The Republic of Korea is in the southern part of the Korean Peninsula. However, its position is like that of the island. It has no land connection with the mainland. Political tension after the Korean War limits rail and road communications through the north of the peninsula. For this reason, the only means of communication between South Korea and other countries is maritime transport and air traffic. In this context, two interrelated factors are of great importance: The South Korean economy grounds on trade, and the level of dependence on national foreign trade is approximately 90%². The second important factor is the share of shipping in the country's total trade, which is about 99.7%, that is, marine communications in South Korea is a vital and irreplaceable force.

When it comes to the importance of the Arctic for the country, it is necessary to note the general state of the Korean economy. Over the past 30 years, the Republic of Korea's economy has grown more than ten times (GDP has grown 14 times, GNI - 11 times)³. In addition, the national economy is highly dependent on imports of energy sources (about 95%)⁴. Based on the previous, it is quite natural that South Korea is looking for a means to shorten the delivery of energy and other goods to Korean ports. The use of the Northeast Sea Corridor, incl. the NSR seems to be a promising possibility, and it offers shorter delivery routes between ports in Asia and Europe [4, Theo-

¹ Arctic Council Rules of Procedure. URL: <http://hdl.handle.net/11374/940> (accessed 15 October 2019).

² Share of imports and export in gross national income (GNI) in South Korea from 2009 to 2018. URL: <https://www.statista.com/statistics/642175/south-korea-foreign-trade-share/> (accessed 17 October 2019).

³ Explore Korea through Statistics 2018 / Statistical Service Planning Division of Statistics s Korea. 2018. c. 33. URL: <http://kostat.go.kr/portal/eng/news/3/index.board?bmode=read&aSeq=372131> (accessed 20 October 2019).

⁴ Ibid, pp. 57–58.

charis D. et al.]. The energy needs of Korea's growing economy require Arctic oil and gas. An essential point, in this case, is the proximity of these resources, although prices for Arctic energy sources are currently a controversial issue [5, Harsem Ø., Eide A., Heen K., p. 8041].

Another point in the Arctic focus of South Korea is the economic opportunities of the industrial sector. The country's well-developed high-tech shipbuilding cluster has high potential in building ships for operation in the harsh conditions of the Arctic, as well as offshore platforms to produce Arctic hydrocarbons. All this represents the economic interests of South Korea in the direction of promoting the exploitation of Arctic deposits. Well-known examples were the construction of the world's first icebreaking LNG tanker for the Yamal LNG project at Daewoo Shipyards in Busan. It is also planned to release other similar tankers⁵.

Summing up, it should be noted that the geographical features of South Korea and the growth of the energy-intensive economy, dependent on foreign trade and driven mainly by the sea. They are the reason why the Korean government and business are trying to take a consistent and advantageous position in the developing policies in the Arctic. Briefly analyze the first steps of the country in this region.

As for many other non-Arctic states, the beginning of the activities of South Korea in the Arctic region is associated with research. After the creation of the Arctic Council in 1996, Korea declared its interest in research activities in the Arctic region. Before this, the state had some research experience in Antarctica, as part of the activities of the Korean Institute for Ocean Research (KORDI), which was founded in 1987 and was renamed the Korean Institute of Oceanographic Sciences and Technology (KIOST) in 2012. The figure below shows the key points in the history of Arctic research in Korea before observer status in the Arctic Council.

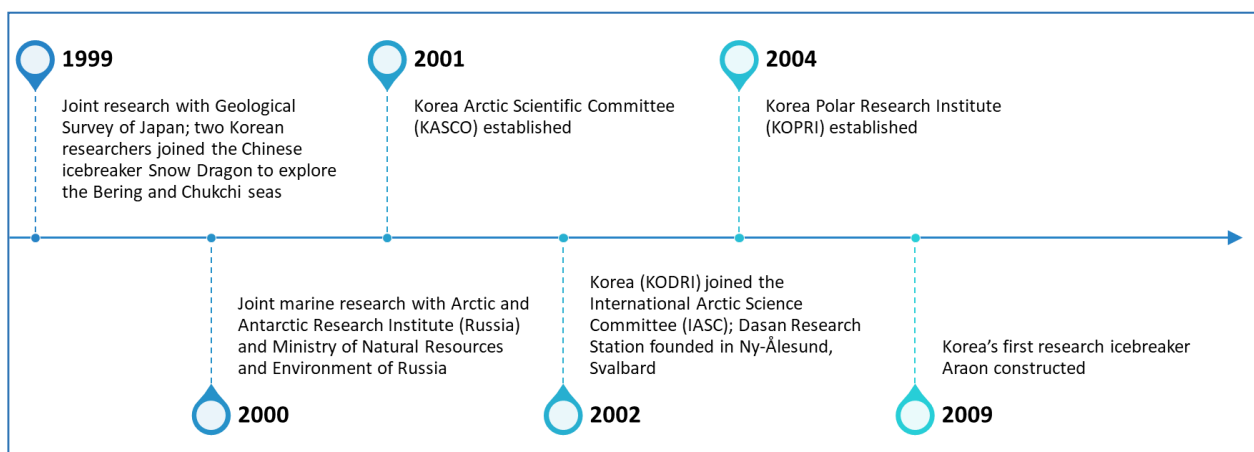


Fig. 1. Key milestones in South Korean Arctic exploration history. Created by authors based on sources

[6, EArk Y.K., c. 2-3; 7, Dongmin J., Won-sang S., Seokwoo L., pp. 87–88; 8, Kim H.J., p. 265].

1999 - Joint research with the Geological Survey of Japan; two Korean scientists joined the expedition of the Chinese ship "Snow Dragon", which studied the Bering and Chukchi Seas.

2000 - Joint marine research with the Russian Institute of the Arctic and Antarctic, as well as the Ministry of Natural Resources of the Russian Federation.

2001 - Creation of the Korean Arctic Scientific Committee (KASCO).

⁵ Korea builds world's first ever icebreaking LNG carrier - to Russia. URL: <https://www.highnorthnews.com/nb/korea-builds-worlds-first-ever-icebreaking-lng-carrier-russia> (accessed 20 October 2019).

2002 - KOPRI joined the International Arctic Science Committee (IASC); The Dasan Science Station on Spitsbergen was founded.

2004 - The Korean Polar Research Institute (KOPRI) is established.

As a result of successively developing in the 2000s research in the Arctic in 2008, the Republic of Korea applied for observer status in the Arctic Council. In support of the application in 2012 and 2013, the Ministry of Oceans and Fisheries has published “Measures to Promote Polar Region Policies,” which resulted in the proclamation of a “bipolar” policy of Korea, that is, having two directions: in the Arctic and Antarctic [7, Dongmin J., Won-sang S. & Seokwoo L., p. 88].

The first Arctic Strategy of the South Korea and its implementation

The first stage in the formation of the Arctic policy of South Korea ended with obtaining observer status in the Arctic Council at the ministerial meeting in Kiruna in 2013. This event prompted the Korean government to develop the first national document on Arctic policy, which would consider all areas of the Arctic interests of the state. So, in 2013, the Republic of Korea became the first Asian country to publish its own five-year Arctic strategy, called the “Arctic Policy Master Plan” [9, Bennett M.M., p. 887]. The overall objective of the political document was “to promote a sustainable future for the Arctic by expanding cooperation with the Arctic states and relevant international organizations in the fields of science, technology, and economics”⁶. The Master Plan should be completed together with the responsible ministries and the relevant areas of their responsibility (fig. 2), national research institutions and interested industries.

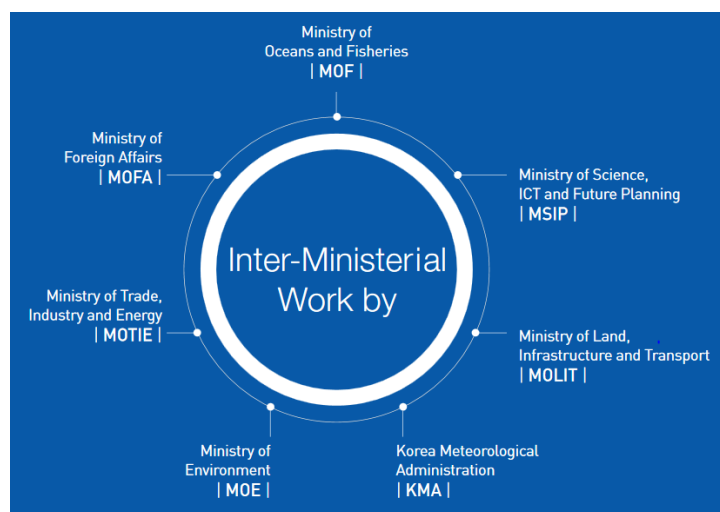


Fig. 2. South Korea ministries responsible for the Arctic Policy Master Plan⁷.

Clockwise ministerial engagement:

- Ministry of Oceans and Fisheries (MOF);
- Ministry of Science, ICT and Future Planning (MSIP);
- Ministry of Land, Infrastructure and Transport (MOLIT);
- Korea Meteorological Administration (KMA);
- Ministry of Environment (MOE);
- Ministry of Trade, Industry and Energy (MOTIE);
- Ministry of foreign Affairs (MOFA).

⁶ Arctic Policy of the Republic of Korea. URL: http://www.arctic.or.kr/files/pdf/m4/korea_eng.pdf (accessed 21 October 2019).

⁷ Ibid.

The figure below represents four key points according their theme area as described in the first South Korea Arctic Policy Master Plan.

4 Major Goals	Four Major Goals (2013-2017)
Strengthen International Cooperation	<ul style="list-style-type: none"> • Expand activities in the Arctic Council and its bodies • Participate in the cooperation programmes of the Arctic-related organizations • Facilitate private and academic initiatives
Encourage Scientific and Technological Research Capacity	<ul style="list-style-type: none"> • Support the scientific researches of Arctic stations • Build science infrastructure in the Arctic • Carry out more researches on climate change in the Arctic • Launch a spatial information project for a safer Arctic
Pursue Sustainable Arctic Businesses	<ul style="list-style-type: none"> • Assess the feasibility of the Arctic Sea Routes • Facilitate the development of Arctic technologies • Seek cooperation in the fisheries sector
Secure Institutional Foundation	<ul style="list-style-type: none"> • Establish an institutional foundation for polar policy development • Build a Polar Information Service Center

Fig. 3. The first South Korea Arctic Policy Master Plan⁸.

The activities of South Korea in the Arctic international cooperation are associated with the work of the Arctic Council bodies. The Republic of Korea collaborates with various Council working groups and task forces. The country's expert representatives take part in meetings and projects, as well as organize their seminars on Arctic issues and invite representatives of these groups to participate. South Korea holds joint workshops with the Arctic Economic Council. Bilateral consultative meetings are held with Denmark, Iceland, Canada, Norway, Russia and Finland. Korean delegations traditionally attend the world's largest forums dedicated to global Arctic dialogue: Arctic Circle (Iceland), Arctic Frontiers (Norway), Arctic: Territory of Dialogue (Russia). Besides, the 2018 Arctic Partnership Week was held in Busan. In collaboration with the University of the Arctic, the Korean Maritime Institute is organizing the "Korean Arctic Academy" - an exchange project for students from the Arctic states to promote the interests of South Korea in the Arctic region. Korean students are sent to leading international universities in the field of Arctic research as part of the Korean student research program in the Arctic. Korean scientists make presentations at various Arctic scientific conferences around the world. The North EAcific Arctic Conference has been jointly organized by the East-West Center and the Korea Maritime Institute annually since 2011.r. The list of cooperation could be longer⁹, since Korean research institutions and government work hard to expand their influence in the Arctic and keep the image of an Arctic cooperation expert.

Another direction of the Arctic Policy Master Plan is research and its necessary infrastructure. Over the past 30 years, the Republic of Korea has created a number of institutions involved

⁸ Ibid, p. 6.

⁹ See: Kang, J.-S. The Republic of Korea's 2018 Observer Review report. URL: <http://hdl.handle.net/11374/2262> (accessed 22 October 2019) and Kim, C.-W. Republic of Korea's 2016 Observer Activities Report. URL: <http://hdl.handle.net/11374/1862> (accessed 22 October 2019).

in polar and marine research, incl. the Korea Polar Research Institute, an associate institution of the Korean Institute of Oceanographic Sciences and Technology and the Korean Maritime Institute. In conjunction with these institutions, as well as for the implementation of the fourth master plan, the Korean Arctic Research Consortium was created to integrate Arctic research and contribute to the further development of national Arctic policy¹⁰. The icebreaking research vessel “Aaron” is a useful asset in polar research, both land, and sea. The expeditions of “Aaron” formed the basis of many published studies.

The third area of the master plan covers the participation of Korean business circles in economic activity in the Arctic. Since this direction is mainly associated with the Arctic sea transport corridors, it has more economic prospects (since the main task of the development of the NSR is to obtain financing for the creation and maintenance of the infrastructure of Russian Arctic ports [10, Lin D. –Y., Chang Y.-T., p. 47]) rather than completed projects. Nevertheless, there are several active projects: the construction of icebreaking vessels for the transportation of LNG by Daewoo Shipbuilding and Maritime Engineering by order of the Russian companies Sovkomflot and NOVATEK¹¹. Besides, vessels under Korean flag have already passed the NSR¹². Thus, this area of cooperation is associated with new profitable projects for the development and transportation of Arctic resources in the future.

Analyzing the provisions of the master plan, we can conclude that South Korea’s first comprehensive document on Arctic policy issues retains its previously established orientation toward research and scientific cooperation. Thus, the text testifies to the predominantly research nature of the Arctic policy of the Republic of Korea. In addition, the document highlights issues relating to various aspects of international cooperation in the Arctic (especially within the framework of the Arctic Council, since the state has received observer status), as well as a few points regarding the prospects for Korean business in the region. In general, the Korean Government and companies were able to implement the planned activities and achieve the results set by the country’s first political document on the Arctic. Thus, at the end of the master plan, its effects were used to develop a new paper on Arctic policy for the further integration of South Korea into Arctic issues. As a result, in July 2018, the Second Master Plan for the Arctic (for 2018–2022) was published. The main findings of Korea’s participation in Arctic affairs after obtaining observer status in the Arctic Council are presented in the figure below.

¹⁰ Founding Declaration of Korea Arctic Research Consortium. URL: <http://www.arctic.or.kr/?c=11/13/65&idx=995> (accessed 22 October 2019).

¹¹ Owen W. Latest Yamal LNG shipping update. URL: <https://www.lngindustry.com/liquid-natural-gas/21102019/latest-yamal-lng-shipping-update/> (accessed 23 October 2019).

¹² CJ Korea Express launches first Arctic operation. URL: <http://www.koreaherald.com/view.php?ud=20150720001051> (accessed 23 October 2019).

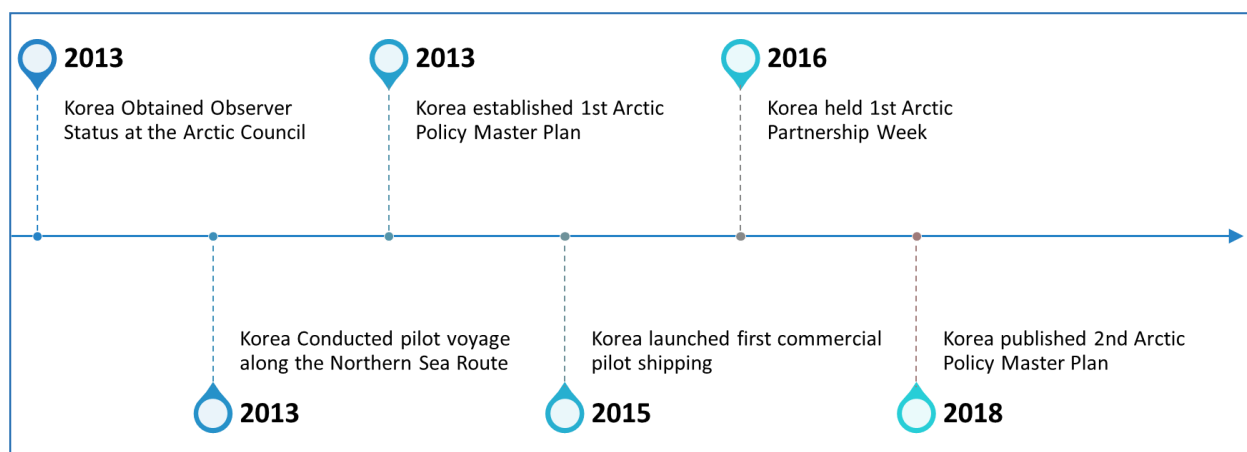


Fig. 4. Main activities of South Korea in the Arctic since 2013.¹³

- 2013 - South Korea received observer status in the Arctic Council;
- 2013 - The first Arctic Master Plan was developed;
- 2013 - Test passage of a Korean vessel along the NSR;
- 2015 - South Korea launched the first trial commercial sea route;
- 2016 - The first Arctic Cooperation Week was held in South Korea;
- 2018 - South Korea developed a second Arctic Master Plan.

Perfecting South Korea Arctic policy and its further development

The overall goal of the second document on national Arctic policy is the need for multilateral cooperation in the Arctic region. However, the focus of the paper shifted from “promoting sustainable development of the Arctic” to positioning the country as a “pioneer and partner in discovering the future of the Arctic”. It proposes to expand the activities of the Republic of Korea in the region. The principal directions of the renewed Arctic policy of South Korea are below.



Fig. 4. Priorities of the second Arctic Policy Master Plan¹⁴.

It is too early to assess the progress in the implementation of the current Arctic plan. However, the critical point of the strategy should be analyzed. First, while the first master plan was a kind of compilation of proposals from national ministries, the updated program document was unified by a shared vision of national Arctic policy. The four main lines of policy remain similar, and this indicates the correctness of the directions of the previous strategy. However, economic cooperation now ranks first. Such a transformation seems reasonable since South Korea has already

¹³ Source: developed by the authors.

¹⁴ Seo H. The Study on the Priority on the Arctic Challenges in Policy Perspectives of Korea (poster at Arctic Futures 2050 conference). URL: https://www.searcharcticsscience.org/files/presentations/arctic-futures-2050-conference//arctic_future_2050-korean_arctic_policy_analysis.pdf (accessed 23 October 2019).

passed the stage of research in the status of a non-Arctic state in the Arctic space of cooperation. Moreover, the Republic of Korea has already entered the sphere of Arctic political discussions, as the land was granted observer status with the Arctic Council. Besides, it is worth emphasizing that the current Arctic policy of Korea is formulated following the provisions of the “Polar Vision 2050.”¹⁵ Main goals are in the figure below.

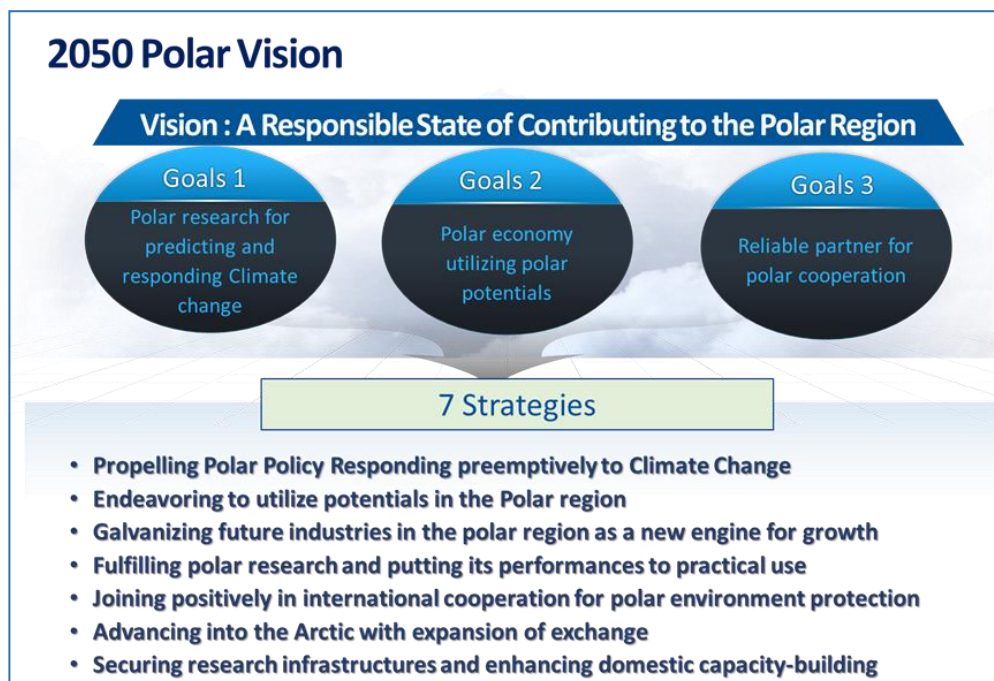


Fig. 6. “Polar Vision 2050” review ¹⁶.

“Polar Vision 2050”. Perspective: a responsible contribution to the Polar region

Goal 1. Polar research for predicting and responding to climate change

Goal 2. Arctic economy using polar potentials

Goal 3. Reliable partner for polar cooperation

Seven strategies:

Actively promoting a polar policy response primarily to climate change;

Try to use possibilities in the polar region;

To give impetus to the subsequent development of industry in the polar region as a source of economic growth;

Conducting research and applying their results;

Participation in international cooperation in the field of environmental protection;

Promotion in the Arctic through the enhanced exchange;

Consolidation of scientific infrastructure and acceleration of the creation of national Arctic potential.

