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QR - Issue

QR – Article



p-ISSN: 2308-4944 (print) **e-ISSN:** 2409-0085 (online)

Year: 2021 **Issue:** 10 **Volume:** 102

Published: 01.10.2021 http://T-Science.org





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ON THE IMPORTANCE OF TARGET INDICATORS FOR THE PERIOD UP TO 2035 FOR THE IMPLEMENTATION OF THE STRATEGY OF SOCIAL AND ECONOMIC DEVELOPMENT OF THE POPULATION OF THE NENETS AUTONOMOUS DISTRICT

Abstract: in the article, the authors assess the significance of the target indicators for the period up to 2035 for the implementation of the strategy of socio - economic development for the population of the Nenets Autonomous Okrug in the framework of the decree of the President of the Russian Federation of October 26, 2020 No. 645, namely: modernization of the urban environment and social infrastructure of settlements, ensuring availability of high-quality social services for people belonging to small peoples, completion of the implementation of the program for the development of navigation in the river basins of the NAO, approval of a program of state support for traditional economic activities of small peoples, improvement of the system of providing social guarantees to citizens of the Russian Federation living and working in the NAO.

Key words: urban environment, social infrastructure, social services, local fuel, comfortable housing, settlements, settlements, small peoples, economic development, regions, district, investment policy, investment attractiveness, investment climate.

Language: English

Citation: Blagorodov, A. A., Shcherbakov, D. S., Homenko, Y. A., Prokhorov, V. T., & Volkova, G. Y. (2021). On the importance of target indicators for the period up to 2035 for the implementation of the strategy of social and economic development of the population of the nenets autonomous district. *ISJ Theoretical & Applied Science*, 10 (102), 37-75.

Soi: http://s-o-i.org/1.1/TAS-10-102-2 Doi: https://dx.doi.org/10.15863/TAS.2021.10.102.2 Scopus ASCC: 2000.



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Introduction

UDC 335.17: 519.44

1. Investment policy is the most important component of the economic policy of the Nenets Autonomous Okrug. The result of its implementation is the attraction of investments in volumes ensuring the diversification of production and expanded reproduction of the economy, improving the quality of life of the population of the Nenets Autonomous Okrug.

Investment policy is a purposeful activity of the executive bodies of state power of the Nenets Autonomous Okrug and local authorities to activate and stimulate the investment process, attract and efficiently use investment resources to solve the problems of complex socio-economic development of the Nenets Autonomous Okrug.

2. The investment policy of the Nenets Autonomous Okrug for the period up to 2035 determines the targets for ensuring a favorable investment climate in the Nenets Autonomous Okrug. It is aimed at increasing the investment attractiveness of the Nenets Autonomous Okrug, creating conditions for mobilizing internal and increasing the inflow of external investment resources and new technologies into the economy of the Nenets Autonomous Okrug, expanding sources of investment for business and projects initiated by the authorities of the Nenets Autonomous Okrug, improving the efficiency of investments, developing regional infrastructure using public-private partnership mechanisms.

The purpose of the investment policy is to ensure high rates of attracting investments in the economy of the Nenets Autonomous Okrug. The result of the implementation of this goal is expressed in the outstripping growth in investment in fixed assets of the Nenets Autonomous Okrug, aimed at overcoming the infrastructural constraints of economic growth and diversifying the economy towards advanced processing industries, production of innovative products, development of the service sector and entrepreneurial activity.

- 3. The system of tasks for the implementation of investment policy in the region is represented by the following structure:
- 1) formation of a favorable investment climate in the territory of the Nenets Autonomous Okrug:

increasing the investment attractiveness of the Nenets Autonomous Okrug; development of investment activity in the territory of the Nenets Autonomous Okrug;

2) active attraction of investments.

To provide investors with information about the Nenets Autonomous Okrug, an investment passport is formed.

- 4. In order to create a favorable investment climate in the district, five key areas of work have been identified:
- 1) creation of a system of state support for investment activities; development of investment potential;
 - 2) reduction of investment risks;
 - 3) formation of a positive investment image;
 - 4) development of investment activity.
- 5. The creation of a system of state support for investment activities is determined by the systematic implementation <u>Plan</u> measures ("roadmap") for the implementation of the Standard for the activities of executive authorities to ensure a favorable investment climate in the Nenets Autonomous Okrug, approved by the order of the Governor of the Nenets Autonomous Okrug dated 23.09.2013 No. 207-rg.