It is clear, Polar Vision 2050 supports the values, formulated in the master plans for Korean policy in the Arctic. Thus, the document covers the areas of Korea’s contribution to Arctic science, responsible use of the region’s economic potential, and diversification of cooperation with other stakeholders in the Arctic. Moreover, the documents of South Korea on the Arctic that we examined allow us to conclude on the commitment and contribution of the state to the sustainable development of the Arctic, as well as to the implementation of the specific sustainable development goals

¹⁵2050 Polar Vision Statement. URL: <http://en.koreapolarportal.or.kr/intro/2050PolarVision.do;jsessionid=877264E315FAC2641EBC2022EAF8DAC3> (accessed 23 October 2019).

¹⁶ Source: developed by the authors.

that are needed today in the Arctic region¹⁷. South Korea's contribution to the development of the Arctic could be a distinct research theme.

Conclusion

Summing up, it seems reasonable to conclude that the current South Korean master plan for the Arctic meets the challenges and opportunities of the region. The South Korean Arctic policy focuses on the use of economic benefits (transport opportunities and energy resources). At the same time, the state contributes to the protection of the region's environment by conducting relevant studies. At the same time, the country's Arctic policy is oriented towards seeking cooperation with ordinary participants in the Arctic dialogue.

Nevertheless, it is necessary to note several aspects related to the Arctic policy of Korea, which are likely to become a topic for further discussion and study. Some scholars note that expanding the participation of foreign states in Arctic projects may encounter specific difficulties in ensuring national security (esp. since the economy and energy security of some Arctic states depend on Arctic mineral deposits) [11, Sharov A.Ye., Chuvashova N.I., pp. 110–111]. In addition, one can expect economic rivalry between China, Japan and South Korea on the issues of privileges and ease of use of the NSR. Given the potential competition, the Republic of Korea should make more efforts to promote its Arctic technologies, and to develop a sustainable business model for the Arctic region, since China does not currently have such a highly developed Arctic technology sector [12, Zhuravel V.P., p. 129].

In the end, it is essential that scientific organizations actively participate in the formulation and formation of the Arctic policy of Korea, since its origins are in the field of scientific research, where they avoided a bureaucratic approach and relied on strategic planning.

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¹⁷Sustainable development goals: Shaping the future of the Arctic. URL: https://arcticwwf.org/site/assets/files/1635/thecircle0218_web_1.pdf (accessed 20 November 2019).

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European Union's approach to the Arctic policy development through the lens of the Russian regional interests*

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Abstract. Based on an extensive database, the authors analyzed the main features of the EU Arctic strategy and their relationship with Russian interests in the region. The authors proceed from the fact that the probability of reaching any significant points of contact between the two actors is minimal. The incompatibility of their strategic lines is because the EU considers the Arctic as another platform for its potential of “normative strength”, while Russia, in cooperation with its foreign partners, is primarily aimed at attracting investments in the development of the Arctic infrastructure. In the context of the ongoing crisis in bilateral relations caused by the events in Ukraine, it is not possible to talk about the prospects for harmonizing the regional aspirations of the EU and the Russian Federation.

Keywords: *the Arctic, the EU, Russia, foreign policy, ecology, environment, stress tolerance, sustainable development.*

Introduction

The European Union was the first non-regional actor to develop the conceptual foundations of its Arctic policy almost at the same time as other circumpolar powers. In November 2008, the corresponding communique of the European Commission was published. Since then, a variety of documents have been adopted by various governing bodies (the European Commission, the European Parliament and the Council of the EU) specifying the content of Brussels' regional interests, namely: the communiqué of the European Commission of June 26, 2012¹, European Parliament Resolution of March 12, 2014², EU Council conclusions on developing a European Union Policy towards the Arctic Region of May 12, 2014³, European Commission joint communiqué of April 27, 2016⁴ and the latest at the moment resolution of the European Parliament of March 16, 2017.⁵ Moreover, in the development of the doctrinal foundations of the EU's Arctic policy in recent years, several characteristic features are visible.

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¹ Developing a European Union Policy towards the Arctic Region: progress since 2008 and next steps. URL: http://eeas.europa.eu/archives/docs/arctic_region/docs/join_2012_19.pdf (accessed 12 November 2019).

² European Parliament Resolution on the EU strategy for the Arctic. URL: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P7-TA-2014-0236+0+DOC+PDF+V0//EN> (accessed 10 November 2019).

³ Council conclusions on developing a European Union Policy towards the Arctic Region. URL: https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/142554.pdf (accessed 10 November 2019).

⁴ An Integrated European Union policy towards the Arctic. URL: http://www.eeas.europa.eu/archives/docs/arctic_region/docs/160427_joint-communication-an-integrated-european-union-policy-for-the-arctic_en.pdf (accessed 21 November 2019).

⁵ European Parliament's resolution on an integrated European Union policy for the Arctic. URL: http://www.europarl.europa.eu/doceo/document/TA-8-2017-0093_EN.pdf?redirect (accessed 19 November 2019).

Common and specific in the EU regional strategy

First, from a functional perspective, involving the EU in the development of the Arctic has always been distinguished by its emphasis on “normative power”. [1, Nicolaidis K., p. 311]. In other words, Brussels seeks to ensure the “indigenous” polar powers perceive its doctrine of legal regulation in an area of Arctic exploration (ecology, mining, shipping, and social security of small indigenous peoples of the North) as a universal standard for activity. The European Union has not been able to develop a clear narrative of its regional strategy, which would resonate with both internal and external audiences. The emphasis on ecology and scientific cooperation alone cannot, according to experts, become an idea justifying the exceptional contribution of Brussels to the process of regional construction. As a result, they raise a big question of whether the EU has both the opportunity and the desire to influence the development of the system of relations between the “indigenous” polar powers, which has already been established both politically and legally [2, Raspotnik A., Östhagen A.].

Secondly, in the thematic plan, the focus of the EU’s Arctic policy is on three aspects: maintaining environmental protection, accumulating the maximum possible amount of scientific information about the Arctic, and ensuring the rights of small indigenous peoples of the North. [3, Chuffart R., Raspotnik A., p. 160]. From this perspective, the regional agenda of Brussels closely resembles the content of the Arctic strategies of individual EU member states (Denmark, Sweden, Finland, Germany, France, and the United Kingdom). At the same time, as A. Osthagen and A. Raspotnik rightly point out, the development and implementation of a single EU policy in the Arctic, in addition to purely financial restrictions, is often hampered by the fact that individual member states pursue opposite interests in this region in military security and resource development ⁶.

Fourthly, in a purely political sense, Brussels is not satisfied with indirect participation in the regional government through Denmark, Sweden, and Finland. That is why, despite the negative position of Canada and Russia, the EU is still ⁷ persistently seeks to increase its status in the Arctic Council to the level of a permanent observer, which was previously achieved by other non-regional groups (e.g., China and India). The lack of progress on this issue does not bother Brussels. It has focused on the implementation of its normative influence through participation in the activities of the AC working groups.

If we talk about the most significant changes that have occurred in the EU Arctic strategy, then, first of all, it is worth noting some adjustments of the position of Brussels on the prospects for the international legal regime of the Arctic. In its resolution of October 9, 2008, the European Parliament called on the European Commission to contribute in every way to the start of multilateral

⁶ Another Step Forward. The Council of the European Union Puts the Arctic on the Table. Arctic Institute. 22 May 2014. URL: <https://www.thearcticinstitute.org/step-forward-council-european-union-arctic> (accessed 22 November 2019).

⁷ Rossiya podpisala soglasenie o predotvrashchenii nereguliruemogo promysla v Arktike [Russia signed an agreement on the prevention of unregulated fishing in the Arctic]. URL: <https://tass.ru/ekonomika/5633940> (accessed 22 November 2019).

negotiations on the conclusion of a separate international treaty on the Arctic, taking the 1959 model of the Antarctic treaty as a basis. It was also assumed that at the initial stage, the subject of regulation might not be the entire Arctic, but only the central part of the Arctic Ocean. To a certain extent, this priority was embodied in the Agreement on the Prevention of Unregulated Fishing on the High Seas in the Central Arctic Ocean, signed in early October 2018 (by the European Union as well). However, initially, Brussels raised the issue more than merely preserving the regional ecosystem and resources, paying much attention to the political component (preventing military conflicts in the Arctic, recognizing the special status of small indigenous peoples, and increasing their role in regional management process). In the latest EU Arctic policy documents, the line for assessing the international legal foundation of regional development has become closer to the position of “indigenous” polar powers. Thus, in its report of April 27, 2016, the European Commission indicated that “... considers the 1982 UN Convention as a sufficient basis for the management of the Arctic Ocean and the peaceful settlement of disputes”⁸. The same but in a slightly more expanded form was also reflected in the content of the resolution of the European Parliament of March 16, 2017, which “emphasizes the importance of the 1982 UN Convention a) in creating a multilateral legal framework for activities in all areas of the oceans, incl. the Arctic, b) in the process of determining the external borders of the continental shelf in the Arctic Ocean and c) in settlement of disputes between regional powers regarding the establishment of sovereign rights in territorial waters”⁹. Thus, the most apparent discrepancies were smoothed out with one of the main provisions of the Ilulissat Declaration 2008. In the document, the five coastal Arctic powers recognized their adherence to “an extensive regulatory framework applicable to the Arctic, especially regarding the definition of external the boundaries of the continental shelf, the protection of the marine environment, the principle of freedom of navigation, marine scientific research, ... as well as the settlement of all possible intersections of mutual claims”¹⁰. It is impossible to talk about the full harmonization of the points of view of the EU and the coastal states (mainly Russia). In the rhetoric of many government representatives in Brussels, the need to recognize the Arctic as a zone of the common heritage of humankind remains relevant.

The second change in the discourse of the EU’s Arctic policy can be traced in the terminological aspect. Since 2008, its conceptual basis has remained the concept of “sustainable development”, which embodies the EU’s commitment to the principles of prudent management, based on minimizing the negative impact on the environment. At the same time, in the 2016 communiqué, along with sustainable development, the term “stress tolerance” also begins to be used. In particular, the document states that “the EU has a special responsibility to protect the environment in the Arctic and strengthen the stress tolerance of its ecosystem”, and also “should contribute to the sustainable development of the Arctic, taking into account the experience of indigenous peoples living in the re-

⁸ An Integrated European Union policy towards the Arctic. P. 14.

⁹ European Parliament’s resolution on an integrated European Union policy for the Arctic. P. 7.

¹⁰ Ilulissat Declaration, 27-29 May 2008. URL: <https://cil.nus.edu.sg/wp-content/uploads/2017/07/2008-Ilulissat-Declaration.pdf> (accessed 23 November 2019).

gion, as well as the impact of economic development on a vulnerable environment”¹¹. In its original sense, stress resistance is the amount of external negative impact (perturbation) the system can withstand before it enters the region of attraction or stability [4, Holling C.S.]. In other words, the ability to absorb or adapt to the effects of various kinds of shocks was considered a vital characteristic of a stress-resistant system, while maintaining its working capacity. Over time, this concept migrated from ecology to economics and politics. Since the beginning of the 2000s, it is in high demand in the political discourse of the EU. In a purely functional plan, the concepts of “sustainable development” and “stress tolerance”, of course, differ. If the former should be understood as a process or the final product, then the latter is a property of the system. However, in the EU’s political discourse, this difference was smoothed out, and today these two terms are used interchangeably.

On the relationship between the interests of the EU and Russia in the Arctic

Historically, it has always been more common for Russian diplomacy to defend its national interests in interacting with foreign players in a bilateral rather than a multilateral format. From this point of view, the EU is for Moscow, an “uncomfortable” partner. If we consider a complex of problems of a general political nature related to the imposition of sanctions against the Russian Federation, accusations of violating the “rules of the game” in the case of Ukraine and Syria, interference with the election, etc., the overall picture of perception becomes quite bleak. Under such conditions, it is complicated to expect any constructive interaction between Russia and the EU in the Arctic [5, Biedermann R.].

Nevertheless, one has to reckon with the fact of the EU’s desire to participate in the development of the region, and therefore it is essential to understand the nature of the relationship between its interests and the Arctic strategy of the Russian Federation in various fields.

Arctic shipping

Since 2007/2008, the steady trend of increasing freight transportation along the NSR (both coastal and transit), combined with the ambitious plans of the Russian leadership to improve the Arctic transport infrastructure, continues to be the subject of close attention of foreign actors, among which the European Union also appears. The development of Arctic shipping is reflected in almost every EU Arctic policy document adopted over the past ten years. The generalized position of the EU on this issue can be formulated as follows.

In principle, the optimizing shipping traffic between the ports of European countries and East Asian countries by using both the NSR and the Canadian Northwest Passage is evaluated positively, if it is sustainable (sustainability). It minimizes the negative impact on the marine environment of the Arctic.

In the political sense, the primary irritation for the EU is the need to pay fees for icebreaking and ice piloting through the NSR, as well as the Russian power in determining the mode of the NSR

¹¹ An Integrated European Union policy towards the Arctic. P. 16.

use. Brussels considers this practice to be discriminatory and, to some extent, contrary to the international law of the sea (and the principle of freedom of navigation in particular) [5, Biedermann R.]. This assessment is especially evident in the memorandum of the EU's Shipowners Association (ECSA) on the EU's Arctic policy, published in June 2014. The document focuses on the fact that “(secured in) the 1982 UN Convention on the Law of the Sea principles of freedom shipping, transit passage and the right of peaceful passage through the straits used for international shipping ... *should be respected and have priority* over the rights of coastal states, as fixed in art. 234 (Ice Covered Areas). Currently some Arctic states¹² are appealing to the contents of this article and they put forward claims for jurisdiction over the Arctic spaces, introducing a requirement to pay fees for the use of routes and straits, arguing that the latter is in their inland waters. Given the prospect of increased shipping and transit traffic in the Arctic, it can be argued that maintaining this practice in the future is likely to create unfavorable conditions (when using the NSR) for ships registered in non-Arctic countries” [6, Vorobyov N.I., pp. 49-50]¹³. Similar critical assessments of the current NSR management system have been heard in recent years from shipowner associations of the EU member states Denmark and Germany.

Slightly more balanced comments on the essence of the existing management system of the NSR were given in an analytical note published back in February 2010 by order of the Directorate General of the European Commission for Maritime Affairs and Fisheries. A team of well-known experts in international law of the sea was involved in its compilation, incl. Erik J. Molenaar, Tore Henriksen, James Kraska, and Maksim Korel'skiy. The experts conclude that “the importance of the NSR for the Russian Federation as a national asset is established, and the regulatory norms and national legislation established for users of the NSR are often even more stringent than generally accepted international norms and rules (esp., by the IMO) and correspond to the content of Art. 234 of the 1982 UN Convention, which is why they cannot be called *inappropriate or unjustifiably discriminatory*”¹⁴. At the same time, experts point out the main danger for European companies potentially interested in the NSR developing is the high possibility of abuse by the Russian side when exercising the NSR norms and rules and the adoption of discriminatory special by-laws/regulations. It was suggested that in the future for domestic vessels navigating in the Arctic waters, the requirements could be set significantly milder than for foreign ships. In addition, the note draws attention to the notorious condition that the coastal state can adopt regulatory laws and regulations only for areas covered with ice “*for most of the year*”, and therefore it is recommended to the EU governing bodies and the

¹² Refers to Russia and Canada.

¹³ ECSA Position Paper. EU Policy Towards the Arctic Region. European Community Shipowners' Association. 04.06.2014. URL: https://www.ecsa.eu/images/NEW_Position_Papers/2014-06-04_FINAL%20ECSA%20Position%20paper%20on%20EU%20Policy%20towards%20the%20Arctic%20Region.pdf (accessed 15 November 2019).

¹⁴ Legal Aspects of Arctic Shipping. Summary Report. European Commission. 23.02.2010. https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/legal_aspects_arctic_shipping_summary_en.pdf P/P. 19 (accessed 12 November 2019).

international community¹⁵ to complete a regularly monitor the actual boundaries of ice cover distribution in the NSR area.

In this regard, the meaning of all the EU efforts in promoting the idea of maximizing scientific cooperation and monitoring climate change in the Arctic becomes evident. It means the accumulation of scientific information is only a tool to create the basis for strategic decisions (naturally, they are not specified in the EU doctrinal documents). Moscow correctly recognizes the presence of such a hidden meaning, and it only spurs even greater distrust and suspicion in the perception of Brussels' regional ambitions.

Back to the contents of the 2010 analytical note mentioned above, it should be noted that since its publication, the regulatory framework of the Russian Federation in the development of the NSR has been noticeable. In 2012, Federal Law No. 132 "On Amending Certain Legislative Acts of the Russian Federation concerning State Regulation of Merchant Shipping in the NSR" was adopted¹⁶. In early 2013, updated Shipping Rules in the NSR appeared¹⁷. In 2015, the Government of the Russian Federation approved the principle of shipments tariff regulation via the NSR, both for domestic and foreign ships, based on the methodology of economically reasonable costs¹⁸. The priorities in the development of the Arctic shipping infrastructure (with an emphasis on creating conditions - primarily in navigation and hydrographic support and communications - to bring the volume of cargo transportation via the NSR to 80 million tons by 2024) were fixed in the second edition of the state program "Social-economic development of the Arctic zone of the Russian Federation"¹⁹ and in the state program "Development of the transport system", adopted in 2017.²⁰

¹⁵ See.: UNCLOS 1982. URL: https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf (accessed 12 November 2019).

¹⁶ Federal'nyy zakon № 132 "O vnesenii izmeneniy v otdel'nye zakonodatel'nye akty Rossiyskoy Federatsii v chasti gosudarstvennogo regulirovaniya torgovogo moreplavaniya v akvatorii Severnogo morskogo puti" ot 28.07.2012 [Federal Law no 132 "On Amending Certain Legislative Acts of the Russian Federation Regarding State Regulation of Merchant Shipping in the Water of the Northern Sea Route" of July 28, 2012.]. Konsul'tant-Plyus. URL: http://www.consultant.ru/document/cons_doc_LAW_133277 (accessed 15 November 2019). (In Russ.)

¹⁷ Prikaz Ministerstva transporta Rossiyskoy Federatsii (Mintrans Rossii) ot 17 yanvarya 2013 g. N 7 g. Moskva "Ob utverzhdenii Pravil plavaniya v akvatorii Severnogo morskogo puti" [Order of the Ministry of Transport of the Russian Federation (Ministry of Transport of Russia) dated January 17, 2013 N 7 Moscow "On approval of the Navigation Rules in the waters of the Northern Sea Route"]. Rossiyskaya gazeta. 19.04.2013. URL: <https://rg.ru/2013/04/19/pravila-dok.html> (accessed 20 November 2019).

¹⁸ Postanovlenie Pravitel'stva RF ot 24.04.2015 N 388 (red. ot 04.09.2015). "Ob utverzhdenii Polozheniya o gosudarstvennom regulirovanii tarifov na ledokol'nuyu provodku sudov, ledovuyu lotsmanskuyu provodku sudov v akvatorii Severnogo morskogo puti" [Decree of the Government of the Russian Federation of 04.24.2015 no 388 (as amended on 09. 04.2015). "On approval of the Regulation on the state regulation of tariffs for icebreaking pilotage, ice pilotage of ships in the waters of the Northern Sea Route"]. Konsul'tant-Plyus. URL: <http://www.consultant.ru/cons/cgi/online.cgi?req=doc&base=LAW&n=185924&fld=134&dst=100001,0&rnd=0.08819334469822704#07261626205709388> (accessed 20 November 2019).

¹⁹ Postanovlenie Pravitel'stva RF № 1064 «O» ot 31.07.2017 [Decree of the Government of the Russian Federation No. 1064 "O" of July 31, 2017]. Sayt Pravitel'stva RF. URL: <http://government.ru/docs/29164/> (accessed 19 November 2019).

²⁰ Postanovlenie Pravitel'stva RF N 1596 "Ob utverzhdenii gosudarstvennoy programmy Rossiyskoy Federatsii "Razvitie transportnoy sistemy" ot 20.12.2017 [Decree of the Government of the Russian Federation N 1596 "On approval of the state program of the Russian Federation" Development of the transport system" of 20. 12. 2017]. Konsul'tant Plyus. URL: http://www.consultant.ru/document/cons_doc_LAW_286331/ (accessed 16 November 2019).

It is noteworthy that since 2009, the Northern Sea Route has been regularly used by foreign shipping companies for transit flights (albeit much smaller than initially anticipated), in compliance with all requirements specified in domestic law, including payment of the relevant fees. From a legal perspective, there is a reason to interpret such a stable tendency as the implicit recognition of the legitimacy for the requirements established by the Russian side.

From upholding the legitimacy perspective for the existing domestic regulatory and legal framework for managing the NSR, it also seems very important to set the correct emphasis on the place of this Arctic route in the system of (external) economic priorities of the Russian Federation. In Section 12 of the 2013 Strategy, the Northern Sea Route is defined as the “single national transport route”, which, along with railway, river and air transport, is one of the main components of the Arctic transport system of the Russian Federation²¹. In interpreting this definition, it is essential to recall that historically the usefulness of the NSR for the Russian Empire / Soviet Union / Russian Federation was primarily *determined by considerations of internal economic development or strengthening the country's military security*. As regards the promotion of the NSR as an alternative route for international maritime trade, so far this task has an auxiliary role. Nevertheless, in the West, priorities in the field of domestic policy for the development of Arctic shipping are seen in a completely different way. They are convinced in Brussels that “Russia designates the NSR as an international maritime transport corridor within the Russian jurisdiction ... and which should remain under its full control. That is why Moscow is creating regulatory and administrative barriers to international shipping on this route”²². The fight against such distortions and misinterpretations at the level of the official state rhetoric of the Russian Federation can play an important role in ensuring recognition of the legitimacy of the established domestic management system of the NSR.

Military security

Brussels' perception of the military preparations of the Russian Federation in the Arctic is primarily determined by increased mutual tension on the issue of sanctions, the resolution of the Ukrainian crisis, and interference in the elections. At the same time, the general thesis about the isolation of the Arctic from the consequences of global military-political tension [7, Östhagen A., p. 87]. By the way, the purposeful representation of Russia as the chief troublemaker in the Arctic began long before 2014. It was primarily intended to become the main factor in justifying the legitimacy of the EU's desire to participate in regional affairs [8, Offerdal K., p. 869]. At the same time, the alarmist perception of Russian military policy in the region near Brussels is combined with the reliance on the concept of “selective interaction”. It provides for the possibility of cooperation with Moscow only in “non-sanctioned” sectors: scientific research in the Arctic, support for small indigenous peoples

²¹ Strategiya razvitiya Arkticheskoy zony RF na period do 2020 g. [The development strategy of the Arctic zone of the Russian Federation for the period until 2020]. Sayt Pravitel'stva RF. 20.02.2013. URL: <http://static.government.ru/media/files/2RpSA3sctElhAGn4RN9dHrtzk0A3wZm8.pdf> (accessed 16 November 2019).

²² Walking on Thin Ice: A Balanced Arctic Strategy for the EU. European Political Strategy Center. July 2019. Issue 31. URL: https://ec.europa.eu/epsc/sites/epsc/files/epsc_strategic_note_issue31_arctic_strategy.pdf pp. 6-7 (accessed 23 November 2019).

of the North, and environmental protection in the region. It should be noted that for the Russian side, such a set of areas of interaction is perceived as extremely narrow and unattractive, which leads to the absence of any reciprocal desire to develop a regional dialogue with Brussels.

Defining the continental shelf outer borders in the Arctic

Commenting on the EU's desire to impose its vision of the most optimal configuration of the international legal regime of the central part of the Arctic Ocean on the coastal polar powers at the early stage of developing its own Arctic strategy, leading IMEMO research fellow P.A. Gudev quite clearly defined that "the talk that the Arctic should be recognized as a "world heritage", a "shared heritage" or a "world park" is extra-legal, ... (since) the concept of ShH can be applied exclusively to bottom and subsoil resources beyond the areas of national jurisdiction of coastal states, that is, to the international seabed area. Speaking about the Arctic, it must be borne in mind that the concept of ShH can be applied to the resources of the area, but only if it is formed there by the Arctic states" [9, p. 64]. In the subsequent development of its Arctic strategy, Brussels ceased to focus on the above-mentioned controversial concepts - in the content of such critical documents as resolutions of the European Parliament in 2014 and 2017, as well as the Communication of the European Commission in 2016; they are missing. However, this does not mean that the EU abandoned the concept of ShH as one of the ideological pillars of its maritime policy. So, in the relevant resolution of the European Parliament, published in mid-January 2018, among other things, a reminder (on the relevance) of UN resolution 2749 of December 17, 1970, as well as Art. 136 of the 1982 UNCLOS, which establishes the surface and subsoil of the seabed beyond areas of national jurisdiction, as well as the resources contained therein, belong to the common heritage of humanity²³. It can be assumed that in the long run, when negotiations to determine the external borders of the continental shelf in the central part of the Arctic Ocean between Russia, Canada and Denmark begin, Brussels will try to influence them by convincing Danish diplomacy of the need to advance the idea of creating an international region around the North Pole as a basis for a mutually acceptable compromise with two other candidate countries. In this case, the development rules for this area would be based on standards and regulations for environmental protection and resource extraction adopted in the European Union (Denmark may be the agent). The implementation of such a scenario would serve as an adequate projection of the regulatory power of Brussels on the process of regional development [10, Riddel-Dixon E., p. 427]. In principle, the idea of such a condominium in the central part of the Arctic Ocean may well find a response in Moscow and Ottawa. However, the likelihood that the parties will agree to access to the development of the resources of the third-party area (in the EU) is negligible.

²³ European Parliament resolution on international ocean governance: an agenda for the future of our oceans in the context of the 2030 SDGs. Provision No. 15.

Conclusion

Based on the totality of the circumstances considered, it can be concluded that the balance of interests of Russia and the EU in the Arctic is slightly negative. It will remain so until an average (pre-crisis) level of mutual understanding in the military-political is restored between and a new meaningful basis for bilateral cooperation is built. Brussels is of interest to Moscow primarily as an economic partner in the supply of technology for the oil and gas sector, the import of resources extracted in the Arctic, and investment in the development of the infrastructure of the Russian North. The EU's attempts, under the sanctions it has introduced, to propose interaction on "soft" issues (scientific cooperation, protecting the rights of small indigenous peoples, environmental protection) as an alternative agenda, cause quiet irritation for the Russian side, as the initiatives proposed by Brussels suggest attempts are often seen to erode Russian sovereignty and the notorious "internationalization" of the Arctic zone of the Russian Federation.

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Expulsions in the Russian North: migration processes and neoliberal policy*

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Abstract. The article summarizes the results of a long-term study of changes in living conditions of the population in the North during the formation of trade capitalism and the spread of neoliberal policy. Expulsion is considered as an institutionally organized way of exception in the form of state policy, actively supporting social polarization, contributing to consumer way of natural resource development and extensive use of before-built infrastructure, and accompanied by the isolation of the experience, disregard of the interests and violation of the rights of residents. The article proves that Soviet policy, interested in attracting labor to develop the Russian North and used a distribution system of goods for these purposes, did not contribute much to the consolidation of labor migrants in the northern territories as it initiated their return to the homeland at the end of their labor biography. The position of a “temporary worker” was formed by the proposed privileges, which served as a compensation for work in adverse climatic conditions but did not contribute to the prospects for the development of the northern territories. At the same time, the interests of residents, who turned out to be cut off from prestigious jobs and found themselves in worse living conditions, were regularly ignored, and their rights were unrecognized. If, through vertical mobility and integration into the Soviet distribution system, it was possible to smooth out the inequities in the distribution of benefits, it became more difficult to hide this with the country's transition to the market and the beginning of a new phase of natural resource extraction. Moreover, considering the exclusion processes have become more widespread. Now not only the indigenous peoples of the North but also the second generation of migrants are among the vulnerable groups. The focus of the conflict has shifted and expressed itself in the relations between the residents of the Center and the regions.

Keywords: *social exclusion, expulsions, migration processes, neoliberal policy, Northern regions of Russia, development and colonization, Soviet heritage.*

Introduction

When studying and evaluating modern migration processes in Russia, domestic scientists observe a severe bias towards problems associated with migrants and migrant workers entering the country. Even though the number of people moving inside the state is higher than the number of international migrants (In 2017, the internal Russian migration amounted to more than 4 million people, while the number of international migrants who left and arrived was less than 1 million [1, Scherbakova E.M.]), and the possible consequences can be dramatic, the processes of internal migration and their relationship with the prospects for the development of regions are analyzed less frequently. So, when understanding the importance of migrants to solve the country's

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geopolitical interests [2, Rybakovskiy L.L.], their significance in the regions is ignored. Little discussion of the debate on the choice between future citizens and temporary workers [3, Mukomel V.I., p. 44], which at the regional level is directly related to the problem of forming a resident population or attracting temporary shift workers, as well as the issue of the relationship between indigenous people and migrants [4, Ryazantsev S.V.]. The studies do not consider the Soviet migration and its impact on the current situation; the topic of the “double” effect of migration on people forced to accept mobile labor flows at one stage of the life cycle and observe at another as they leave their homes. Finally, with a significant number of publications analyzing the impact of state migration policy, there is no criticality concerning the market itself [5, Lytkina T.S., Yaroshenko S.S.]. Researchers still pay little attention to the consequences of the current policy. They have little reflection on the uniqueness of Russia as a territory with many regions that have their characteristics of socio-economic development.

For some scientists, the study of migration processes in the Russian North may seem a far-fetched problem, since the harsh climate is an indisputable argument in favor of the outflow of the population. Moreover, there is a point of view that the development of a territory rich with natural resources is costly. It is so not only because it is cold, but also because of the surplus population, and therefore the ongoing relocation from the north to the south can be regarded as a positive market influence on the Russian economy [6, Smirnov S., Garcia-Iser M.; 7, Efremov I.A.]. They will be right, but only to some extent. We argue that climate is significant, but far from the main factor of northern migration. Firstly, the outflow of the population is observed even in territories with relatively favorable climatic conditions. Secondly, during the statistical registration of registration at a new place of residence, less than one percent of those who left indicated that they didn't comply with the climatic conditions as the reason for leaving; thirdly, in the late 1990s. The practice was widespread among northerners when, exercising their right to move under the resettlement program, they returned to severe climatic places and continued to work there (on the contrary, those who wished to leave could not afford this).

In this paper, migration processes in the Russian North are analyzed in the framework of the concept of expulsions as a form of institutionally organized exclusion. It is proved that, on the one hand, the outflow of the population is a consequence of the previously pursued Soviet policy, which was interested in the reproduction and maintenance of the workforce in the North, while ignoring the interests and non-recognition of the life experience of local residents; and on the other hand, the processes of expulsions, today directly connected with the new (self-expanding) economic boundaries of capitalism: the excessive exploitation of natural and labor resources for additional profit. We want to say that the processes of social exclusion give rise to the means of expulsion and show how they become inextricably interconnected.

New ways of exploitation are always aimed at finding vulnerabilities in politics and economics; they are generated by exclusion processes that contribute to strengthening structures of social inequality, while limiting the realization of civil rights and the ability to manage the life situ-

ation of low-resource groups. Despite the fact that “social exclusion” and “expulsion” have the potential of different levels of explanation (individual / territorial), the heuristic possibilities of these two concepts are essentially links in the same chain and consist in explaining the processes of capitalization. At *the individual level*, we have a system of limited external opportunities that determine access to material and social benefits and are manifested in the folding of individual resources and needs. At *the level of the territory*, we see the result of expulsion in the form of curtailing social and economic potentials, the absence of grounds for sustainable development: both the individual is deprived of the opportunity to manage life situation and the territory (territorial community) as a development strategy. The crowding out at the level of the northern regions of Russia is accompanied by the loss of priority rights to the territory and natural resources, as well as the deprivation of the possibilities for the remaining citizens to influence the decision-making processes on the nature of the development of the territory, followed by a decrease in their level and quality of life.

Aware of the close relationship between the concepts of “social exclusion” and “expulsions”, we are trying to strengthen S. Sassen's position: we complement the principle of unity of society and territory that she reflexes with K. Dorre's ideas about the dynamics of the development of capitalism (Landnahme). Whereas in Sassen expulsion is found in the “flight” of the population [8, Sassen S.], in our case it is in defensive strategies that are manifested in the use of resources of the past to compensate for the negative market influence [9, Burawoy M., Krotov P., Lytkina T.; 10, Yaroshenko S.S.; 11, Lytkina T.S.]. We also argue that a territory that loses highly qualified specialists of various professions fails the possibility of socio-economic development or, in the language of economists, “competitive advantages” (according to some scholars, expectations about the competitiveness of the North are inappropriate [12, Pilyasov A.N., Zamyatina N.Yu.]), is becoming more vulnerable to further exploitation: in areas with depleted human capital, the formation of adequate protection from the market is demanding. In turn, the absence of such protections from the market leads to the fact that capitalist players have even more (!) More privileges and opportunities to include territory in their accumulation strategies [13, Dörre K.]. In table 1, we give the main categories of the concept of expulsions based on the concept of expansion and the concept of exclusion.

Table 1

Expulsions: theoretical frames of the research

Concept		Mechanism of expulsion
<i>Expulsions</i> (S. Sassen)	<i>Expansion of capitalism</i> (K. Dörre)	Politics concerning the Russian North:
		<ul style="list-style-type: none"> • power and financial communications • polarization of society through a reduction in social protection and precarization of workers • reduction and extensive use of the infrastructure with a deterioration in the quality of services provided
		Strengthening the structures of social inequality:
		<ul style="list-style-type: none"> • spatial • urbanization (city / village)

	<i>Social exclusion as a deprivation of the ability to manage a life situation (A. Sen, S. Yaroshenko, T. Lytkina)</i>	<ul style="list-style-type: none"> • industry • class • gender <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> The process of producing a social position: <ul style="list-style-type: none"> • rights violation • ignoring interests • non-recognition of differences • isolation of experience </div>
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Completed by the authors.

The expansion involves the spread of capitalism through the capture and capitalization of resources that were previously not goods. It is accompanied by power and financial communications focused on the capital, a consumer way of developing natural resources, the polarization of society, and the extensive use of infrastructure. In turn, an exception, as we noted above, means depriving one of the ability to manage one's personal life situation. It is facilitated by isolation of experience, non-recognition of differences, ignoring interests, and violation of rights. The combination of these two processes leads to the strengthening of inequality structures.

The scientific novelty of the article lies in the further development of the concept of expulsions, that is, the removal of local communities from managing the territory. The article deals with how the policy concerning the northern areas through the expansion at the macro-level leads to the reaction of the population at the micro-level. It means the migration outflow or disagreement with the (re) production of a social position in the face of limited life opportunities in the North. Before moving directly to the results of the study, we present the research strategy for studying the North.

Russian North: definition and study methods

The concept of "North" does not have an established explanation. It is preferably associated with historical, cultural and/or geographical representations than with administrative divisions. It is for this reason that Kostroma and Vologda Oblasts, which are not part of the Far North, or Tomsk Oblast and Krasnoyarsk Krai, which are partly part of the North, are often ranked among the northern territories of Russia. Given the high influence of state policy on the development of the North, incl. the creation of a system of incentives for the formation of a migratory influx in the Soviet period, the authors decided to allocate the North on the basis of the administrative-territorial principle. The first attempts to regionalize the North as the "Far North" were made in 1932. Until now, the concept of "remote areas" or "northern outskirts inhabited by indigenous peoples" has been applied relatively to the current northern regions [14, Fauzer V.V., Lytkina T.S., Fauzer G.N., p. 20]¹.

Our focus is on the regions of Russia, the territories of which are fully included in the list of areas of the Far North and equivalent localities. This list includes 13 constituent entities of the

¹ In 1945, a decree of the Presidium of the Supreme Soviet of the USSR, were introduced two concepts: "Far North" and "areas equated to areas of the Far North". Subsequently, the list changed, but it expanded significantly in 1992. Recent changes were made in 2012. In May 2014, a list of land territories of the Arctic zone of Russia was determined. In our article, the Arctic zone is considered as the territory of the North.

Russian Federation (Table 2). The north is extremely polarized: almost half of the population lives in large and medium-sized cities, and the rest of the community lives in small towns and rural settlements². In total, 7 million 850.9 thousand people live in the North. Despite the impressive size of the population, it makes up only 5.3% of Russia's population. Compared to Moscow and the Moscow Oblast, the Russian North is a territory that is 163 times larger and has 2.6 times less population.

Table 2

*The population of the Russian North territories, 1989 and 2018.*³

	Census 1989			January 1, 2018				
	Total population, thous. people.	including:		Total population, thous. people.	including:		площадь территории, тыс. кв. км	Population density, persons per 1 km ²
		urban	rural		urban	rural		
Russian Federation	147 400.5	108 425.6	38 975.0	146 880.4	109 326.9	37 553.5	17 125.2	8.58
Northern territories	9 633.1	7 608.8	2 024.3	7 850.9	6 362.4	1 488.5	7 623.7	1.03
European North	4 769.4	3 806.8	962.6	3 372.0	2 754.1	617.9	1 332.1	2.53
Republic of Karelia	791.3	645.7	145.6	622.5	500.6	121.9	180.5	3.45
Komi Republic	1 261.0	952.3	308.7	840.9	656.8	184.1	416.8	2.02
Arkhangelsk Oblast	1 570.3	1 152.5	417.8	1 155.0	900.9	254.1	589.9	1.96
Nenets AO	54.8	34.3	20.5	44.0	32.0	12.0	176.8	0.25
Murmansk Oblast	1 146.8	1 056.3	90.5	753.6	695.8	57.8	144.9	5.20
Asian North	4 863.7	3 802.0	1 061.7	4 478.9	3 608.3	870.6	6 291.6	0.71
Khanty-Mansi AO	1 268.4	1 152.8	115.7	1 655.1	1 528.3	126.8	534.8	3.09
Yamal-Nenets AO	486.2	378.6	107.6	538.5	451.4	87.1	769.3	0.70
Tyva Republic	309.1	145.6	163.5	321.7	173.9	147.8	168.6	1.91
Rep. Sakha (Yakutia)	1 081.4	721.2	360.2	964.4	632.9	331.5	3 083.5	0.31
Kamchatka Krai	466.1	379.1	87.0	315.5	246.8	68.7	464.3	0.68
Magadan Oblast	385.3	325.6	59.7	144.1	138.2	5.9	462.5	0.31
Sakhalin Oblast	709.6	584.8	124.8	490.2	402.0	88.2	87.1	5.63
Chukotka AO	157.5	114.2	43.3	49.4	34.8	14.6	721.5	0.07

The proposed study is a logical continuation of the study of changes in living conditions of the population living in the North, after the collapse of the USSR. The collection of in-depth interviews carried out within the framework of a qualitative methodology was started in 1994 in the capital of the Komi Republic, Syktyvkar, and was caused by the first economic shocks that affected industrial workers. The study was longitudinal in nature and was initiated by Professor of the University of California M. Buravoy⁴. To understand the situation of workers better, we met them every two years and conducted in-depth interviews with families until 2002. Later (in 2010–2014), the focus was on the residents of the depressed town of Inta, located north of the capital of the

² According to official statistics (01.01.2018), 40% of the population of the North of Russia live in large cities - 3 million 152.0 thousand people and about the same in small cities, villages, and urban-type settlements (urban settlements). In medium-sized towns, there are 695.7 thousand people (9%), in small towns - 1 million 786.9 thousand people, and 727.8 thousand people account for the town. 1 million 488.4 thousand people or 19.0% of the Northerners live in rural areas.

³ Compiled from the 1989 census. URL: www.demoscope.ru/weekly/ssp/census.php (accessed 09 December 2019) and Statisticheskogo sbornika «Chislennost' i migratsiya naseleniya Rossijskoy Federatsii v 2018 godu» [The statistical collection "Population and migration of the Russian Federation in 2018"]. URL: www.gks.ru/bgd/regl/b19_107/Main.htm (accessed 09 December 2019).

⁴ Project "Economic Involution" (project leader M. Buravoy, University of California).

republic⁵. In-depth interviews were also conducted there, but that time we talked not only with ordinary citizens but also with the heads of government bodies and enterprises. We did not disregard the rural residents and, although it was the shortest project in the Udorsky and Izhemsky districts (2010)⁶; it forced to turn to the history of the socio-economic development of the republic and the development of the North.

Each time, changing levels of explanation (individual, local community, the population of the North), we pushed the theoretical framework: the theory of social exclusion - the regime of social exclusion - the concept of expulsion. Interviews with workers showed a sharp decline in their well-being and social status. The everyday reality of emerging Russian capitalism did not lead to the accumulation (activation) of internal resources, but their diversification and subsequent curtailment together with the level of needs. The closure of enterprises, prolonged non-payment of wages forced workers to transfer economic activity from the enterprise to the household [15, Burawoy M., Krotov P., Lytkina T.]. The workers tried to defend their rights, but received no support from the rest of society, resigned themselves to the miracle promised by the optimists of the market. They did not wait long. So, the waiting was replaced by an awareness of the loss of rights and injustice of the capitalist system. Their position was fundamentally different from the position of intellectuals, who continued to believe in the market and did not trust the state.

The split in Russian society led to the creation of many social positions. The individuals who occupied them in the struggle for limited resources began to unite into closed social groups. The social distance between them increased along with the growth of distrust and socio-cultural insensitivity to each other. As a result, the local communities of small northern cities in conditions of limited opportunities, having lost their self-sufficiency, and having gained the experience of failures, "closed". It was noted that the residents of the Komi Republic, forming survival strategies, do not resort to mass protests. They preferred mutual assistance practices that promote such a social organization of life, in which it becomes possible to exploit natural and human resources further and expand capitalism. Now, local communities have lost their relationship with the rest of society. Their previous status as conquerors of the North was lost. The strategies of behavior on the labor market, and indeed life in the North, no longer had anything to do with the demonstrative success models of a modern market society. They were among those expelled indigenous people whose interests and rights began to be ignored even before the advent of Soviet power and before the start of large-scale industrialization of the country. However, for all the complexity of the situation, they did not want to recognize vulnerable equality and still believed that indigenous people, despite the damage to their lifestyle, should be grateful to them for the development of territories in the Soviet years.

⁵ The basic research program of the Ural Branch of the Russian Academy of Sciences, the project "Social Potential of the Russian North: Networks, Trust and Mutual Assistance Practices" No. 12-U-7-100 (leader – T. Lytkina, ISEiEPS KomiSC UB RAS).

⁶ The project "Post-industrial transformation as a factor in reducing the peripheral space of the northern region" of the basic research program of the Presidium of the RAS, 2009-2011 (leader – T.E. Dmitriev, ISEiEPS KomiSC UB RAS).