The solution to the problem of developing investment potential is measured in general by indicators of investment growth in the Nenets Autonomous Okrug.

In the process of implementing the investment policy, taking into account investment risks and developing mechanisms to overcome them is of great importance, since the Nenets Autonomous Okrug is interested in attracting not only domestic, but also foreign investments.

6. The formation of a positive investment image of the Nenets Autonomous Okrug is carried out in the following areas:

the formation of the prestige of the territory with the help of the media and other information and reference materials;

using the capabilities of the official portal of the authorities of the Nenets Autonomous Okrug (admnao.ru) and a specialized bilingual Internet portal dedicated to investment activities in the Nenets Autonomous Okrug (invest.adm- nao.ru) to post information on investment processes;

the activity of the executive authorities of the Nenets Autonomous Okrug in achieving certain prominence in the domestic and international community;

popularization of the district's achievements and its investment opportunities at various exhibitions, meetings and seminars both in Russia and abroad, as well as receiving domestic and foreign delegations on the territory of the Nenets Autonomous District.

The implementation of the policy of actively attracting investments into the economy of the Nenets Autonomous Okrug is characterized by an increase in the volume of investments in fixed assets from all sources of financing.

In the period up to 2035, it is necessary to concentrate efforts on the development of competition, new technological changes and the increasing role of human capital. The role of innovations in socio-economic development will



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significantly increase, while the influence of traditional growth factors in the overall development of the region will decrease.

7. To implement the task of actively attracting investments in the economy of the Nenets Autonomous Okrug, a system of partnerships should be maintained with professional participants in the investment market and potential investors, banks, specialized financial institutions and organizations, with Russian and international development institutions.

In order to attract investments to the territory of the Nenets Autonomous Okrug, to create conditions for the development of subjects of investment and entrepreneurial activity on the territory of the Nenets Autonomous Okrug, a Microfinance Organization, the Fund for Entrepreneurship Support and the Provision of Guarantees for the Nenets Autonomous Okrug, was created.

The instruments for increasing investment activity and attracting investments in both the infrastructure and the private sectors of the economy of the Nenets Autonomous Okrug are the register of investment projects implemented in the Nenets Autonomous Okrug and the register of infrastructure sites in the Nenets Autonomous Okrug.

The objectives of creating these instruments are to organize a system for accounting for investment projects and infrastructure sites for the subsequent attraction of investment resources based on a single database, as well as creating an information basis to help increase investment activity in the Nenets Autonomous Okrug.

- 8. Particular attention should be paid to stimulating the investment activity of existing enterprises focused on expanding or modernizing production, intensifying export activities, as well as implementing energy conservation and energy efficiency measures.
- 9. It is necessary to form new instruments and conditions for attracting free financial resources of individuals and legal entities of the Nenets Autonomous Okrug for their active inclusion in the investment process by investing in projects implemented in the territory of the Nenets Autonomous Okrug.

10. An important tool for attracting investments is an active policy of searching for and attracting direct investments, including foreign ones, and localizing new industries in the territory of the Nenets Autonomous Okrug.

Active attraction of investments is associated with the formation of program measures aimed at attracting investments in existing enterprises, in infrastructure projects, localization of new industries, implementation of other commercial and innovative projects. Within the framework of this task, it is necessary to form and implement a system for assessing the effectiveness of the executive bodies of

state power of the Nenets Autonomous Okrug and local self-government of municipalities of the Nenets Autonomous Okrug, based on the fact that the planned indicators of attracting investments (in terms of volumes and growth rates) in the relevant supervised area have been achieved.