If until now, the work has used high-quality methods for the study of sociology (case study), and a close look was focused on the Komi Republic, then in 2016, we turned to regulatory documents, analysis of statistics, and strategic planning documents for the development of the North. We are aware that each northern territory has its own experience in modernizing economic activity. Some areas are “richer” (Khanty-Mansi Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, and NAO); the others are “poorer” (Tuva and Karelia). They had different periods of development and the extent of migration; the diversity of the ethnic composition of the residents was replaced by uniformity, and almost 100% is the indigenous population (Table 3). And yet, most of the areas were included in the northern ones even at the stage of formation of regulatory regulation of the North as territories geographically remote from resettlement centers located at the borders of the North of the country and requiring development. The exception is the Republic of Tuva, which was included in the list of regions of the North only in 1994⁷. It acts as a kind of enclave located in the south of Russia; it does not have a large-scale mining industry and, in many respects, resembles the “depressed” agricultural regions of the country. The remaining territories are characterized by a development cycle, when the depletion of natural resources sets in at the last stage, which leads to a decrease in economic activity, a drop in the level of population’s income, and degradation of the social sphere. An essential factor in the development of the region is the attachment to the place of residence, the interest of citizens in the development of the territory, and their ability to protect their rights, which is mainly due to the number of indigenous people and the proportion of locals in northern regions. The interest in protecting rights and influencing the development of the territory is higher where the percentage of indigenous people and natives is higher, as well as the likelihood of their participation in government.

Table 3

*The share of the titular ethnic group and locals in the northern regions of Russia according to the population censuses 1939–2010, %*⁸

Territories	Year of establishment	Titular ethnic group	Share of the titular ethnic group							Share of locals 2010*
			1939	1959	1970	1979	1989	2002*	2010*	
Republic of Karelia	1920	Karelians	23.2	13.1	11.8	11.1	10.0	9.2	7.4	73.6
Komi Republic	1921	Komi	72.5	30.1	28.6	25.3	23.3	25.3	23.7	70.9
Republic of Sakha (Yakutia)	1922	Yakuts	56.3	46.4	43.0	36.9	33.4	45.7	49.9	78.5
Tyva Republic	1944	Tuvans	-	57.0	58.6	60.5	64.3	77.0	82.0	93.4
Nenets Autonomous Okrug	1929	Nenets	11.8	10.9	15.0	12.8	11.9	19.0	18.6	71.0

⁷ At that time, the Republic of Altai and Buryatia entered, but partially, therefore, unlike Tyva, they are not considered in our analysis

⁸ Completed using the results of census. URL: www.gks.ru, demoscope.ru/weekly/ssp/census.php (accessed 09 December 2019) and Fauzer V.V., Lytkina T.S., Fauzer G.N. Vliyanie migratsii na jetnicheskuyu strukturu naseleniya severa Rossii [The impact of migration on the ethnic structure of the population of the north of Russia]. In *Demograficheskij potentsial stran EAJES: sb. st. VIII Ural'skogo demograficheskogo foruma* [Demographic potential of the EAEU countries: Sat. Art. VIII Ural Demographic Forum. Volume II]. Ekaterinburg: Institut jekonomiki UrO RAN, T. II, 2017. pp. 541–548.

Khanty-Mansi Autonomous Okrug	1930	Mansi	6.2	5.0	2.5	1.1	0.5	0.7	0.8	31.1
		Khanty	13.1	9.0	4.5	1.9	0.9	1.2	1.3	
Chukotka Autonomous Okrug	1930	Chukchi	56.3	21.4	10.9	8.1	7.3	24.0	26.7	31.0
Yamal-Nenets Autonomous Okrug	1930	Nenets	29.3	22.4	22.0	11.0	4.2	5.3	5.9	36.9
Arhangelsk Oblast	1937	-**	93.6	91.5	92.1	92.4	92.1	94.4	95.6	82.0
Murmansk Oblast	1938	-**	84.0	85.3	84.6	83.8	82.9	86.3	80.8	53.6
Magadan Oblast	1953	-**	-	73.3	78.3	77.6	72.5	80.4	81.5	53.4
Sakhalin Oblast	1918	-**	82.9	77.7	80.4	81.7	81.6	84.8	82.3	68.0
Kamchatka Krai	1932	-**	79.7	82.5	83.0	82.9	81.0	83.6	78.4	57.4

* percentage of the number of persons who marked their nationality/place of birth; ** the share of Russians - if no titular ethnic group in the territory.

Thus, the article first summarizes the results of sociological studies that allow interpreting statistical data and assessing the main trends in the reactions of the inhabitants of the northern territories to changing policies. Then, based on official statistical compilations and bulletins of Rosstat (1990–2017) ⁹, and the results of censuses (1989, 2002, 2010) ¹⁰ the analysis of migration processes was completed. However, the study of the number and composition of migrants and the impact of migration on the structure of the permanent population of the North, does not allow us to determine the direction of migration flows and the intensity of migration in urban districts and municipal areas of the North. To implement this part of the study, we used recently published indicators from the Unified Interdepartmental Information and Statistical System (UIISS) ¹¹ and Databases of indicators of municipalities (DB IM) ¹².

Northern Territory Development Policies: from Soviet distribution to Post-Soviet expulsion

We, Komi, do not know how to protect our rights. We have no natural resources left; the indigenous population does not dispose of them; nothing belongs to them; they have nothing from them (natural resources). We have lost our main trump card - natural resources. Oil, gas, etc., all profits, everything always leaves (m., head of the municipality, Udorsky district) ¹³.

Today I want to say that it is becoming difficult for the poor reindeer herder to work. Today, expansion is in the oil industry. Today they are taking the land of these rein-

⁹ Serii «Chislennost' i migratsiya naseleniya Rossiyskoy Federatsii», «Demograficheskiy ezhegodnik Rossii», «Regiony Rossii. Sotsial'no-ekonomicheskie pokazateli» [Series "The number and migration of the population of the Russian Federation", "Demographic Yearbook of Russia", "Regions of Russia. Socio-economic indicators"]. URL: <http://gks.ru> (accessed 09 December 2019).

¹⁰ Perepisi naseleniya Rossiyskoy Imperii, SSSR, Rossii [Censuses of the Russian Empire, USSR, Russia]. URL: <http://demoscope.ru/weekly/ssp/census.php> (accessed 09 December 2019).

¹¹ Edinaya mezhvedomstvennaya informatsionno-statisticheskaya Sistema [Unified interdepartmental information and statistical system]. URL: <https://fedstat.ru/> (accessed 09 December 2019).

¹² Baza dannykh pokazateley munitsipal'nykh obrazovaniy. Rosstat [Database of indicators of municipalities. Rosstat]. URL: <http://gks.ru/dbscripts/munst/> (accessed 09 December 2019).

¹³ This and other interviews used in the article were a part of the project "Post-industrial transformation as a factor in reducing the peripheral space of the northern region" of the fundamental research program of the Presidium of the RAS, 2009-2011.

deer herders. Today, at the same level, they are equally involved in the competition for land leases for both the oilman and the reindeer herder. Is that right? Is this an approach? Why am I talking about the law? What is it? You need to paint all the rules of the game in this law. Who is a reindeer herder? It is their land; they didn't bring deer here, the deer was born here, this is their habitat (f., head of the enterprise, Inta).

The development of capitalism needs to expand the methods and forms of exploitation. The most favorable environment is in non-capitalist societies, esp. if they are subjected to harsh criticism and are full of faith in the ability of the free market to solve any problems - which Russia appeared with the collapse of the Soviet Union. The socialist system was not only unable to develop effective ways to regulate the market but also minimized market relations, being immune from market pressure [16, Burawoy M.]¹⁴. As a result, excessive optimism about the relatively smooth change of one regulatory structure (the worst version of socio-economic development) to another (ideal model) not only did not come true but also allowed the formation of an even stricter system of exploitation and violence. But before that, the Soviet system, as well as being introduced in the 1990s the market made the most discriminatory practices and methods of oppressing the previous regime.

Meanwhile, the foundations of colonization in the North of Russia, rich in natural resources, were laid in the 19th century. They are not accepted, as well as the fact that the ambitious plans of the tsarist government to transform the territory into a prosperous land were carried out in the context of catching up modernization modeled on the West European and American environmental management models [17, Korotaev V.I.]¹⁵. The development of the northern lands, regardless of ownership, consent or tolerance, was widely supported by the government, clergy, industrialists, and intellectuals¹⁶ without considering the life experience of the indigenous people of

¹⁴ The intensive planting of socialist ideology makes the forms of exploitation visible (transparent), while the rules of the game of the capitalist system led to their mystification.

¹⁵ At the end of the 19th - beginning of the 20th century, the policy of Russian statism took shape: the meaning of each and everyone is in serving the state. The state itself has lost its sacredness, turning into a police force and creating alienation between various classes of Russia. At the same time, the fierce competition began between Russia and foreign states (Great Britain, Norway, Germany), primarily regarding fisheries. Norway, which ranks second in the world in the number of fish caught, began to dictate its conditions in the fishing zone of Russian Pomors and actively displace them from the domestic market. Unlike Russians, Norwegians took a more active part in settlement of the border regions of the Russian North. As a result of this activity, by 1900, Russian colonists lived in Murman 44%, Finns and Norwegians 43.5%, representatives of the northern peoples (Karelians and Lapps) - 12.5% of the population. Whereas in the territories of the Murmansk and Arkhangelsk Oblasts, Great Britain, Norway, and Germany claimed for natural resources, then in the Far East American industrialists poached and soldered the local population (Zulyar Yu.A. A previous look at the industrialization of Siberia. Part 1 [Predvzyatyy vzglyad na industrializatsiyu Sibiri. Chast' 1]. *Izvestia Irkutskogo State University. Series: Political Science. Religious Studies* [Izvestiya Irkutskogo gosudarstvennogo universiteta. Seriya: Politologiya. Religiovedenie], 2011, no.1, pp. 29-41). In other words, in a problematic socio-political situation within the country, Russia was urgently faced with the question of preserving the borders of the state and the right to use natural resources. The same problems persisted with the advent of Soviet power.

¹⁶ The solitary thoughts of scientists - opponents of the colonization of the North - were not accepted by the tsarist government. According to A.A. Charushin (1) should not recklessly follow the experience of other countries, forgetting about the peculiarities of the way of life of peasants; (2) nature itself is an unremovable obstacle, and this must be

the North and the practices of their interaction with nature. When ignoring the value system, the lifestyle of residents was stigmatized, and they were considered underdeveloped, aliens, “enemies of progress”, “native population”, “wild peoples” [21, Kamenev A.A., pp. 15; 16, Korotaev V.I., p. 46]. Active, enterprising, young people should have “rebuilt” the northern world; they should have settled the territory. In other words, the perception of natural resources in the form of a bottomless pantry of uncountable wealth and the possibility of enrichment was reflected in neglect of the balanced connection of the indigenous people of the North with nature¹⁷, which became the basis in the Soviet period for the formation of specific forms of exclusion through ignoring life experience and suppressing the personality in the process of reproduction and maintenance of the workforce.

During the catch-up modernization, the Soviet government continued not only the policy of colonization of the North but also statism, which already in the 1930s established itself in its extreme form - totalitarianism. Initially, the Soviet government actively collaborated with specialists in the previous system, preparing new personnel. The joint efforts of the “old” and “new” cadres of overtaking modernization have given acceleration. The population of the northern territories began to multiply and take shape as a result of intensive migration. At the same time, the North became a zone of industrial development and a place of punishment for those disliked by the state. In the Stalin period, these were, first of all, convicted for political reasons and special immigrants; later - representatives of the underworld.

During the development of the North, not economic surpluses were invested, but labor resources. If subsequently the cruel practice of using the GULAG system of the NKVD of the USSR was severely criticized, then the contribution to the development of the territory of local peasants (expropriation of peasant farms, forced labor at the same time at enterprises and on the ground) went unnoticed. Meanwhile, experiencing regular harassment by representatives of the Gulag system, residents were often simultaneously forced to solve food problems and work on logging sites. Formally, the state did not bear any responsibility for the situation of collective farmers, shifting this burden on themselves: with the growth of workdays, the monetary content decreased and often was not paid. Without undeniable facts of apparent resistance, expressed in refusing to work, wrecking and/or other methods of intentionally undermining the economy, the quality of life of peasants fell to the level of forced migrants [22, Lytkina T.S., Fauzer V.V., pp. 105].

reckoned with; (3) settler-colonists do not have the necessary resources to adapt to a new place (Charushin A.A. Voprosy kolonizatsii Severa [Issues of colonization of the North]. *Izvestiya Arkhangel'skogo obshchestva izucheniya Russkogo Severa* [Bulletin of the Arkhangel'sk Society for the Study of the Russian North], 1911, no. 4. pp. 259–265). Sorokin A. P. believed that no colonization of the North was necessary, it was enough to raise the agricultural culture of old peasants (Sorokin P.A. Pechorskaya ekspeditsiya i kolonizatsiya Zyryanskogo kraya [Pechora expedition and colonization of the Zyryan Territory]. *Izvestiya Arkhangel'skogo obshchestva izucheniya Russkogo Severa* [Bulletin of the Arkhangel'sk Society for the Study of the Russian North], 1911, no. 8–9, pp. 645–651).

¹⁷ At the same time, it should be noted that the ideas of harmonizing the relationship between man and nature became spread a hundred years later.

Rather fast, the logging industry, with minimal financial outlays, became the “main foreign exchange shop”, ensuring further exploration work in the North. Subsequently, income from mining operations became the basis for the implementation of plans for expanded industrialization of the whole country. Along with the growing demand for qualified specialists for the oil and gas industry and coal mining, the need arises for the formation of a labor stimulation system in the North to attract new, already prepared by the network, young Soviet personnel. In place of forced migration carried out without taking into account the interests of the sending and receiving parties, the possibilities of accommodating people and creating basic social and living conditions for work and life, a system of benefits and benefits for “conquerors of the North” is being formed, new working cities are being developed with expanded infrastructure tour. In essence, the state, through negotiations with enterprises, delegated cares about its citizens. Enterprises became the epicenters of the distribution of goods [23, Burawoy M.], and they built neighborhoods of residential complexes, kindergartens, and sanatoriums. The scale and quality of the offered products depended on the prestige of the industry and were not linked to the development prospects of the northern territory. However, such concern for labor grants contributed to the formation of a consumer attitude to the place of temporary residence and the consolidation of their priority right to high incomes. In other words, the existing privileges and privileges contributed to the attachment of a person to the workplace, but not to the environment. Workers who come to the North primarily became part of labor collectives, not the local community involved in the development of the territory. The determination of the options for the development of the territory or the standards of comfortable living entirely remained exclusively in the competence of the state, proceeding from the interests of the mobilization type¹⁸.

Locals were mainly living in rural areas and became “cut off” from jobs in prestigious industries and the benefits provided to them¹⁹. They could partly overcome existing barriers to integration into the distribution system of the Soviet era²⁰ due to the logging sectors, which by that time had lost priority importance for the development of the economy, but still contributing impressive revenues to the country's budget. Their integration into the distribution system [24, Ladanyi J., Szelenyi I.] turned out to be conditional and not comparable either to the damage done to them in the implementation of the traditional way of life or to the size of the part of the income that they returned from the extraction of natural resources. Against the background of northern cities, the

¹⁸ Northern cities are predominantly built up with panel “boxes”. Architecturally, there are a few dwelling houses. All of them were built before the revolution or in the Stalin period. The exceptions are cities such as Salekhard and Khatanga. At best, the institutions of social and cultural life act as sights, which are more in the European part of the North than in the Asian part, but their number has significantly decreased since the beginning of economic reforms.

¹⁹ Indirect evidence is the national composition of the residents of “resource” cities. E.g., in the Komi Republic for 2010: 1.7% of the Komi live in Vorkuta, 7.9% in Ukhta, 11.4% in Inta, and 14.8% in Usinsk.

²⁰ First of all, due to existing restrictions on the passport regime, peasants did not have the right to move peasants even through the territories where the repressed were forcibly taken. After the abolition of restrictions in 1974, and which began certification on January 1, 1976, and ended only on December 31, 1981, a continuous flow of people and resources was established between the city and the village.

places of residence of indigenous people looked depressing: the infrastructure was inferior, the supply of goods was worse, and the quality of public services was lower. Meanwhile, the processes of Russian colonization of the North continued to be considered for the method of development of humanity and cultural enlightenment, poorly adapted to the living conditions of peoples [25, Rybakovsky L.L.].

The task of developing the North, which was to gain access to the extraction of natural resources, was achieved. Unlike capitalist countries, the specifics of the power and wealth manifestations [26, Walker R.] were reflected not in the individual but in-state megaprojects. It means large-scale industrialization, free aid to union republics, and developing countries to the detriment of creating a comfortable living environment for their citizens. But at the same time, the planned system restrained civic activity and participation in managing the development of the territory. It did not imply the formation of a collective northern identity. As a result, the residents of the northern territories, not having a history of joint activities that determine the socio-cultural attachment to the territory²¹, were unable to formulate common goals and ways to protect their rights, which led to the further actualization of historical discrimination practices. In other words, violation of rights, neglect of interests, non-recognition of differences, and isolation of the experience of residents were widespread in the new system. Still, the number of those excluded increased: they also included the second generation of voluntary migrants.

We affirm that today the Russian North is being supplanted and reflected not only in the prevailing practices of social exclusion but also in the expansion of capitalism: the seizure of resources and the development of capitalist production methods. First, in the 1990s, the industry of the North drowned in a deep economic crisis: more than half of the enterprises were declared bankrupt [11, Lytkina T.S.], and the remaining ones only strengthened the export-raw material orientation of the economy [29, Krotov P.P.]. Reducing the number of jobs contributed to increased exploitation. With non-payment of wages, the common practice of administrative leave, the living standards of northerners declined, and social protection curtailed. The labor collectives, which, under the previous political regime, had the potential for solidarity, lost their ability to mobilize. And the territories lost the ability to develop due to the transformation of the system of distribution of goods, tax policy for natural resource extraction²² and the criteria for receiving subsi-

²¹ The North was perceived as a "home", but not as a "homeland" (Heleniak T. The role of attachment to place in migration decisions of the population of the Russian North. *Polar Geography*, 2009, vol. 32, iss. 1–2, pp. 31–60. DOI: 10.1080/10889370903000398. Bolotova A., Stammler F. How the North became home. Attachment to place among industrial migrants in Murmansk region. In *Migration in the Circumpolar North: Issues and Contexts*, 2010, pp. 193–220).

²² In 2003, the regional share of the mineral extraction tax (MET) for gas was reduced from 20 to 0%, for oil - from 20 to 14%; in 2004, the regional share of mineral extraction tax on oil was again reduced to 5%, and since 2009, mineral extraction tax on natural gas and oil has been fully credited to the federal budget. In 2017, the federal center reduced the rate of income tax payable to regional budgets from 18 to 17%. It also reduced the share of excise taxes on petroleum products credited to the local budgets to 61.7%. Finally, in 2018, the regions lost part of their budget revenues due to the severance tax index NDPI, which reduced the income tax base (Yushkov A.O., Oding N.Yu., Savul'kin L.I. Sud'by Rossiyskikh regionov-donorov [Fates of Russian donor regions]. *Voprosy ekonomiki* [Issues of Economics], 2017, no. 9, pp. 63–82. DOI: 10.32609/0042-8736-2017-9-63-82).

dies from the federal budget²³. Even though the northern regions of Russia continue to provide 38.4% of revenues to the federal budget, they do not have financial independence, the ability to diversify the economy and overcome the consequences of its resource specialization.

The expulsion / exclusion we can observe on the examples of emerging structures of social inequality [32, Lytkina T.S., Smirnov A.V.]. According to statistics, the average monthly wage in the North of Russia remains higher than the national average, but the gap continues to narrow. If in Russia in 2006 real incomes of the population exceeded the level of 1991, then in the North, despite their growth in the 2000s, they never returned to their previous level. The processes of (re)production of poverty are proceeding more intensively, and the poor are becoming more and more. Today, the proportion of the poor with incomes below the subsistence level in the northern regions is 15.4% compared with the national average of 13.2%. At the same time, the standard of living of rural residents, as before, is much lower than that of the city, and men are in a better position than women. The most significant type of inequality is sectoral due to the unique role of natural resource extraction in the economy of the North. However, the spread of the shift method of labor deprives residents of highly profitable jobs.

The expulsion of the North is accompanied by a contraction of the social and engineering infrastructure of settlements [32, Lytkina T.S., Smirnov A.V.]. The auxiliary support of the mining industry is also deformed or lost: geological exploration, and hydrometeorological service [33, Epov M.I., p. 8]. GRP per capita in the northern regions is declining, while natural resources are becoming depleted. The result of economic activity was the fact that the industrial cities of the North are leading in terms of environmental pollution and anthropogenic impact on the environment [34, Bityukova V.R.]. Finally, the removal of the state from solving the problems of the North led to a massive outflow of the most qualified population and the spread of pessimism. After 1989, out of 117 cities in the North only in the territorial centers, some mining and defense settlements (29 cities), the population increased; in the remaining 88 settlements (75.2%), it decreases. The area began to lose creative potential, which no less leads to a decrease in the quality of life and the loss of prospects for the development of the territory. Some rushed to big cities to obtain a prestigious education, in search of decent incomes and opportunities for professional self-realization, others are deprived of choice, build life strategies that contradict the values of individ-

²³ Today, the priorities of the federal authorities in investing in the territories are mainly political. The interests of large business are concentrated in projects for the extraction and transportation of oil and gas (Zubarevich N.V. *Regiony Rossii: neravenstvo, krizis, modernizatsiya* [Russian regions: inequality, crisis, modernization]. Moscow, Nezavisimyy institut sotsial'noy politiki [Independent Institute of Social politics], 2010. (In Russ.)). E.g., in 2005-2015, the share of investments in fixed assets in the gross regional product (GRP) of the Komi Republic increased from 29.4 to 33.5%, with more than 82% of investments in oil and gas production, as well as pipeline transport. Excluding these types of economic activity, it turns out that other investments fell from 9 to 6% of GRP. Today, the priority geostrategic territories of the Russian Federation are the Crimea, the Kaliningrad region, the North Caucasus, the Far East, and the Arctic zone (Ob utverzhdenii Strategii prostranstvennogo razvitiya do 2025 goda [On approval of the Spatial Development Strategy until 2025]. URL: <http://government.ru/docs/35733/> (accessed 09 December 2019)). The political interests and the struggle for state support and benefits are guided by today's initiators of the expansion of the Arctic zone, and the northern territories, which did not achieve entry into the Arctic zone, drop out of federal programs and cannot count on the formation of development strategies.

ualism, freedom, and democracy, for the sake of which the country's transition to the market was carried out in 1991.