- 11. One of the main mechanisms of an active policy to attract investment is the formation of a circle of partner companies that assist investors in locating production facilities on the territory of the Nenets Autonomous Okrug.
- 12. The most purposeful mechanism for actively attracting investment in the economy of the Nenets Autonomous Okrug is the implementation of infrastructure projects of public-private partnership. The implementation of such projects allows to reduce the burden on the district budget for capital investments, to revise plans for the construction of infrastructure facilities in the direction of expanding the list and accelerating their commissioning, to provide a fuller and wider scale of coverage with new construction and reconstruction of infrastructure facilities and the commissioning of new production facilities, technologies, innovative and energy efficient solutions.
- 13. The formation and improvement of the regulatory legal framework of the Nenets Autonomous Okrug will create a system of legislative complex that forms a system for attracting and stimulating investments, establishing guarantees for the safety of investments and mechanisms for protecting the rights of investors. In this case, the following principles must be observed:

stability of legislation governing investment activities;

development of procedures and mechanisms that protect investors from illegal actions of state authorities, local authorities and their officials;

recognition and observance of the investor's rights to implement an investment project; avoiding worsening conditions for investors;

protecting property rights and improving interactions with corporate management;

the use of progressive tools for the influence of the state authorities of the Nenets Autonomous Okrug on private business.

14. Provision of property and other legal guarantees to investors at the legislative level is one of the factors in increasing the inflow of investments.

State support for investment projects using financial incentive mechanisms (provision of tax incentives, government guarantees, subsidies or other forms of financing) is based on the compliance of investment projects with priority economic activities of the Nenets Autonomous Okrug.

Main part

Small and medium-sized businesses are the basis for creating new jobs, reducing unemployment,



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replenishing the budget of the Nenets Autonomous Okrug through tax revenues, realizing the entrepreneurial potential of the population, and increasing the competitiveness of regional business.

With the aim of developing and supporting entrepreneurial activity in the Nenets Autonomous Okrug, a Microfinance organization, the Fund for Entrepreneurship Support and the Provision of Guarantees for the Nenets Autonomous Okrug, was created; the creation of conditions for entrepreneurial activity is carried out by the executive bodies of state power of the Nenets Autonomous Okrug, headed by the Administration of the Nenets Autonomous Okrug.

The Nenets Autonomous Okrug is a unique entity for conducting entrepreneurial activities, since in the territory of the okrug personal support of each entity engaged in entrepreneurial activity is possible.

The following mechanisms have been developed to support business entities: grants to start-up entrepreneurs, subsidies to reimburse part of the costs in carrying out entrepreneurial activities, subsidies from specialized executive bodies of state power of the district, microfinance and guarantees.

In addition to financial support, entrepreneurs are provided with information and methodological support. Every entrepreneur has the right to count on personal attention from the heads of the district, executive bodies of state power, institutions for supporting entrepreneurship in solving issues arising in the implementation of entrepreneurial activities.

To develop entrepreneurial activity, increase entrepreneurial activity, the executive bodies of state power of the Nenets Autonomous Okrug have the following tasks:

improvement of the legal framework governing entrepreneurial activity;

development of existing mechanisms of financial and non-financial support for entrepreneurship;

dissemination of positive experience in doing business; training and retraining of professional personnel for small and medium-sized businesses;

assistance in promoting products of small and medium-sized enterprises to regional, Russian and international markets;

carrying out information and analytical monitoring of the development of small and medium-sized businesses in the field and the development of measures of state policy for the further development of entrepreneurship.

The main directions of the socio-economic development of the Nenets Autonomous Okrug ensure the implementation of the target scenario for the development of the okrug in accordance with the system of target indicators of the long-term development strategy of the Russian Federation and taking into account the nationwide tasks of ensuring a high quality of life for Russians, and achieve technological leadership in the most important sectors

of the country's economy. The main strategic directions fix the challenges that are relevant for the socio - economic development of the region in the medium and long term, and the possible and available ways for regional executive authorities to deal with these challenges.

The largest oil companies of Russia are taking part in the development of oil fields: Rosneft, LUKOIL, Surgutneftegaz, Tatneft, Bashneft, Zarubezhneft. In addition, in the framework of international cooperation in the implementation of oil and gas projects, foreign partners take part: the French company "Total", the Norwegian "Statoil", the oil and gas corporation of the Socialist Republic of Vietnam - KNG "Petrovietnam". In total, as of 01.01.2016, 26 companies operate in the territory of the Nenets Autonomous Okrug, they hold 103 licenses for the right to use subsoil.

Oil production in the region began in 1984 with a trial operation of the largest in the Nenets Autonomous Okrug, the Kharyaga oil field.

An analysis of the dynamics of production in the territory of the Nenets Autonomous Okrug shows that in 2009 the peak of production was reached - 18.8 million tons, in the period from 2010 to 2013 in the region there was a decrease in oil production. Positive dynamics was outlined only at the end of 2014, the level of 2009 was achieved in 2019. Further forecast shows the possibility of a decrease in production volumes by 2035. With the existing volumes of oil production, the provision of oil and gas producing enterprises with proven oil reserves in the Nenets Autonomous Okrug is more than 50 years.

The remaining in the unallocated fund are 8 oil fields with total reserves of less than 60 million tons of oil, mostly small - with reserves of less than 15 million tons, which cannot serve as a reserve for oil production growth.

In the near future, the main reserve for the growth of oil production on the territory of the Okrug is the previously licensed fields that were not involved in development, or that were commissioned in the last year or two and are at the initial stage of development. Thus, a certain increase in production volumes can be expected due to the commissioning of deposits in the Central Khoreyver zone (JV "Rusvietpetro"), the R. Trebs and A. Titov (JSC ANK Bashneft), the Labaganskoye and Naulskoye fields (JSC NK Rosneft), expansion of the 3rd stage of development of 2 - 3 objects of the Kharyaginskoye field, developed by JSC Total RRR on the terms PSA.

In 2016, the Naulsky oil field was commissioned by OJSC NK Rosneft.

In addition to the aforementioned oil production facilities, the bulk of oil production will be provided by previously commissioned fields (the largest - Yuzhno-Khylchuyu, Kharyaginsky, Inzyreysky, Tedinsky, Val Gamburtsev fields, etc.).

However, one should not lose sight of the



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deposits with a significant degree of depletion and other deposits, the volumes of production on which for various reasons are falling.

The increase in oil production in the Nenets Autonomous Okrug due to the new fields will be somewhat offset by a natural drop in oil production at the fields under development.

Under these conditions, the development of the oil transportation infrastructure is not a deterrent to the level of oil production. The entire oil and gas transportation infrastructure created on the territory of the Nenets Autonomous Okrug, including the Varandey oil loading terminal of OAO NK LUKOIL, ensures the transportation of hydrocarbons from the fields of the Nenets Autonomous Okrug.

At present, oil is transported from the territory of the Okrug in the southern and northern directions. In the southern direction - to the Baltic pipeline system of Transneft, in the northern direction - by tankers through the Varandey oil loading terminal of LUKOIL.

Despite the fact that the Nenets Autonomous Okrug is an oil-producing region, its budget revenues do not directly depend on the volume of oil production and on the conjuncture of world prices for hydrocarbon raw materials. The main "oil" taxes - mineral extraction tax - are to be credited to the federal budget and the budget of the Arkhangelsk region, corporate income tax - a part is credited to the federal budget, a part within the framework of the Agreement concluded from January 1, 2015 to December 31, 2021 between by the state authorities of the Nenets Autonomous Okrug and the Arkhangelsk Region are credited to the budget of the Nenets Autonomous Okrug in accordance with the standards established in the Agreement.

The main "budget-forming" taxes in the Nenets Autonomous Okrug are the corporate property tax and, to a lesser extent, the transport tax.

Taking into account that a trend has developed and continues to develop in the district of the largest production facilities, and most of them have already been commissioned, there is a long-term risk of loss of income due to increased depreciation of the operated property complex.

At the same time, given a good oil price, the additional profit of oil producing companies can be used to implement projects for the development of medium-sized and small fields, the profitability of which at today's oil price levels is negative (we mean the construction and commissioning of a property complex).

As for the Kharyaga PSA, here the revenues of the state (in particular, the budget of the Nenets Autonomous Okrug) directly depend on the volume of oil production and the price of oil.