Outgoing migration as a defensive reaction to market and state pressure

Today, normal parents who want to see their children happy, they will not leave them here at Inta because they have to eke out a miserable existence here, in the sense that there is no work here (f., Mr. Inta).

I would move at a late age. If only in one [apartment] was the daughter, and in the neighborhood - me. It's undoubtedly easier there; you don't need firewood, then try to buy firewood for this salary here. Firewood, a car, costs 3,500. Well, where can you buy a firewood car with such a salary? Buy and be hungry for a month. And for the winter you need three cars (f., Usogorsk village, Udorsky district).

Since the early 1990s, population losses from migration amounted to approximately 2.3 million people or 24% of the population. Outflows in the European and Asian parts of the North were different in different periods. If before the beginning of the 2000s, a more intensive migration outflow was in the Asian part, then in the European part of the North. As a result, the decrease was approximately the same (1.1 million people each). Stable trends in the migration outflow of the population continue to be observed in the vast majority of cities and territories. Each year, the North loses about 30-40 thousand people. In areas of the Far North, the outflow of the population is three times more intense than in the areas equated to them. The most significant population decline was in 2015–2017. It was observed in the Chukotka and Yamalo-Nenets Autonomous Okrugs, the Republic of Komi, and the Magadan Oblast. Some cities and areas in these territories lose up to 4% of the population per year. It is evident that the life of rural residents in the North is less attractive than in the southern and central areas of Russia: since the beginning of market reforms, the number of rural residents of the North has decreased by 26% (Fig. 1). In comparison, in Russia, it has only reduced by 4%. The urban population of the North during this period decreased by 16%, and Russia - increased by 1%.

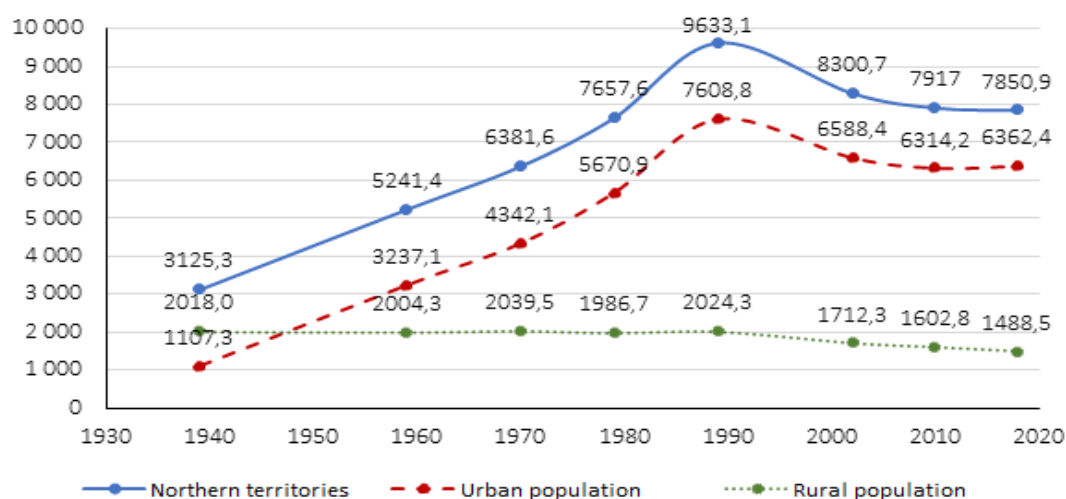


Fig. 1. The permanent population of the Russian North according to censuses 1939-2010 and at the beginning of 2018, thousand people ²⁴.

New places of residence of northerners are distinguished by a more favorable climate and high quality of life. First of all, these are the capital regions: Moscow, St. Petersburg, Moscow, and Leningrad Oblasts. About a quarter of migrants from the North move there. Return flows from capitals are almost half. The situation is similar in the case of large southern regions: Krasnodarskiy Krai, Belgorod and Voronezh Oblasts, Crimea, etc.

Although the northern cities, even the largest ones, do not withstand competition with the central and southern subjects of the federation. Within the territories, there is a “pulling” of the population to the capital’s centers, where the prospects of life, on the one hand, are more favorable (better infrastructure, more jobs, and higher incomes), and on the other - more accessible (less money is needed for moving, educating children). That is why the migration situation in the most densely populated areas looks relatively stable. In municipalities with populations below 100 thousand people, the migration loss is four times higher than in large cities (Table 4).

Table 4

Migration in the largest municipalities of the North 2012-2017. ^{25,26}

Municipalities	Population, thousand people, beginning of 2018	The rate of migration growth, per thousand people	incl., by type of migration		
			within a territory	between territories	international
Total	3316.4	0.5	4.3	-6.4	2.7
Arkhangelsk	356.9	0.0	6.6	-7.3	0.7
Surgut	366.2	10.4	3.5	1.7	5.2
Yakutsk	328.5	8.1	13.9	-6.2	0.5
Murmansk	295.4	-9.9	1.2	-13.4	2.3

²⁴ Compiled by the authors

²⁵ Compiled by the authors based on data of the PMO, Rosstat.

²⁶ At the beginning of 2018, in the northern regions of Russia, there are 15 towns with a population of more than 100 thousand people, in which 42.2% of the population of the North live. Two urban districts previously had a population of more than 100 thousand people. Still, today they have ceased to be large: Vorkuta (the population decreased from 216.2 thousand people in 1989 to 77.3 thousand people in 2018) and Magadan (decreased from 163.6 to 99.7). One urban district is approaching 100 thousand people and may soon become one of the largest - Khanty-Mansiysk (98.5 thousand people at the beginning of 2018).

Petrozavodsk	279.2	9.8	8.0	-0.4	2.2
Nizhnevartovsk	275.4	0.5	-1.1	-3.6	5.2
Syktyvkar	260.8	0.6	7.2	-6.5	-0.1
Yuzhno-Sakhalinsk	206.1	6.4	6.7	-4.5	4.1
Severodvinsk	184.3	-6.3	2.6	-9.7	0.7
Petropavlovsk-Kamchatskiy	181.2	-0.8	1.9	-10.8	8.1
Nefteyugansk	127.0	-6.1	-5.1	-4.1	3.1
Ukhta	117.8	-5.9	5.2	-11.7	0.5
Kyzyl	115.9	-4.7	2.7	-7.8	0.3
New Urengoy	114.8	-7.4	-2.5	-7.2	2.3
Noyabrsk	106.9	-14.0	-5.3	-12.2	3.5

The decline is especially typical for rural areas of the North. It is villages and urban-type settlements that continue to provide an influx into cities within territories. Mostly rural youth aged 15 to 19 years throw home places. Migration is connected with getting an education, to which the girls are more inclined. According to the analysis of official statistics at this age, girls make 29.5% more movements than boys. If parents from villages support their children to apply to educational institutions of the nearest cities in the territory, then urban ones go to metropolitan universities outside the territories. Studying at central universities and employing children outside the territory subsequently suggests a strategy for parents to move to their children after they retire (at the age of 55–59). This decision is actively promoted by resettlement programs, esp. for areas of the Far North (Novy Urengoy, Noyabrsk, and Vorkuta). Parents of rural youth, deprived of state support in the implementation of migratory installations, as a rule, remain at home.

Obviously, as the population of villages and urban-type settlements decreases and grows older, the possibilities for replenishing the population of cities will decrease. We can already observe these trends today in the Murmansk region, where the share of the rural population is only 8%. In cities such as Noyabrsk, Nefteyugansk, Novy Urengoy, Nizhnevartovsk, and Norilsk, intraregional migration has long been negative. These cities are less surrounded by rural areas and there are no large educational institutions providing internal migration growth of northern cities²⁷. Another situation is, e.g., in the town of Ukhta (the Komi Republic): lacking a metropolitan status, due to a large university and rural surroundings, has an increase within the territory at a high level of 52.4; in Syktyvkar - the administrative center with universities - migration is 72.4²⁸.

Together with school graduates, the North is losing the most qualified personnel. Citizens with incomplete higher education (a decrease of 10.0 people per 1000 residents), higher education (9.2), and full secondary education (6.6) have the highest propensity for outbound migration. The migration loss of citizens with an initial professional is only 1.2. If we measure the educational potential of the population as the total duration of education in years, then it turns out that for a year, migration leads to the export of about 1.3% of its educational potential outside the North.

²⁷ According to the analysis of municipal statistics, an 84% variation in the intraregional migration growth of large cities in the North is determined by the proportion of students in the urban population.

²⁸ When calculating, the given student population in towns was considered according to the monitoring of the effectiveness of the activities of educational institutions of higher education in 2017 (URL: <http://indicators.miccedu.ru/monitoring/?m=vpo>).

Instead, the northern territories receive less qualified personnel [35, Fauzer V.V., Lytkina T.S.]. As a rule, scientists focus on the fact that population reduction, deterioration of the age structure, and the outflow of educated citizens negatively affect the demographic and labor potentials of the territory [36, Fauzer V.V.], which is undoubtedly true. But it also adversely affects the social well-being and quality of life of the remaining residents of the North [37, Lytkina T.S.; 38, Lytkina T.S.].

In absolute terms, the most massive outflow of the population falls on working age (23 thousand people per year)²⁹. Together with the natural processes of population aging and low birth rates, this leads to the aging of the age structure of the population. In rural areas, these processes are faster. Since 2002, the average age in the North has grown by 3.1 years; in rural areas, it has increased by 3.7 years. In Russia, it increased by 2.4 years (moreover, in the city and the village equally)³⁰. In 2017, every fifth resident of the North was older than working age, and the demographic burden on the able-bodied population has almost reached the average Russian level (716 and 764, respectively). The deformation of the age composition results in a reduction in the proportion of the population of reproductive ages, a decrease in the birth rate, and, as a result, depopulation of the northern regions. In recent years, natural growth has been replaced by a decline in the Komi Republic, Murmansk and Magadan regions.

At the same time, we have the opportunity to observe the attractiveness of the North for labor migration, especially for men aged 20 to 54 years. The most significant number of labor migrants in 2015–2017 were immigrants from Bashkortostan, Dagestan, and the Omsk Oblast. As for neighboring countries, Ukraine (35%), Uzbekistan (12%), Kyrgyzstan, and Tajikistan (10% each), Azerbaijan (6%), Belarus, and Armenia (5% each) took the most active part in the migration exchange. There are not many attractive cities for labor migrants, but higher wages distinguish all of them. First of all, these are areas of oil production of the Khanty-Mansi Autonomous Okrug. Half of the foreign labor migrants come here. No less attractive are the island areas (Novaya Zemlya, Kuril Islands, Sakhalin), recently associated with high defense activity and the development of sea transport routes. However, such labor migration provides migratory mobility without contributing to the growth of the resident population of the North.

The interest of mining enterprises in shift work organization makes high-wage jobs inaccessible to residents, which exacerbates their situation. At the same time, it should be recognized that with a further decrease in the level of comfortable living in the North, the availability of earnings stimulates travel beyond. At the same time, the outflow of the population is the higher, the lower the comfort of living and the possibility of professional self-realization, and today they are smaller than average in representations of northerners³¹. As an additional argument, we used the

²⁹ It is 1.7 times more than the outflow of the population older than the working age (13.5 thousand people).

³⁰ If in 1989 the specific gravity of children was 29.3, people of working age 61.8, and the proportion of people of older age groups was 9.0, today the ratio of three age groups in the North is as follows: 21.5; 59.1 and 19.4.

³¹ RFBR project No 18-410-110002 "Employment of the population in small business (the case of the Komi Republic)", 2018–2020 (project leader - M.Terentyeva).

indicator of life expectancy³², which is one of the most important indicators of socio-economic development of territories and quality of life. It showed that a massive outflow of the population is observed where the standardized mortality rate is high and exceeds 12: in Vorkuta, Pechora, Usinsk, Apatity and most rural areas of the North. The worst indicators are observed in Chukotka (29.9), where the life expectancy of men does not reach even 50 years. On the contrary, in Surgut, Yuzhno-Sakhalinsk, Kogalym, Yakutsk, and Khanty-Mansiysk this mortality rate is low, and migration loss is not observed.

It is also essential to pay attention to the fact that more people want to go outside their places. Still, every year, along with a decrease in income of northerners, it becomes more and more challenging to realize migration intentions. Against the background of the lost benefits of living in northern cities and villages, the visible, attractive sides are a measured, calm life, the support of friends and relatives in solving everyday problems, as well as the nature of the northern region. However, the rejection of migration and attachment to native places are increasingly associated with a lack of individual (family) resources for departure and subsequent adaptation in a new home, while the apparent advantages of living in the north justify the preservation of the former place of residence. Indigenous people of the North, living in worse conditions compared with other northerners, are least inclined to leave. Indigenous Peoples of the North³³ almost do not participate in migration exchange. This issue requires further study.

Conclusion

Using the example of the Russian North, we tried to show the reasons that provoked its expulsion. They lie both in the recent past, and the neoliberal policy pursued today, namely: in the perception of the North as a territory rich in natural resources, and a dismissive attitude towards citizens. It was proved that the formation of local northern communities did not imply either the protection of the indigenous interests, the manifestation of civic initiatives and responsibility for the development of the territory, nor the formation of a collective northern identity.

In the Soviet period, identity was formed around the workplace, contributing (to) the production of social exclusion in the form of interaction practices with the superiority of some and the silent resistance of others. The Soviet distribution policy greatly facilitated it. On the one hand, it excluded local communities from the distribution of benefits, organizing a hierarchy of priority

³² To measure the impact of the quality of life on the migration growth rate of territories, a standardized mortality rate was used, which reflects life expectancy and the general level of well-being of the population. The linear correlation coefficient with migration growth in 195 towns and territories of the North was 0.55, which is significantly higher than the dependence on wages (0.07).

³³ The same territories, settlements with a predominance of the Russian population (according to the 2010 census) demonstrate mobility indicators several times higher than the areas with a predominance of indigenous peoples. It is true for peoples from different territories and belonging to different language groups. In those rare cases, when small nations participate in migrations, they quickly "dissolve" in another cultural environment. It, in our opinion, is connected with discriminatory practices of social interaction, captured by the indigenous inhabitants of the North. Thus, since 1989, the number of Veps in Russia has more than halved as a result of their migration to St. Petersburg and Petrozavodsk.

sectors in the economy. On the other, through vertical mobility channels, it provided access to additional benefits: education, healthcare, and opportunities for professional and career growth.

With the beginning of capitalization, a new stage in the withdrawal of natural resources began, and the subsequent deformation of social relations aggravated the situation and led to severe obstacles to the development of the common interests of the northerners. The exclusion processes through a policy of ignoring the interests of northerners were continued and gained further distribution: now not only the natives of the North, but also the second generation of voluntary migrants born in the North and who became his hostages fall into the exclusion zone. Like more than a hundred years ago, the policy of forming a permanent population has been replaced by a system of temporary residence, but now thanks to the shift method of organizing labor. The work of residents not only becomes unclaimed but also less paid; there is extensive use of infrastructure. Migration moods become a defensive reaction of northerners to the market amid declining quality of life. As a result, the northern areas are massively abandoned by residents, incl. young and skilled ones, which provokes a further decrease in the attractiveness of life in the North for the remaining population.

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Features of local identity of single-industry town residents (the case of the Murmansk Oblast) *

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Abstract. The article presents an analysis of the local identity of single-industry town residents in the Arctic zone of the Russian Federation (AZRF) in the case of the Murmansk Oblast, which has half the single-industry towns of the Arctic zone. Considering local identity as a EArt of territorial identity, the authors present it as a symbolic sEAc for creating and strengthening the sense of territorial identity. At the same time, according to the authors, the people's identification related to the area of residence contributes to the construction of an effective system of regional interaction. It is one of the critical factors for the sustainable development of territories. According to the results of the study, positive and negative factors of identity manifestation were obtained from the residents of single-industry towns of the surveyed area (questionnaire (n=428), in-depth interviews (n=12)); the assessment of connection with the place of residence and socio-economic status of residents, the degree of attractiveness of cities and migration attitudes of the population were determined. The authors argue that the socio-economic image of the area in the minds of its residents is developing along with the manifestation of their rootedness. A distinctive feature of the local identity of single-industry town residents in the Murmansk Oblast is well-being. It determines the visibility of communication with the place of residence. The increase in prosperity is proportional to the growth of identification with the town, and it is of strategic importance for building regional policies in single-industry towns.

Keywords: *local identity, territorial identity, single-industry town, the Arctic zone of the Russian Federation, the Murmansk Oblast.*

Introduction

The socio-cultural space of modern Russia is a regional diversity due to both historical and geopolitical and socio-economic changes that have taken place since the 1990s.

Regional differentiation for our country has deep objective grounds. Firstly, the territory of the Russian Federation is located in nine time zones, in almost all natural and climatic zones, with a unique natural resource potential, inhabited by many ethnic groups, with a diverse configuration of settlement structures. Secondly, our country unites many regional communities, the life of which takes place in particular conditions.

The territorial principle of structuring social space gives rise to the need to continually clarify the role of a particular region and local territory in the system of external, internal, and interregional interactions. It requires determining the development directions of a specific area, identifying and ensuring the protection of the socio-economic interests of its community, and the for-

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mation of a positive image of the territories. As K. Topcu notes, today, it is difficult to maintain and strengthen the local character of small cities (territories) in a globalizing world [1, Topcu K., p. 371].

The successful solution of these problems is primarily determined by the formation and content of local identity. The identification of residents with the territory of residence may be conducive to building an effective system of regional interaction, consolidation of the regional community, and be one of the most significant factors in the sustainable and progressive development of territories.

In modern Russian realities, imbalances in socio-economic development and managerial influence in the regions lead to serious systemic shifts. They have generated relations between the center and the territories based on the “center-periphery” principle, where the main character is the remoteness of the periphery associated with backwardness and stagnation. An important fact remains the competition created by national and regional projects within the regions between municipalities, forced to fight among themselves for obtaining resources from higher-level budgets [2, Morozova E.V., Ulko E.V., p. 139].

These circumstances created a challenge for the state policy of Russia and require the search for mechanisms for its formation and subsequent implementation. The relevance of regional development issues is confirmed in the program documents of the Russian state, in particular, in the proposal of the President of the Russian Federation V.V. Putin to launch a large-scale spatial development program for Russia, incl. the development of towns and other settlements, and at least double the cost of these goals over the next six years¹.

One of the main challenges to the social and political stability of our country is to ensure the development of single-industry towns. An important document on the development of single-industry towns in this regard is the “Strategy for the spatial development of the Russian Federation for the period until 2025”², where the development of single-industry towns is one of the directions of the spatial development of our country.

Local identity as social phenomenon

The key research question that determined the problems of this article is to study the features of the local identity of the population of single-industry towns.

Turning to the concept of “identity”, one must bear in mind the ambivalent nature of this phenomenon, indicated by E. Erickson, who considers identity, on the one hand, as a static phenomenon, and on the other – as a dynamic one. Based on the ambivalence of the concept, we will

¹ Poslanie Federal'nomu Sobraniyu ot 1 marta 2018 g. [Message to the Federal Assembly on March 1, 2018]. Consultant Plus. URL: http://www.consultant.ru/document/cons_doc_LAW_291976/ (accessed 22 June 2019).

² Strategiya prostranstvennogo razvitiya Rossiyskoy Federatsii na period do 2025 goda / utv. rasporyazheniem Pravitel'stva Rossiyskoy Federatsii ot 13.02.2019 g. № 207-r [Strategy for the spatial development of the Russian Federation for the period until 2025 / approved by the order of the Government of the Russian Federation]. Consultant Plus. URL: http://www.consultant.ru/document/cons_doc_LAW_318094/006fb940f95ef67a1a3fa7973b5a39f78dac5681/ (accessed 22 June 2019).

consider local identity from the standpoint of the constructivist approach. In this paradigm, identity is a placement in the “life world”, and therefore it can only be assimilated together with the social world. But this world should be understood by the individual and, if possible, clearly presented in the existing images of everyday order. In other words, the world is never completely closed and determined - it is always open to new interpretations and transformations. In other words, identity is something that can be selected, can be constructed, and something that can be manipulated [3, Golovneva E.V., p. 43].

Local identity is one of the components of territorial identity, which, according to N.A. Shmatko and Yu.L. Kachanova means the experienced and / or conscious meanings of the system of territorial communities (subjective socio-geographical reality) that form a practical sense or consciousness of the territorial affiliation of an individual [4, Shmatko N.A., Kachanov Yu.L.]. Accordingly, local identity means the person’s identification with the local community, a sense of ownership concerning events and situations occurring in the territory of direct residence (city, district, village, and micro-district) [2, Morozova E.V., Ulco E.V., p. 140]. In this sense, the territory acts as a symbolic space for the creation and strengthening of identity.

In understanding local identity, it is essential to consider the concept of group identity. Group identity is based on the idea that people recognize themselves as part of a group, and their well-being and status are associated with this group [5, Wilcox-Archuleta B., p. 961]. Attachment to the local community, incl. the territorial one also shows the ideas of individuals about success and satisfaction with life activity in specific conditions.

In the process of researching local identity, it is essential to identify clear identification boundaries of a particular locality of a region.