It is necessary to make maximum use of the opportunities for the development of oil and gas production in the Nenets Autonomous Okrug, which

arise as a result of the reduction in production in Western Siberia and the creation of incentives for the implementation of new production projects at the level of the Russian Federation. At the same time, it is necessary to take into account the severe environmental restrictions arising from the peculiarities of the climate and landscapes of the district, and give priority to long-term and sustainable growth over a rapid expansion of production, which jeopardizes the ability to maintain a stable volume in the long term. Theoretically, intensive methods of oil production at the fields distributed between the companies allow to produce 45-55 million tons of oil per year by 2020, which would lead to an increase in the status of the Timan-Pechora oil and gas province in the Russian Federation.

The main reserve of free gas reserves is concentrated in 5 fields prepared for development and amounts to about 370 billion m3, including for the following fields:

- 1. Vasilkovskoye with reserves of 81 billion cubic meters licensed (CJSC Pechorneftegazprom), in development, with an average annual production of natural gas of about 135 million cubic meters and 4 4.5 thousand tons of gas condensate, to provide gas to settlements in the district.
- 2. Kumzhinskoye with reserves of 101 billion m3 licensed (ZAO SN-Invest, a subsidiary of OOO Pechora LNG);
- 3. Korovinskoe with reserves 46 billion m3 licensed (OOO Evroseverneft, a subsidiary of OOO Pechora LNG);
- 4. Layavozhskoye with reserves of 139 billion m3 unallocated fund, subsoil plot of federal significance;
- 5. Vaneivisskoe with reserves 85 billion m3 unallocated fund, subsoil plot of federal significance;

As already mentioned, free gas production is currently carried out only at the Vasilkovskoye gas condensate field in order to gasify the district's settlements.

In 2016, the licensing of the Nenets Autonomous Okrug field was carried out, referred to the subsoil areas of federal significance - Vaneivisskoe and Layavozhskoe (both oil and gas condensate) with total gas reserves of more than 225 billion m3.

Pechora LNG (LLC Pechora LNG) is a project for the development of two gas condensate fields in the Nenets Autonomous Okrug - Kumzhinsky and Korovinsky, creating a gas transportation infrastructure, building a comprehensive gas treatment unit (CTP), as well as building a gas liquefaction plant near the village of Indiga. Licenses for the development of the Kumzhinskoye and Korovinskoye gas condensate fields are held by SN-Invest CJSC and EuroSeverNeft LLC (a joint venture of ALLTEK Group and OJSC NK Rosneft).

The Pechora LNG company, together with Giprospetsgaz, prepared options for the development



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of gas condensate fields in the district. To make the final investment decision, it is necessary to decide on the sale of products.

The sale of liquefied natural gas (LNG) is planned to be carried out to the markets of the Asia-Pacific region: India, Korea, etc., which implies the use of the Northern Sea Route.

In 2015, amendments and additions were made to the licenses for the right to use the subsoil of the Kumzhinsky and Korovinsky subsoil plots: the licenses were extended until 2035 (from 2032 and 2034, respectively), the project implementation terms were postponed: end of 2025 (from 2016 and 2017, respectively).

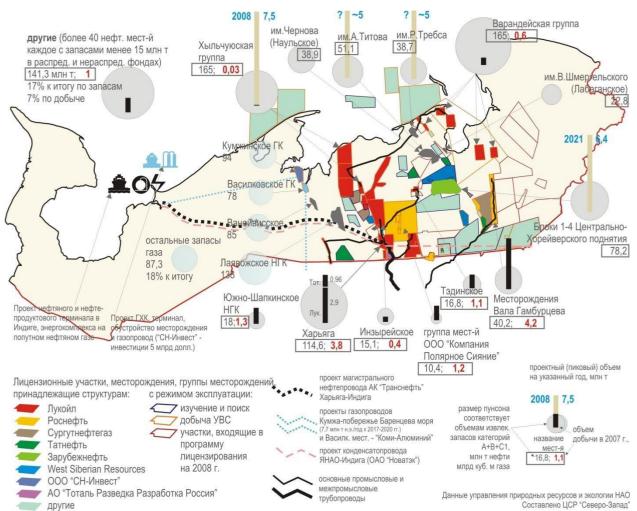
To increase oil and gas production on the territory of the Nenets Autonomous Okrug to the level of 20-22 million tons of oil equivalent per year and to stabilize it in this corridor, it is necessary not only to develop production, but to ensure the comprehensive development of the infrastructure for transporting oil and gas to the main markets. In general, it is necessary to form a flexible (mobile and diversified by target markets) integrated system of oil transportation in the northern part of the Timan-Pechora oil and gas province, taking full advantage of the possibilities of direct access to world markets due to coastal location and growing and unmet needs of Gazprom in gas in the Komi Republic. At the same time, it is important to take into account the complex corporate structure