In this regard, of particular interest is the identity of single-industry towns included in the Arctic zone of the Russian Federation (AZRF). The single-industry towns of the Russian Arctic have the so-called specificity of “northernness” associated with their location in areas with extreme climatic and environmental conditions. It, as E.E. Plisetskiy and E.A. Malitskaya mentioned, left an imprint on the nature and directions of their development, the functioning of crucial life support systems [6, p. 86].

Among the regions of the Arctic zone, the most indicative, in our opinion, is the Murmansk region, which includes half of all single-industry towns. This region is especially interesting in connection with its inclusion in the supporting territories of the Arctic zone of the Russian Federation. It is determined by the “Strategy for the development of the Arctic zone of the Russian Federation and national security for the period until 2030” and the State program “Socio-economic development of the Arctic zones of the Russian Federation for the period until 2025. “Also, the “Spatial Development Strategy of the Russian Federation until 2025” denotes the economic specialization of the region in industries that are tied to single-industry towns, for example, mining, metallurgical, and chemical industries.

The following administrative-territorial entities belong to the monotowns of the Murmansk Oblast: the towns of Zapolyarny, Kirovsk, Monchegorsk, Olenegorsk, Nikel, Kovdor, and the town settlement of Revda. According to official statistics, as of January 1, 2019, in the designated settlements, the total urban population was 138.8 thousand people, which is 18.6% of the total population of the territory and 20.1% of its urban population³.

Despite the climatic and resource specifics, the strategic importance of the Murmansk Oblast (outpost area, frontier region), the Oblast is in a difficult socio-economic situation, which significantly affects its image and the local identification of its residents.

As E.G. Animitsa and the team of authors noted, the single-industry towns of the Oblast are not able to fully satisfy the complex of social, cultural, and educational needs of the population. Therefore, the problem of increasing their socio-cultural self-sufficiency remains quite acute [7, p. 16]. Given this point of view and the difficult socio-economic situation in the Murmansk Oblast, it seems that residents of its mono-cities find themselves in an even more difficult situation, where the local identity crisis is exacerbated by the city's monofunctional structure with correspondingly low diversification of employment sectors (homogeneous professional becoming), high unemployment, monotonous cultural life.

Factors of the formation of local identities of single-industry towns of the Russian Arctic

From our point of view, the local identities of single-industry towns are caused by several factors that make it possible to look more clearly at the problem of regional identity.

First, as a product of the Soviet system of administrative-territorial division, monotowns found themselves in a more difficult socio-economic situation after the collapse of the Soviet Union. Transformations of a geopolitical and socio-economic nature that have launched negative processes in the social sphere of single-industry towns have led to an intensive outflow and marginalization of the population to a greater extent than was observed in large cities. And the lack of resources and real levers of influence on the crisis led the territory to depressive states. Therefore, the negative characteristics of local identity will be traced here more clearly.

Secondly, being an inheritance from the Soviet system of the administrative-territorial organization, with its distribution policy and social guarantees, residents of single-industry towns broadcast most of all nostalgia for the Soviet past. The population was not ready for life in the new capitalist realities, requiring greater individual responsibility and activity. This circumstance is mainly cultivated by representatives of the age group that found experience (either childhood or labor activity) in Soviet realities. It is this group that begins to prevail more and more in the age

³ Chislennost' naseleniya po munitsipal'nym obrazovaniyam Murmanskoy oblasti na 1 yanvarya 2019 goda i v srednem za 2018 god. Federal'naya sluzhba gosudarstvennoy statistiki, Territorial'nyy organ Federal'noy sluzhby gosudarstvennoy statistiki po Murmanskoy oblasti [Population by municipalities of the Murmansk region as of January 1, 2019 and on average for 2018. Federal State Statistics Service, Territorial Authority of the Federal State Statistics Service for the Murmansk Oblast]. URL: http://murmanskstat.gks.ru/wps/wcm/connect/rosstat_ts/murmanskstat/ru/statistics/population/ (accessed 12 June 2019).

structure of single-industry towns, mainly due to the outflow of young people due to the low attractiveness of life there.

Thirdly, the production link to a limited number of enterprises remains the basis of economic life for single-industry towns. This circumstance has a unique effect on the structure of local identity, where corporate identity occupies a particular place. Most of the able-bodied population of single-industry towns continue to be employed at city-forming enterprises, which, being uninterested in staff turnover, try to keep them within the region. In the 1990s, the leading industrial enterprises were acquired by the most significant Russian business structures, e.g., such large corporations as PJSC MMC Norilsk Nickel, AO MCC EuroChem, PAO Severstal, PJSC PhosAgro, JSC RusAl Ural and others. Decision centers and company profits are located outside the territory.

Local researcher Izmodenova N.N. notes “the export-resource orientation of the economy creates dependence on price fluctuations in the global raw materials market. If the situation worsens, large companies, as a rule, reduce production volumes, underestimate the prices of production units in the regions of production. Thus, profit is concentrated in the central administrative structures, and then the funds are redistributed in those areas that are a priority for business groups. There is a conflict of interests between companies and their base region, which does not receive taxes.

The companies that came to the Oblast are interested in efficiency and profit, not in the human mind, not in people with their needs. The population is considered as an effective or ineffective labor force” [8, Izmodenova N.N., p. 53]. And in this sense, local identity is filled with the qualitative characteristics of additional content. City-forming enterprises with their corporate culture are a significant agent of influence on local identity in settlements of this type, where a special way of life (associated with everyday communication and direct interaction of the city and their groups for various reasons) reproduces a particular mentality. Here, solidarity groups are formed with their leaders and authorities, in which formal and informal relations are created with the managerial structures of enterprises, the zone of influence of which often extends far beyond the boundaries of organizations. An important role is played by the nature of the professional activity of the majority of the able-bodied population. E.g., having a narrowly specialized worker (e.g., a mining worker), the opportunities for diversifying labor activity by specialty outside the Oblast are reduced to zero unless it is a question of territories with similar industry affiliations. But here a number of circumstances are included, which are more likely to be factors of retention and rooting: polar premiums, long holidays, northern pension, social benefits of corporations themselves. So, the average wage as of April 2019 in industries such as mining was 88 516.0 rubles, in metallurgy 75 759.0 rubles, while the average salary in the Oblast is 58 227.0 rubles.⁴

⁴ Dannye o srednemesyachnoy nominal'noy nachislennoy zarabotnoy plate rabotnikov organizatsiy po vidam ekonomicheskoy deyatel'nosti [Data on the average monthly nominal accrued wages of employees of organizations by type of economic activity]. *Sotsial'no-ekonomicheskoe polozhenie Murmanskoy oblasti v yanvare – mae 2019 goda: doklad* [Socio-economic situation of the Murmansk region in January - May 2019: report]. Federal'naya sluzhba gos-

Fourth, a remarkable circumstance that qualitatively fills local identities in single-industry towns, incl. the Murmansk Oblast, are the consequences of the activities of city-forming enterprises that negatively affect the ecology of territorial entities. This circumstance is considered aggravating and introduces negative characteristics into the image of places of residence.

The results of the study by I. Roshchina and N. Artyukhova show that most of the single-industry towns they studied (9 out of 11) have a shallow index of happiness. Also, most residents from single-industry towns are not satisfied with the state of the environment, the development trends of the municipality, life safety, and material well-being [9, pp. 44–45].

It is important to note that single-industry towns are micro-societies of the area filled with a limited number of identification markers. This circumstance requires close research attention, primarily from understanding the processes taking place in the Oblast in the structure of towns.

Significant to justify local identity is the historical context of the formation of single-industry towns, whose population was formed due to migrations of the first half of the 20th century. Intensive development of the territory of the Kola North was due, among other things, to the development of new deposits and the construction of mining and processing enterprises. The socio-demographic composition of the visitors was very diverse; people from all territories of the Soviet Union came here both voluntarily and forcibly. Since the 1930s, residents of the territories gained advantages in the form of additional material preferences for living in the conditions of the Extreme North; these were polar allowances, long-term leave, northern pension, and so on. The ethnic composition of the monotowns of the Murmansk Oblast is diverse; there are almost no indigenous people; there are about 2 thousand Sami and indigenous residents throughout the Murmansk Oblast.

Today, the Murmansk Oblast is a highly urbanized region (92% of the urban population) with a high level of education.

Back to single-industry towns. It should be noted that according to the degree of influence of the crisis, experts propose the following classification: 5% of single-industry towns are territories with a high degree of crisis manifestation, and urgent measures are required at the federal level. In the Murmansk Oblast, these territories include the town of Revda and the city of Kirovsk; 15% are in the high-risk zone - the leading role in solving the problems of single-industry towns should be played by the constituent entities of the Russian Federation. In the Murmansk Oblast, Monchegorsk, Kovdor, Nickel, Zapolyarny, Olenegorsk remain in the designated zone; 80% require regular monitoring of the socio-economic status at the regional and federal levels and the development of programs for the development of single-parent families for the medium and long term. In the Murmansk region there are no mono-profile formations of the indicated type.

Over the past decades, the monotowns of the Murmansk region have experienced a severe demographic burden, one of the reasons for which is the intensive outflow of the population (Fig.1).

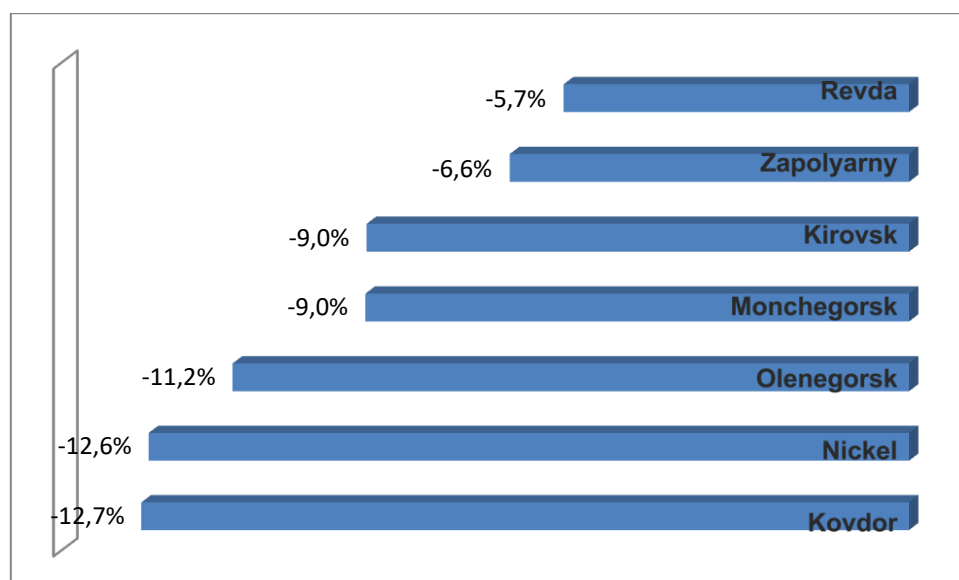


Fig. 1. The dynamics of population decline in single-industry towns of the Murmansk Oblast between 2010 and 2019.⁵

This circumstance is recognized as a negative factor in the socio-economic development of the Oblast, and various measures are proposed at various levels of government to improve the living standards and attractiveness of the territories (from federal ones - “The development strategy of the Arctic zone of the Russian Federation and ensuring national security until 2030”, State the program “Socio-economic development of the Arctic Zone of the Russian Federation”; to regional programs – “Strategy of the economic security of the Russian Federation for the period until 2030”, Program “Socio-economic development of the Murmansk Oblast till 2020 and for the period up to 2025,” integrated development program single-industry towns of the Murmansk Oblast, the creation of areas of advancing socio-economic development and so forth.). Despite several proclaimed government measures aimed at keeping the population and improving the quality of life of the territories, the migration balance and the attractiveness of the territories continue to have a negative value.

Studying the local identity of the single-industry town residents of the Murmansk Oblast

To identify local identities of residents of single-industry towns of the Murmansk Oblast, a sociological study was completed in 2016-2019 by the authors. The empirical basis of the study was the data of opinion polls collected through electronic questionnaires (n = 428) and in-depth interviews with residents of single-industry towns (n = 12). Surveys were conducted for the following single-industry towns of the Murmansk Oblast: Monchegorsk, Olenegorsk, Zapolyarny, Kovdor, and Kirovsk. The age of respondents was from 14 to 75 years.

The analysis of local identity was carried out through such indicators as the image of the town (assessment of the connection with the place of residence, the degree of attractiveness of the city, assessment of the socio-economic situation), and migration attitudes.

⁵ Chislennost' naseleniya na nachalo goda [The population at the beginning of the year]. Federal'naya sluzhba gosudarstvennoy statistiki, Territorial'nyy organ Federal'noy sluzhby gosudarstvennoy statistiki po Murmanskoy oblasti [Federal State Statistics Service, Territorial Authority of the Federal State Statistics Service in the Murmansk Oblast]. URL: http://murmanskstat.gks.ru/wps/wcm/connect/rosstat_ts/murmanskstat/ru/statistics/population/ (accessed 17 June 2019).

Assessment of communication with the place of residence. When studying attachment to the area of residence, it was proposed to distinguish several levels of identification: local (city/village), subregional (Murmansk Oblast), and macro-regional (North). The respondents experience the strongest attachment, corresponding to five points, with Russia — almost half of the respondents (49.6%) indicated this position. It is followed by attachment to their city/village - it is noted in 35.4% of respondents. A quarter of respondents reported a connection of five points with the North (26.4%), one in five - with the Murmansk Oblast (20.1%). When summing up positive ratings in the zone of 4–5 points and negative first and second points, the ratings are distributed as follows: residents of single-industry towns feel the strongest connection with Russia (70.4%) and with their city/village (64.2%) and only 15.7% and 14.9%, respectively, give low estimates of attachment for these indicators. A high attachment to the Murmansk Oblast is experienced by 52.0% of respondents, to the North - 50.4%. At the same time, every fourth (26.4%) resident notes that he practically does not feel an attachment to the North and every fifth (21.0%) - to the Murmansk Oblast. The analysis of average scores reflects the described situation, where civic and local identities are manifested with the greatest force (4.0 and 3.8 points, respectively), with the least - sub-regional and macro-regional (3.4 points each).

Statistical confirmation was given to dependence on the place of birth, attachment to the Murmansk Oblast, and Russia: those who were born in the studied area are relatively more attached to the Murmansk Oblast. On the contrary, those born in another area have a pronounced civic identity, noting a great attachment to the country of residence as a whole. The age of moving also affects the manifestations of respondents' attachment to their place of residence in different ways. Thus, those who arrived in childhood (up to 10 years old) - 3.9 points - experience greater attachment to their city (village) than 2.8 points - those who moved to 20–29 years old. It is also worth noting the statistical differences - the criterion in an attachment to the North: in the group of people who moved in childhood (up to 10 years) - is 3.6 points, and in older age groups of respondents (after 20 years) - by 2.7 points. In relation to the Murmansk Oblast, statistical differences in assessing the attachment of younger (up to 9 years old and 10–19 years old) and older (20–29 years old and after 30 years old) age groups: the former are relatively more attached to the region. Relationship with Russia as a manifestation of civic identity does not depend on the age of moving to the Murmansk Oblast.

The degree of attractiveness of life in a single-industry town. In general, cities of residence are largely attractive only to 29.8%, i.e., less than a third of respondents. Every fourth respondent (26.8%), on the contrary, estimates the attractiveness of life in a single-industry town rather low. Almost half of the respondents (43.4%) indicated that there are features attractive for living, and those factors that make the place of residence unattractive. To identify such traits, open-ended questions were asked where it was proposed to indicate in which respondents see the attractiveness of life in the city and what is unattractive to them. These questions were an attempt to reveal the content component, which is a rather abstract concept, difficult to directly

empirical measurement. The basis of the attractiveness of life in single-industry towns is formed by such features as: "northern nature, climate"; "standard of living", "people, mentality." At the same time, the first two characteristics are leading in the ranking of unattractive features of the territories of residence. So, among the problems of life in the region prevail: "northern nature, climate", "ecology", "health", "standard of living", "development, prospects", as well as "infrastructure, roads." In our opinion, the characteristics of the northern nature and climate and the parameters of the standard of living form the core of both the local and regional identities of the population of the Murmansk Oblast. Moreover, both of these characteristics are ambivalently combined in the residents' self-awareness. On the one hand, cold summers, harsh winters, and polar nights are risk factors that worsen the health of the region's inhabitants and are often regarded as unattractive features. On the other hand, the beauty of northern nature, the northern lights, the polar day constitute an exotic habitat and are positively perceived by respondents. Personal needs and ambitions largely determine the assessment of the parameters of the standard of living: while for some, the presence of northern and polar allowances represents a particular advantage of life in the region; for others, it is insufficient "payment" for life in harsh permafrost conditions. A comparative analysis allows us to see that the climatic conditions to a greater extent characterize the negative type of local identity (65.4 versus 47.7%), and the standard of living in the minds of young people has relatively higher indicators than in other regions and forms the positive basis identity (23.2 versus 12.6%). The first mentality of the northern people (calm, goodwill, decency, etc.) characterizes the positive vector of self-consciousness of the respondents (11.7 versus 2.3%). The environmental situation and conditions for maintaining health, on the contrary, are mostly perceived negatively by the respondents (14.0 versus 2.9%). Such a feature as the development and prospects of the region is also quite pronounced in the structure of positive and negative local identities of northerners (8.0 and 11.5%, respectively). An interesting fact is that young respondents more critically evaluate this parameter, indicating: "there is nothing to catch," "there are no prospects for self-realization," "the development of the region is at a deficient level." Positive assessments of the development and prospects of the region were mainly associated by respondents with the availability of natural resources, an ice-free port, a border status (proximity to Scandinavia), and the youth of the region itself. Further, respondents were asked to determine what exactly they see as the prospects for the development of their territories. As the most popular direction for the development of their settlements, respondents indicated industrial activity and the development of natural resources of the Arctic (42.9%): the development of factories, the development of minerals, the development of the mining and metallurgical industry, the development of energy, and so on. Almost the same number of respondents (42.1%) see prospects for development in the tourism industry, leisure, sports, culture, and creativity. One in five respondents indicated the importance of developing infrastructure, transport, construction, roads, and services (19.7%). This category included those answers that reflected the need for the development and modernization of the urban environment (the development of institutions and the

material base of the spheres of education, medicine, culture and sports, leisure, road works, and so on). Assessment of the socio-economic potential of the territories of residence. According to the results of the analysis of this indicator, it was revealed that it differentiates in different socio-demographic groups. Thus, representatives of the middle age group (30 to 49 years old), residents with specialized secondary education, as well as high and low-income groups are relatively more critical. On the contrary, residents of single-industry towns with higher education or without vocational education (among the latter mainly young people), middle-class representatives in terms of material well-being, demonstrate relatively high grades. Interestingly, visiting respondents are relatively more polarized in assessing the socio-economic situation of the region than those born in the Murmansk Oblast. The value of the index largely depends on the time of the move: visitors in adulthood are more critical than those who arrived in early childhood.

The socio-economic image of the region in the minds of its inhabitants is formed in conjunction with the manifestations of their rootedness. Thus, low index values correlate with a problematic attitude to the natural phenomena of the North (difficulties of adaptation and perception are more often noted), less involvement in regional practices and types of recreation, with a greater focus on emigration, with a low attractiveness of the region for life and lack of identification with the place of residence as a “small homeland” in general.

Migration preferences. Before moving on to an analysis of the migration patterns of residents of the single-industry town, we dwell on the data of the Federal State Statistics Service on the migration situation in the region as a whole. According to the results of 2017, the number of people who left the Murmansk Oblast amounted to 43.4 thousand people; over the past five years, the situation with retirement has remained quite stable in quantitative terms $\pm 1.5\%$ (in 2013, those who left were 43, 5 thousand people)⁶. In this case, the highest outflow of the population falls on urban settlements. Regarding the territorial directions of the departed, one can ascertain the predominance of intra-Russian migration, in 2017, 91.0% of the residents of the Murmansk Oblast dispersed to the territories of the Russian Federation, in 2013 - 95.4%⁷.

Statistics also indicate the prevalence of economically active citizens among those who left the territory. Of the total number of migrants, more than 65% are citizens of working age (a large proportion of arrivals are citizens aged 20–24, and those who had left the area — 30–39 years

⁶ Obshchie itogi migratsii naseleniya. Federal'naya sluzhba gosudarstvennoy statistiki, Territorial'nyy organ Federal'noy sluzhby gosudarstvennoy statistiki po Murmanskoy oblasti [Common population migration results. Federal State Statistics Service, Territorial Authority of the Federal State Statistics Service in the Murmansk Region. URL: http://murmanskstat.gks.ru/wps/wcm/connect/rosstat_ts/murmanskstat/ru/statistics/population/ (accessed 12 June 2019).

⁷ Raspredelenie migrantov po territoriyam pribytiya i vybytiya po Murmanskoy oblasti za 2017 god. Federal'naya sluzhba gosudarstvennoy statistiki, Territorial'nyy organ Federal'noy sluzhby gosudarstvennoy statistiki po Murmanskoy oblasti [Distribution of migrants by the territory of arrival and departure in the Murmansk Oblast for 2017. Federal State Statistics Service, Territorial Authority of the Federal State Statistics Service in the Murmansk Region]. URL: http://murmanskstat.gks.ru/wps/wcm/connect/rosstat_ts/murmanskstat/ru/statistics/population/ (accessed 12 June 2019).

olds). The outflow of youth as a socio-economic potential of the territory is an aggravating fact of the migration situation in the Murmansk Oblast.

According to the analysis of a survey of residents of single-industry towns, the majority of respondents (52.7%) plan their departure. Including one in ten (11.2%) intends to leave their place of residence during the year, 27.6% of respondents expect to move in 3-5 years. Each fifth (20.9%), who expressed a desire to leave the city, is going to do it in 6-10 years. A minority of respondents (9.2%) postpone moving for 11–20 years.

Among the main reasons, problems of a socio-economic nature dominate job cuts, low wages, inadequate conditions for self-realization; in second place, the causes of the natural-climatic origin, i.e., harsh climatic conditions that significantly affect health. Interesting are the results of cluster analysis. They revealed a statistical relationship between the estimated level of well-being and satisfaction with life in the Oblast. Thus, people with higher incomes demonstrate a high degree of satisfaction with life in the Oblast (19.8%).

The preferred directions of moving are St. Petersburg (Leningrad Oblast), Moscow (Moscow Oblast), the southern regions of the Russian Federation (Krasnodarsky Krai, Belgorod Oblast).

It is necessary to supplement the analysis on the above indicators with the results of in-depth interviews.

Regarding the images of cities, the situation is similar for all objects of research. So, in the representations of the population, the image is dominated by “proletarian identity” [10, Davydov D.A.]. The majority of the population associates their cities solely with the activity of industrial enterprises; enterprises remain the main source of employment. Often, the local political elite is formed from the natives of these enterprises (all current heads of administrations had the experience of leadership positions in the industrial enterprises of their settlements). This circumstance leaves an imprint on the policy of positioning cities, making it difficult to get away from the myth of “cities of labor glory”. This problem has a number of consequences, first of all, for young people, whose image is more likely to cause rejection, and many do not like life in unpromising provincial cities. They assess their potential employment in enterprises extremely uncertainly: *“Jobs are constantly being reduced, it’s virtually impossible to get a job at the enterprise unless you are just someone’s son”, “I don’t want to work at the plant, I want to go to St. Petersburg and study there to stay, I want to work in the IT field”*.

The very quality of life in the city is also not optimistic: *«сходить некуда», «ловить нечего», «глушь, хочу заработать на жильё и уехать отсюда», «врачей не хватает, приходится анализы сдавать ездить в Мурманск, пока все сделают, они [анализы] уже не актуальны», «детям здесь будущего нет», «экология ужасная, комбинат нас травит, ничего не растёт»*.

Informants employed in city-forming enterprises have a clear connection of the image of the city with the corporate culture of the enterprise itself. It often extends beyond the workflow. Noteworthy were the examples of the influence of corporatism on non-production situations:

“When the elections were held, we all had to report to the line manager that we went and voted. The manager had listed, and he noted. And it is advisable to say who to vote for. I voted as I saw fit, phoned my boss that I went to the station and that’s all. ” The situation with voluntary-compulsory attendance of elections was monitored in 5 single-industry towns out of 7. When asked what would happen if a person did not go to the polls and report, the answers were similar: that, in principle, nothing is possible, and it should not be, but no one runs the risk of being non-performing. Fear of being left without work in conditions of constant optimization of personnel is the leading feeling of those employed in enterprises.

For the same reason, informants in all cities note that over the past five years, there have been no problems with labor discipline at enterprises. Also, workers employed in the city-forming enterprise note a constant contribution to the development of the social infrastructure of their cities. In fact, in all single-industry towns, at the expense of enterprises, swimming pools and sports clubs were built. The nature of employment also determines the inseparability of corporatism in the structure of local identity: constant work in insecurity forms a particular type of partnership in the team, which, as our informants noted, go over to unhappy everyday life - joint leisure and simple friendship between shifts are common practice for monotowns under study. Group cohesion is also the reason that the features of the attractiveness of life in the city feature a particular mentality with a predominance of such human qualities as “calm, goodwill, decency, openness, and so on.” The important thing that is noted during the interviews is a constant reference to the Soviet past, which is found in comparative characteristics on a wide range of issues among informants who found Soviet times either in childhood or in working age: *“Before [in Soviet times] everything was different, everything was adjusted, several state farms worked, factories ... everything was closed, there is nowhere to work, there was no way to get a factory ”*, *“ Give me back the Soviet Union! ”* Life in the city has a clearly defined chronotope: a cloudless Soviet past - a difficult present - an unpromising future: *“Anyone here will say that he does not want his children to live here. What kind of education can they get here? I am already silent about health care; hospitals have all been closed, is it free to not get doctors. Plus emissions from the plant, people are constantly dying of cancer ”*. It is important to note that informants under 30 do not reproduce Soviet identity at all; the past does not appear in their comparative references. Here, links to other regions, especially St. Petersburg and some southern ones, are crucial. The factors determining the migration mood are the natural and climatic conditions, the ecology, and the uncomfortability of the urban environment of this place of residence.

Bad ecology is the curse of the regional single-industry towns, according to the words of residents of the city of Nickel - *“In our city, you can shoot Armageddon.”* For several decades, the active activity of enterprises has turned the area into blasted wastelands with polluted reservoirs and sparse vegetation. Emissions also cause polluted air, which is reflected in disappointing disease statistics. Bad ecology leads the way in leaving residents and is a decisive factor in the outflow from single-industry towns.

Conclusion

Summing up, it should be noted that the majority of the population of the Murmansk region considers their cities to be native, demonstrating a significant connection with their place of residence. Still, no more than one-third of those surveyed associate their lives with them. The leading reasons for a possible departure are the climatic and environmental conditions, as well as the socio-economic nature. And here, it is essential to note the analytical finding in the form that the distinguishing property of local identity is the material factor, which significantly determines the severity of the connection with the place of residence. Improving wealth is directly proportional to the growth of identification with the city, which is of strategic importance for building regional politics in the Murmansk Oblast.

The peculiarities of the northern nature and climate and the standard of living ambivalently combined in the minds of the townspeople are the core parameters of self-awareness as residents of the northern region. An important factor is leisure activities related to climatic conditions, which are very highly valued by residents of single-industry towns. In essence, this is fishing, hunting, picking berries and mushrooms, winter and summer sports that are more applicable in these conditions. Gathering and fishing with hunting also constitute an additional (sometimes the only) source of income for some residents. "Local patriotism" of residents of the region's single-industry towns is becoming a significant factor in the formation of their attitude to the country as a whole: attachment to the city of residence translates a particular state of civic consciousness.

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District newspapers as a chronicler of the Arkhangelsk North history*

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Abstract. The article discusses the creation and operation of district periodicals in the Arkhangelsk Oblast. The author analyzed their role in solving problems in different periods and evaluated the place of the “district” in the relations of the state and local authorities. Based on a study of modern local periodicals, the author concluded that the press, freed from the CPSU dictates, became dependent on new power and was forced to cover mainly its activities and achievements. The way out of this situation is the creation of municipal newspapers.

Keywords: *periodicals, district newspaper, reform, municipal formation, state and municipal authorities.*

Administrative and territorial reform related to the creation in 1929 on the basis of the Arkhangelsk, North Dvina, Vologda provinces and the Komi area of the Northern Territory¹, affected the lower level. Instead of counties, their disaggregation, districts were created everywhere, which led to the appearance of a periodical press.

It is from this time that the regional newspaper, which has survived to this day, originates. However, in a number of areas it appeared much earlier. Noting the round date - the ninetieth anniversary of the creation of the majority of “districts”, it should be noted that in a number of territories covering the then existing counties, their own newspapers appeared much earlier - back in 1917-1920².

It was facilitated by the situation that developed on the territory of the former Russian Empire after the events of 1917. Freedom of speech and thought, the assembly then became part of life, which allowed Izvestia newspapers, established by the Soviets of Workers' Deputies, to appear in the country and then in the provinces and soldiers' deputies, their executive committees. This example was also followed by the subordinate Soviets - county, publishing their print media. Many of them borrowed the same names, e.g., “News of the Council of peasant deputies of the Arkhangelsk district”, “News of the Council of peasant deputies of the Yarensky district”. They came out most often for free, they were kept at the expense of advertising revenues and scanty amounts allocated from local budgets. Without an apparent periodicity, the local press, nevertheless, played a significant role in disseminating information among the population in the initial pe-

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¹ See: Sm.: Administrativno-territorial'noe delenie Arkhangel'skoy gubernii i oblasti v XVIII–XX vv. Spravochnik [Administrative and territorial division of the Arkhangelsk province and the region in the 18th – 20th centuries]. Arkhangelsk, 1997. (In Russ.)

² Russkie gazety perioda 1917–1922 godov v fondakh Gosudarstvennoy biblioteki SSSR imeni V.I. Lenina [Russian newspapers of 1917-1922 in the collections of the V.I. Lenin State Library]. Moscow, 1982. (In Russ.)

riod of the formation of Soviet power. This made it possible, among other things, to provide conditions for the expression of opinions by various strata of society.

With the help of the local press, it became possible to unite people both on a professional basis and on interests. It most often bore the democratic imprint of the time, despite the ever-growing power of the Bolsheviks, but was still weak to withstand it. Therefore, in the output of some of the current "districts," e.g., Onega, Kargopol, Shenkur, and Velsky districts, you can see the year of publication associated with the beginning of their first release in the very difficult period when the civil war broke out and foreign military intervention continued.

Analyzing the provincial periodicals of the pre-revolutionary period, it should be noted that county newspapers had every reason to appear, even as official ones, back in the late nineteenth and early twentieth centuries. The fact is that decisions made then by local authorities, which affected the interests of residents, could come into force after their publication in the periodical press. And since there wasn't one at the county level, they had to print them in the provincial newspaper *Vedomosti*, overloading it with officialdom, which forced the editorial office to often increase the volume and release applications.

The tsarist government did not want to make concessions to allow the creation of a local press, to prevent free-thinking on the part of the population. As a result, in none of the districts of the Arkhangelsk province until 1917 not a single one of its periodicals was published. This can also be explained by the fact that "the local authorities still did not want to get their own newspapers. She didn't show any initiative, and public organizations were not ready for this: they didn't want to disperse their forces, and at the same time, they were under pressure from the power structures" [1, Butorin M., p. 83].

However, the first county newspapers, appearing in the early years of Soviet power, did not last long. One of the reasons that served as their closure was financial - the transition to a new economic policy required the introduction of self-financing, and the editorial offices themselves did not have enough money to issue, as well as paid newspapers. It was good, but not the main reason. After the end of the civil war and foreign military intervention in the North, county newspapers gradually turned into joint bodies of the executive committees of the Soviets and the committees of the RCP (b). According to A.N. Zashikhin, "in practice, this meant subordinating the Soviet press to the party structure" [2, p. 12]. The fact is that the Bolshevik party, having monopolized power in the country, saw in the press one of the most important mobilizing means for solving the problems facing the country. It was decided to create a new press - the party-Soviet press (it got that name) with the organization of the release of central newspapers and magazines. Therefore, not only local but also many regional publications of various orientations, which did not even set political goals, were closed - only the official press remained, the organs of which were the party committees. In our Arkhangelsk province, these included the *Volna* newspaper with the supplements *Severnaya Derevnnya*, *Komsomolets*, the party magazine *Bolshevik Thought*, the economic journal *Severnoye Khozyaystvo*, the journal *Northern Co-Operator* [3, Butorin M., p. 16].

And this was no exception. A similar printing system has developed in the neighboring provinces of Arkhangelsk - in the Vologda and Severodvinsk.

The creation of the current “districts” was postponed until the administrative-territorial reform, which provided for the formation of districts instead of counties. The trial was the creation of newspapers at the district level, which are an intermediate link between the region and the districts but have not justified themselves and were soon liquidated. And then, in 1930–1932, newspapers were created everywhere in the districts.

This was a new type of press, its purpose was primarily associated with the solution of important tasks of socialist construction, strengthening ties with the masses. By directive documents it was clearly defined that “each district can have one newspaper, its organ is without fail the district committee of the CPSU (b), the district Council of Deputies” [3, Butorin M., p. 19]. But in the presence of two seemingly equal bodies, an important place in the leadership of the newly appeared press was already assigned to the party committees: they selected and approved the editors, considered the work plans of their printed publication, and gave directives on various issues. The Soviets, which were the same equal bodies of the press, were given a secondary role: they were called upon to ensure, mainly, the material and technical and financial activities of the editorial board.

Despite its size (originally appeared on two pages), the “district” tried to cover a wide range of issues of the socio-economic life of the territory in which it spread. True, the theme changed depending on time: at different periods of the newspaper’s existence, time dictated. Open the newspapers of the thirties - on their pages are questions of collectivization and industrialization, the Stakhanov movement, socialist competition, and then the struggle against the enemies of the people. With the beginning of the Great Patriotic War, the theme changes, but the newspaper, despite the difficulties with paper, continues to come out - its main leitmotif is: “Everything for the front, everything for the victory!”. The districts in the sixties and eighties became saturated in content. Interest in them increased, the circulation of many of them exceeded ten thousand copies. Per inhabitant, it was the press most demanded by the reader, which covered local life in all its diversity. Newspapers write about socialist competition, the development of the economy, the social sphere, and people, but the main place on its pages is given to readers’ letters.

The printed editions of the districts have repeatedly changed the volume and frequency of publication. For a long time - many residents of the districts remember this - they went out strictly according to the established schedule: three times a week in four lanes.

The turning point in the life of the “districts” was the beginning of the nineties of the past century. It was facilitated by the emergence of a legal basis for their activities, in particular, the adoption of the Law of the Russian Federation “On Mass Media”, which determined that “the search, receipt, production, and distribution of mass media, the establishment of mass media, the

possession, use and disposal of them, not subject to restrictions, except as provided for by the legislation of the Russian Federation on the media”³.

Most of the local publications change their names, for example, the Shenkur newspaper “Leninets” - to “Vazhsky Krai”, the Kargopol newspaper “Communist” - to “Kargopolye”, the Kholmogory newspaper “For Communism” - to “Kholmogorskaya Zhizn”, Konosha newspaper “Zvonok” - to “Konosha kourier”. The founders of newspapers are state authorities. The periodicity of the release is also changing: now the editorial staff sets it on the basis of its own capabilities. The first in the region weekly newspaper in 1994 was transferred to the seaside newspaper “By the White Sea”, which caused an mixed reaction from colleagues. Today, including taking into account the delivery conditions, the vast majority of “districts” in the region come out in this format, which allows them, using modern computer technologies and programs, to make the newspaper more diverse in its design and layout.

However, with the advent of the legal framework and the development of democracy, the district newspaper did not receive full independence. Its founders are the administration of the governor and the government of the region, which dictates its conditions when covering the life of the region, giving preference to showing the activities of the regional authorities, as well as the local administration. Thus, having freed themselves from the dictatorship of the CPSU, the editorial offices turned out to be dependent on the modern government, which provides them with scant financial assistance, depending on the publication of materials provided by the authorities.

An analysis of the local press shows that newspapers published in cities and regions of the region are issued by publishing houses, which are autonomous state institutions. However, they have their distribution in the territories of municipal entities whose bodies, following Article 12 of the Constitution of the Russian Federation, are not included in the system of public authorities⁴.

It turns out that municipalities have the right to create their mass media. It is enshrined not only in the Law of the Russian Federation “On Mass Media”, but also in the federal law “On General Principles of Organization of Local Self-Government in the Russian Federation”. However, this right in the Arkhangelsk Oblast could be used only in Arkhangelsk and Koryazhma. In other municipalities, there is no such money to support their media.

The transfer of “districts” to the influence of local authorities also has many so-called pitfalls, which calls into question the independence of the local press. In our opinion, the first step

³ Zakon RF «O sredstvakh massovoy informatsii» ot 27.12.1991 g. № 2124-1 (s izm. na 01.05.2019 g.) [The Law of the Russian Federation “On Mass Media” dated December 27, 1991 No. 2124-1 (as amended on May 1, 2019)]. Vedomosti S"ezda narodnykh deputatov RF i Verkhovnogo Soveta RF [Vedomosti of the Congress of People's Deputies of the Russian Federation and the Supreme Council of the Russian Federation]. February 13, 1992, no. 7. Art. 300.

⁴ Konstitutsiya Rossiyskoy Federatsii. Prinyata vsenarodnym golosovaniem 12 dekabrya 1993 g. (s uchetom popravok, vneshennykh zakonami Rossiyskoy Federatsii o popravkakh k Konstitutsii Rossiyskoy Federatsii ot 30.12.2008 № 6-FKZ, ot 30.12.2008 № 7-FKZ, ot 05.02.2014 №2-FKZ, ot 21.07.2014 № 11-FKZ) [Constitution of the Russian Federation. Adopted by popular vote on December 12, 1993 (subject to amendments introduced by the laws of the Russian Federation on amendments to the Constitution of the Russian Federation dated December 30, 2008 No. 6-FKZ, dated December 30, 2008 No. 7-FKZ, dated February 5, 2014 No. 2- FKZ, dated July 21, 2014 No. 11-FKZ)]. Sbornik zakonodatel'stva RF [Collection of the legislation of the Russian Federation], 2014, no. 31. Art.4398.

towards this could be the transfer of “districts” under the auspices of representative bodies of local self-government.

To a certain extent, this would provide them with independence and independence, would allow more comprehensive coverage of local life, touching upon existing problems, suggesting ways to solve them, which is lacking in the current local periodicals. Indeed, the periodical press itself is not only a source of information - a newspaper line creates the history of the region, and all together - the Arkhangelsk Oblast as one of the areas of the Russian Federation. And one can see this, turning over the pages of newspapers that have already turned yellow from time to time. Before our eyes stand the life of many generations of people who lived and worked in different periods of the formation and development of the northern region.

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Review on the book “Historical Essays about Life on the Islands of the Northern Dvina Delta” by M.A. Lukina*

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Abstract. The book is the result of a great work of M. A. Lukina on the history of villages in the Delta of the Northern Dvina River. The book is the first study of the island colonization, establishment, and centuries-old development of settlements in the mouth of the Northern Dvina River. The author combined the traditional historical approach to the data presentation and the method associated with the study of the value change over the centuries and historical memory.

Keywords: *review, islands, the Northern Dvina Delta, archives, memories.*

The book is the result of many years of work by M.A. Lukina over the history of the villages located in the delta of the Northern Dvina River. It is the first study devoted to the processes of colonization of the island territory, the formation and centuries-old development of settlements located at the mouth of the Dvina River (these include Voznesen'ye, Konetsdvor'ye, Baykalovo, Lastola, Studimenskoye, Onishovo, Vagino). M.A. Lukina devoted a book to the study of the history of her small homeland - the village of Vaginsky Navolok of the Primorsky district of the Arkhangelsk Oblast. As she explains, the reason that prompted her to work on the book was a desire to find out the history of her birthplace and understand what happened to peasant culture in the 20th century. The book combines the traditional historical approach to the presentation of the material and a method similar to *École des Annales*, associated with the study of the change in value attitudes over the centuries and the problems of historical memory.

For many years M.A. Lukina has been working in various archives in Moscow and the Arkhangelsk Oblast: the Russian State Archive of Ancient Acts (RGADA), the State Archive of the Arkhangelsk Oblast (GAAO), the archive department of the Municipal Administration of Primorsky District, and others. In addition to archival materials, M.A. Lukina uses other sources in the book: annals, monographs, encyclopedias, articles, periodicals and regional studies, memoirs of old-timers, archaeological reports, etc. For the first time, it introduces a large number of hard-accessible archival materials (metric books and spiritual paintings, confessional books, census records, census of households, population censuses, agreements, contractual acts, worldly sentences, etc.). Material for the book was collected, as she writes herself, “bit by bit”. The list of sources impresses with its quantity and variety. It gives the study a fundamental character.

Based on the data of archeology, M.A. Lukina writes that the coast and islands of the White Sea were already settled in the Mesolithic and Neolithic. The book convincingly reveals the fea-

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tures of the Slavic colonization of the lower reaches of the Northern Dvina associated with the development of the territory on which the native Finno-Ugric population already lived. In this regard, I would like to point out the inaccuracies in explaining the ethnonym chud and the lack of references to the scientific literature on this issue in the book. Reference to the book A.A. Tungusov is incorrect since this is a local history publication. There are many studies on the meaning and origin of the word chud'. All of them are considered in the book of N.V. Drannikova "The Chud in the Oral Tradition of the Arkhangelsk North" (Arkhangelsk, Publishing House of Pomor. University, 2007). M.A. Lukina, raising a question who is the chud, doesn't answer it. However, in science, there is a prevailing opinion that the chud' is an aboriginal Finno-Ugric population (most often the Baltic-Finnish population) who lived in the territory of the modern Russian North before the Slavs came there and subsequently assimilated with it (see Drannikova N.V. "The Chud in the Oral Tradition of the Arkhangelsk North", Arkhangelsk, Publishing House of Pomor. University, 2007).

The historical periods of the development of the island territory at the mouth of the Northern Dvina from the Novgorod volost of Zavolochye, the Dvinskaya Zemlya to the Dvinsky and Arkhangelsk uyezds of the Russian state are revealed consistently and deeply in the book. The system of portages along which the development of the northern part of the modern Arkhangelsk Oblast was proceeding was considered by M.A. Lukina using information from the book of T.A. Bernshtam "Pomors. Formation of a group and system of economy". She pays great attention to the history of church parishes and the role of the church in the life of the peasant. The merit of the book is a section dedicated to the socio-political life of the peasantry in the 20th century. Many of the materials in this section are published for the first time.

Separately, I want to say about the sections "Socio-political life in the 1917-early 1930s." and "Collectivization of peasant farming and dekulakization in the 20th century." I think their inclusion in the book is essential. Arkhangelsk historians rarely turn to these periods of history; therefore, the study reveals "white spots" not only in the history of island settlements but throughout the Arkhangelsk Oblast. M.A. Lukina uses archival materials and testimonies of old-timers who witness these events.

The book convincingly shows how the process of "disintegration of the peasant class" took place in the northern villages, starting from the surplus appropriation system and agricultural tax in kind to dekulakization. The process began immediately after 1917, and it was slowed down by the landing of the Entente troops and the creation of the Supreme Administration of the Northern Region (VUSO). The tragic pages of Soviet history are revealed by M.L. Lukina profoundly and comprehensively. Navigation, marine fishing, and sea-hunting products provided residents with good earnings; they had a high standard of living compared to peasants living in the agricultural part of the Arkhangelsk province. It fell sharply after 1924 when the NEP was abolished. The Soviet government immediately divided the peasantry into "kulaks" and "poor", which led to an aggravation of relations between them. The poor were exempted from taxes that more affluent villagers were supposed to pay, which led to conflicts in local communities.

Since 1930, repressive measures against the village intensified. Peasants began to be taxed by numerous taxes depending on their social and property affiliation. Many of them were deprived of suffrage, subjected to self-taxation, agricultural taxes. Contracting, firm supply and purchase of agricultural products at the lowest prices began. The Government stopped issuing passports to peasants, restricted their freedom of movement, imposed unregulated heavy physical labor and subscriptions for loans and bonds. There was no food and clothing in the villages. Laws on compulsory natural disasters insurance, a resolution on the government delivery depending not on the harvest but on the number of hectares of land and so on were enacted. The Government proceeded financial mobilization of the population, demonstrative selsoviet offsite meetings similar to the show trials began. The northern villages survived the famine of 1921 and 1933, which was caused by the economic policy of the state towards peasants - the seizure of grain. The village was sacrificed to industrialization: in 1930, the state switched to complete collectivization. In January 1930, the Central Committee of the All-Union Communist Party of Bolsheviks adopted a resolution "On measures to eliminate the kulak farms in areas of continuous collectivization". The mass deportation of "kulaks" to uninhabited lands and more northern areas began. The high standard of living of the inhabitants of the island settlements led to the fact that many of them were dispossessed and subsequently repressed. These events caused the peasants to flee from the village to the city, and they get a job at the sawmills and the shipyard 402 in Molotovsk (Severodvinsk). State policy towards the village led to its poverty and a sharp decline in living standards. M.A. Lukina shows with concrete examples and figures how these processes took place in the villages located in the delta of the Northern Dvina.

The same fate befell the church. In 1929, almost all churches were closed, and their buildings were destroyed or dismantled, and the icons were burned. Instead of churches, reading houses, clubs, schools were created, training in them is carried out according to new programs, pioneer and Komsomol organizations appear. The materials published in the book make it possible to understand how the process of creating a new Soviet man took place, associated with a change in generational values.

The book has an excellent reference matter. It contains the "Dictionary of terms, concepts", which includes dialect and archaic vocabulary. I would like to point out that the meaning of not all words is given in it is true; in particular, the term "bratan" is explained as a nephew, although in northern dialects, a "bratan" means a cousin [1]. The book includes eight annexes in which hard-to-reach archival materials are published (information about the clergy of the Voznesenskaya Church in the 19th century, the General Census of the Population of the Russian Empire in 1897, and metric certificates of those who passed examination in 1901 in the Kontsdvorskaya Church parish school, etc.). I consider the appearance of the book "Historical Essays about Life on the Islands of the Northern Dvina Delta" by M.A. Lukina as an essential event in the scientific and cultural life of the Arkhangelsk Oblast. The book is of great interest not only to Arkhangelsk scholars, regional leaders, and residents but also to the entire Russian scientific community. It can be an

example of scientifically conscientious, sincere, and multi-aspect work for all Arkhangelsk researchers and local historians. In conclusion, I would like to wish the author to reprint such a valuable book in a more convenient form for reading: there is so much material in the book that it led to a decrease in the font and an increase in the amount of information that makes reading difficult. In my opinion, the book should be reprinted in two volumes.

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History and activities of the Arctic Public Academy of Sciences*

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Abstract. The founding of the St. Petersburg Scientific Public Organization “The Arctic Public Academy of Sciences”, created at the beginning of the 21st century, is briefly described in the article. The Academy is based on the Arctic direction of the Geopolitics and Security Section of the Russian Academy of Natural Sciences. Three stages of its development are designated and commented on, as well as the main directions of the Academy's activities, and examples of projects. The Academy actively participates in international forums, conferences, summits, committees, and festivals. Being an expert scientific organization, AEAS plays a vital role in civil society and consolidates domestic intellectual potential.

Keywords: *the Arctic, expertise, non-state academy of sciences, interdisciplinarity, education, publishing, international forums.*

Sixteen years have passed since the idea of creating a new alternative scientific organization in St. Petersburg, the Arctic Academy of Sciences, based on the role of civil society institutions in the development of the country's scientific sphere. Moreover, the prerequisites for its creation arose even earlier, in the last years of the existence of the USSR.

At the end of the 1980s, a significant part of the expert community in Russia had a clear idea of the transition from a planned to a market economy. Representatives of industry and university science understood how easily a crucial and rather thin layer of professionals could disappear due to reforms and foresaw the danger of Russia losing its leadership in scientific and technological development. At that time, the USSR Academy of Sciences, known worldwide for outstanding work in mathematics, physics, chemistry, earth sciences, biology, etc., was still operating. Large industrial research institutes and university laboratories in a wide range of areas also worked. At the same time, domestic scientists realized the need to create new, more viable forms of scientific associations.

At the same time, the Supreme Council of the RSFSR turned to the scientific community of Russia with a request to submit its proposals on the principles of the creation and organization of the Russian Academy of Sciences. An initiative group of Moscow and Leningrad professors put forward the idea of creating the Russian Academy of Natural Sciences as an alternative scientific

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organization. The authors of scientific discoveries published in the Great Soviet Encyclopedia (volume “Scientific Discoveries in the USSR for Thirty Years”) should have become its base. The Academy was formed as a multidisciplinary scientific organization led by talented and prolific scientists.

In 1991, a section of geopolitics and security was formed at the Russian Academy of Natural Sciences, headed by Pirumov V.S., and the St. Petersburg branch of the section, led by Yakovlev V.V., then Belyaev V.S., and then Mitko V.B. From the very beginning, the St. Petersburg branch turned towards the Arctic. However, in Moscow at the Scientific Council of the Security Council of Russia, its main proposals were accepted without enthusiasm: they believed that the Arctic problems are more related to the Northern capital than to the central one.

The Arctic Public Academy of Sciences was created based on the St. Petersburg branch of the Geopolitics and Security Section of the Russian Academy of Natural Sciences and registered by the Ministry of Justice of the Russian Federation on December 3, 2003. Its founders were Belyaev V.S., Kudersky L.A., Mitko V.B., Petrov A.A., Privalov A.A., Shchitinsky V.A., Yakovlev V.V. and Minina M.V. was appointed the Scientific Secretary of the Academy.

Three stages can be distinguished in the development of the Academy:

- at the first stage (2003–2008), sections arose that practically corresponded to the main geopolitical factors determining the sustainable development of the Arctic and, accordingly, the Russian Arctic mission, as well as the draft Arctic Doctrine being developed;
- at the second stage (2008–2013), in connection with the emergence of new research priorities (socially significant for a renewed and self-determined Russian society), the sections “Geopolitics and Security”, “Young Scientists of the North” appeared, and the “Agency for High-Tech and Innovative” was created technology”;
- at the third stage (2013–2018), the Center for Arctic Infocommunication Technologies was created, many agreements were concluded with Russian and foreign organizations, the Arctic Council of the Eurasian Peoples' Assembly was formed, chaired by AOAN President VB Mitko, and the scientist was responsible secretary AOAN Secretary Minina M.V.

Academy activities

The main goal of the Arctic Academy of Sciences was to assist in the implementation of scientific and coordinating activities to provide academic support and advice on all issues related to the activities of Arctic organizations, to carry out scientific research that contributes to the comprehensive harmonious development of the northern territories, a radical improvement in the life and life of northerners.

The activities of the Arctic Academy of Sciences from the very beginning were aimed at achieving the goals and objectives of realizing the scientific potential of St. Petersburg in solving the problems of the Arctic and the North, Russian and international organizations and coordinating its work with committees of priority projects of the Arctic direction. From the very beginning, work was carried out in humanitarian and socio-economic areas.

Most sections of the Academy operate inside universities. Moreover, a significant part of the Academy members is leading professors of the best universities, institutes, and academies of Russia, Bulgaria, Finland, France, China, Kazakhstan, Armenia, and other countries. It is these people who bring fundamental and applied knowledge to youth audiences.

The main programs and projects of the Academy

In the field of research activities:

- carrying out studies in support of the formation of a management system for the Arctic zone of the Russian Federation with the Center in St. Petersburg;
- development of digital models of regional management at the federal, local and corporate levels and assessment of the strategic stability of the state in the Arctic;
- development of territorial development schemes, transport infrastructure, planning organization of the Murmansk and Tomsk regions, the Republic of Sakha (Yakutia), etc.

In the field of scientific and organizational activities:

- participation in the international competition of scientific, scientific, technical and innovative developments aimed at the development of the Arctic and the continental shelf OFSHOR-2015, 2016, 2017, where the Academy's projects are annually recognized as laureates of the Government of the Russian Federation (Ministry of Energy);
- development of a methodology for assessing environmental risks in the Arctic and participation in the development of the Environmental Public Standard;
- involvement in the competition of innovative projects of the Committee on Science and Higher Education of the Government of St. Petersburg.

In the field of scientific and educational activities:

- development of textbooks and teaching aids, teaching materials on disciplines corresponding to the profile of sections of the Academy and the section of Geopolitics and Security of the Russian Academy of Natural Sciences;
- participation in the National Arctic Scientific and Educational Consortium of the Northern (Arctic) Federal University named after M.V. Lomonosov;
- co-organization of the annual International BIOS - Olympiad for schoolchildren and students;
- assistance in conducting the yearly All-Russian educational meeting of young polar explorers "Our Planet";
- participation in the work of the Scientific Council of the Yamal-Nenets Autonomous District with financial support from the Presidential Grants Fund, which implements the Arctic School project.

In the field of culture, arts and tourism:

- participation in projects and programs "Marine Heritage" as members of the Association with the involvement of the Council of Young Scientists of the North;
- participation as co-organizers of the annual international film festival of marine and adventure films "The Sea Calls";
- implementation of the project "Alexander Sibiryakov - scientist and philanthropist";
- holding ceremonial events in St. Petersburg and Kotka (Finland), dedicated to the anniversary of A.S. Popova;
- organization of work on the annual International Festival of Folk Art and Multimedia "Young Arctic";

- Organization and implementation of the annual International Cultural and Educational Project “Talents of the Arctic. Children”;
- the initiation in 2019 of the International Scientific and Educational Cluster “Preservation of National Traditions, Language and Culture of Indigenous Peoples of Europe”;
- the scientific discovery of the theory of Arctic circumpolar civilization as a historical phenomenon in the development of humanity, which occupies a special place in the system of local civilizations of the fifth generation;
- patronage of the expedition to Vottovara and Arkaim.

In the field of scientific and industrial activity:

- interaction with organizations of the Republic of Sakha (Yakutia) on the safety of operation of energy systems;
- participation in expeditions of the Republic of Sakha (Yakutia) for a medical examination of residents of the Arctic areas of Yakutia;
- scientific substantiation of the main areas of conversion and diversification of defense industry enterprises for the needs of the Arctic areas.

In the field of international cooperation:

- traditional cooperation with the Scandinavian countries (Norway, Finland, Estonia). This cooperation is even more relevant in turbulent international conditions;
- cooperation with the Arctic Economic Council of the Intergovernmental Forum “Arctic Council”;
- continuation of the project “Admiral de Traverse - Minister of the Sea of Russia” to study the naval interaction of France and Russia and prepare for the 200th anniversary of the discovery of Antarctica in 2020;
- a new direction - the development of relations with China, participation in the maritime forum together with the Academy of Military Sciences of the Russian Federation and the Center for the Study of World War II - the Anti-Japanese War and the post-war international peace at the University of Jilin, organized at the direction of the leaders of China and Russia;
- restoration of scientific ties with Azerbaijan in many areas: in the field of information technology, noise-monitoring of risks during oil transportation through pipelines in Eastern Siberia and South Yakutia, and the educational sector. This cooperation seems important and promising, given the signed agreements.

In the field of organizing core activities and events:

- the main result is the creation in 2016 of the Arctic Council of the International Union of Non-Governmental Organizations “Assembly of Eurasian Peoples”, where the scientific and organizational responsibility lies with the Arctic Academy of Sciences and the section of Geopolitics and Security of the Russian Academy of Natural Sciences. The Arctic Council was successfully represented in Paris, in 2019 - in Turkey, Bulgaria, Denmark, China;
- development of public-state partnership - membership in the Public Chamber of the North-West Federal District;
- Organization and leadership of the Polar Commission of the Maritime Council under the Government of St. Petersburg;
- conclusion of bilateral cooperation agreements with many Russian and foreign organizations;
- in 2006, the creation of the Agency for High-Tech and Innovative Technologies;
- in 2016, the creation of the Center for Arctic Infocommunication Technologies based on the Leningrad branch of the Central Research Institute of Communications;

- 2008–2016 holding the International Congress “Millennium Development Goals and innovative ways of developing the Arctic territories”, St. Petersburg;
- In 2014, the holding of the Arctic International Investment Summit “Northern Sea Route. Infrastructure and transport and communication system of the Arctic region” in Moscow, Hotel “Moscow Tverskaya”;
- in 2015, the holding of the II Arctic International Investment Development Summit in Moscow, the Borodino Hotel;
- in 2018, the holding of the III International Arctic Summit “The Arctic and Offshore Projects: Prospects, Innovations, and Regional Development” (Arctic 2018 SPb) in St. Petersburg at the St. Petersburg State Marine Technical University;
- since 2012, once every two years, the holding of the International Scientific and Practical Conference “Russia in the Arctic” within the framework of the International Festival of Sea and Adventure Films “The Sea Calls” in St. Petersburg, a branch of the Museum of the World Ocean in St. Petersburg - an icebreaker “Krasin”;
- since 2013, the annual joint seminar with the Center for Social and Political Studies and the Rosa Luxemburg Foundation “The Arctic: the vector of development and dialogue” in St. Petersburg;
- since 2018, the holding of the International Seminar with the support of the Gorchakov Foundation “Arctic Public Diplomacy in a Community of One Destiny” in St. Petersburg.

Large projects examples

Over the years of the Academy, several major projects have been implemented. Two of them are the most significant.

The project “Alexander Sibiryakov - a scientist and a philanthropist” began with a report at one of the conferences about a man forgotten by compatriots whose name was associated with an icebreaker who died in the Kara Sea in World War II. The Academy became interested in this topic and organized a round table, began work in the archives and searched for concerned scientists and specialists. It was 2008. As a result, the project became international, the activities of the Academy in 2009 were dedicated to the name of Alexander Mikhailovich Sibiryakov, whose 160th birthday was celebrated by the scientific community. During 2009, a lot of archival material was collected, a large international scientific-practical conference was held at the House of Scientists of the RAS, which brought together representatives of 5 countries associated with the name of Sibiryakov, a collection of works was released, and in October a delegation of the Academy visited Paris, Toulon, and Nice, where in the Russian cemetery “Kokad” A.M. Sibiryakov rests in peace. Academy representatives became the only delegation from Russia to lay flowers on his grave in recent decades.

Here is just a small list of merits to the Fatherland of A.M. Sibiryakov. Financing, together with the English entrepreneur Gardiner, the voyage of the Scottish captain W. Wiggins in 1876 to the mouth of the Yenisei River and up to the confluence of the Kureyki River with the delivery of European goods to the region. The organization, at the expense of the sponsor, of the expedition of A. Nordenskjöld along the Northeast Passage and around Eurasia in 1878–1880. These were the first attempts to develop the Northern Sea Route. Paving the road from Europe (for the successes of which participants and organizers were noted in Sweden, but not in Russia in any way) to Asia

via the Northern Urals, connecting the Ob and Pechora rivers, called the Sibiryakovsky Trakt, organizing expeditions of German and French naturalists to the Ob region in 1890. An equally important part of his activity is educational and charitable. The entrepreneur's funds built the first Siberian university in Tomsk, four free primary schools in Irkutsk, established the Higher Technical School, the Siberia printing house, built churches and temples, allocated 10 thousand rubles to the Academy of Sciences to award a prize every three years for the best historical original essay on Siberia, material support was given to Siberian students studying in Moscow and St. Petersburg.

In 2019, the Arctic Academy of Sciences, in the year of the 170th anniversary of the birth of A.M. Sibiryakov, again turned to this project, announcing an essay contest on Siberia and the North for high school students and university students as part of the upcoming Arctic Innovation 2019 St. Petersburg Arctic Summit.

The second significant international project implemented by the Arctic Academy of Sciences is **“Admiral de Traverse - Minister of the Sea of Russia”**. It dates back to 2004 when a conference was organized within the walls of the Agrarian University in Luga dedicated to the 250th anniversary of the birth of the Frenchman by birth, but the true son of Russia for many years of impeccable service, Ivan Ivanovich Traverse, nee Jean Baptiste Prevost de Sansac, Marquise de Traverse. During the time of Catherine the Great Traverse distinguished himself in battles with the British during the American War of Independence, he was invited to Russian service and gave his consent. The Great Revolution raged in France, and the new power did not favor the hereditary nobles. By his appearance in Russia, the Frenchman, the initial enemy of Britain, openly confused the cards of the anglophiles, of whom there were many at court, which was especially evident in the murder of Paul I, who assigned de Traverse the rank of rear admiral. Intrigues haunted the Marquis all his life, which did not prevent him from first showing himself as the commander of the sailing squadron of the rowing flotilla of the Baltic Fleet (1802), then as the Chief Commander of the Black Sea Fleet and, finally, as the Minister of the Sea of the Russian Empire (1809) to the highest degree of efficiency. The last post he took in 1811. the Marquis 18 years headed the Ministry of the Sea, becoming a member of the Council of State. For organizing numerous expeditions, incl. the expedition of F.F. Bellingshausen and M.P. Lazarev, who discovered Antarctica in 1820, Admiral Traverse was awarded the highest order of the Russian Empire - St. Andrew the First-Called. So the “golden age” of the geographical discoveries of our fleet is connected precisely with Admiral de Traverse.

However, the most eloquent episode characterizing Marquise Traverse as a person is connected with Napoleon's attempt to return the admiral to his homeland at all costs. In 1811, a special envoy of the emperor of the French arrived at Admiral Traverse with a proposal to return to France on his terms and take any post, including the position of Minister of the Sea ... The Marquis refused, declaring that he would not betray his new homeland, which helped him out in a difficult time, and in the same year, he accepted Russian citizenship. He kept his word and met his death on an estate in the village of Romanshchina near Luga, where he was buried.

Over the years of the project, archival materials were collected, round tables and seminars were held, scientific relations were established with France, Finland, Ukraine, the USA, the Traverse Association of Heirs; a delegation of the Arctic Academy of Sciences annually in April visits the burial place of the Sea Minister and his wife in the Roman region, holds press conferences and meetings at the Head of the local administration. In March 2019, the International Conference “Le Marquis de Traversay un autre héros des deux mondes” (Marquis Traverse - the hero of the Old and New Worlds) was held, which provided an opportunity to consider the admiral’s personality in a broad aspect of Franco-Russian-American relations in a retrospective of three centuries. The conference was held as part of the implementation of the International Project of the Arctic Academy of Sciences “Admiral de Traverse - Minister of the Sea of Russia”, initiated in 2009 and dedicated to the 200th anniversary of the discovery by the Russian navigators of the sixth continent of the Earth - Antarctica. The organizers of the conference, in addition to the Arctic Academy of Sciences and the host of the event - the Historical Service of the Ministry of Defense of France (Service historique de la Défense), located in the Chateau de Vincennes of Vincennes - were: Sorbonne and Panthéon-Sorbonne Universities and Naval War College, Newport, USA. In 2020, the year of the 200th anniversary of the discovery of Antarctica by Russian sailors, the Academy will hold a response International Scientific and Practical Conference in St. Petersburg. The Academy plans to establish the Traverse International Charitable Fund to support scientific, historical, cultural ties between Russia and France, as well as the organization of historical tourist routes in the Luga district of the Leningrad Oblast.

Conclusion

The peculiarities of geopolitical factors that determine inter-regional interactions in the Arctic super-region are, first of all, in the new role of regions in the context of globalization. The study of these processes is one of the main activities of the Arctic Academy of Sciences. Her participation in the development of the national security concept and many years of efforts in adopting the proposed version of the Arctic Doctrine of Russia were crowned with success, finding almost complete reflection in the Fundamentals of Russian State Policy in the Arctic. In content, they completely reiterate the doctrine proposed by the Arctic Academy of Sciences, except for the last section, which spoke about the Arctic organization of the state. The proposed doctrine was consonant with the military doctrine, where without this section, all the previous ones are simply a declaration, which is observed today in the Arctic.

A situation has arisen in which Russia must develop a completely new strategy in its regional policy in order not only to maintain its integrity but also to recognize its new geo-economic role in a rapidly changing world. It requires a serious scientific justification.

The current socio-political situation in Russia is significantly different from the middle of the 20th century when a centralized management system made it possible to implement the northern (Arctic) policy based on directives of the USSR State Planning Commission. At present,

harmonization of the relations “Science - Power - Business” is necessary in the context of the formation of civil society. And this means involving local government institutions, an active public resource - and the scientific justification of decisions made.

For sixteen years, the Arctic Public Academy of Sciences has been upholding scientific principles that contribute to the sustainable development of the Arctic zone of the Russian Federation and ensuring a decent quality of life for the population of the Arctic.

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