of the oil and gas complex of the Nenets Autonomous Okrug, a historically spontaneous oil transportation system based on inter-field pipelines of producing companies and the absence in the region of main pipelines of national monopolists - OJSC Gazprom and OJSC Transneft. To remove infrastructure restrictions for the growth of oil production and the development of gas and gas condensate production, it is necessary:

- 1. To maximize the potential of the coastline of the Nenets Autonomous Okrug to develop new opportunities for the supply of Timan-Pechora oil and gas to world markets, supporting the development of projects:
- 1) Varandey system (includes the Varandey oil offloading terminal (VNOT) and interfield pipelines to South Khylchuy, the A. Titov, R. Trebs and G. Chernov fields and the Varandey group fields);
- 2) the Kharyaga-Indiga system, involving the construction of a trunk oil pipeline (MNP) and a terminal with a capacity of 12 million tons (built by 2017);
- 3) transport and processing system Kumzhinskoe field Indiga (capacity 7.7 million tons of oil equivalent), including a gas chemical plant;
- 4) consider the relevance of the project for the construction of the Yamalo-Nenets Autonomous Okrug Indiga condensate pipeline with a throughput capacity of 12 million tons and a length of 1600 km.



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Pic. 1. The main announced projects for the development of oil and gas production and oil and gas transportation infrastructure in the Nenets Autonomous Okrug

- 2. To form an integrated pipeline system based on the existing and under construction interfield oil pipelines of the operating companies and by coordinating and agreeing on future projects for the development of pipeline infrastructure in the Nenets Autonomous Okrug. Within the framework of the program for the formation of an integrated system, it is necessary to ensure:
- 1) flexibility of the system (due to the technological capabilities of individual sections to work in a reverse mode) and the ability to maneuver commodity flows of raw materials (due to the "margin" of strength of the system);
- 3. non-discriminatory access to the system for small and medium-sized production companies, without which it is difficult to effectively develop the northern part of the Timan-Pechora oil and gas industry (TP NGP) (which has a large number of small fields).
- 4. Take advantage of the increased demand for natural gas in the Komi Republic arising from the implementation of the Komi-Aluminum projects, the expansion of the Syktyvkar LPK and the possible

construction of a large new pulp and paper mill, which cannot be met by OAO Gazprom - to expand gas production at the Vasilkovskoye gas condensate field, start production at the Naryan-Mar group of fields (Layavozhskoye - reserves of 125.6 billion cubic meters and Vaneivisskoye with reserves of 85.2 billion cubic meters) and form a gas transportation infrastructure in the direction of Komi with a capacity of 2.5 to 5 billion cubic meters ... m / year - up to 3.8 million tons of oil equivalent.

To increase the stability of the Okrug's economy in relation to changes in the situation on the world commodity markets, it is necessary to stimulate the product diversification of the oil and gas complex and an increase in the volume of added value created in the fuel and energy sector of the Nenets Autonomous Okrug through the formation of large high-tech complexes for deep processing of oil, gas and gas condensate in the coastal zone ... The location of large oil and gas processing complexes at sea terminals and in the immediate vicinity of raw material production areas in recent decades has been the main global trend in the location of new hydrocarbon processing



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facilities.

- 1. The prospects for the construction of a large (with a capacity of up to 12 million tons) oil refining complex in Indiga are due to the following factors:
- 1) Indiga is located in the non-freezing part of the Barents Sea: the navigation period is 20 - 25 days longer than the Arkhangelsk Sea, 50 days longer than the Pechora Sea; movement in ice to the non-freezing part of the Barents Sea is 60–100 miles (15–25 hours of movement in ice) less than from Arkhangelsk and less than from the Gulf of Finland. It is believed that there is a possibility of ice-class vessels sailing in the area of the Indiga Bay without icebreaker escort for at least 185 days (for the Arkhangelsk port, this figure ranges between 94 for points on the seashore and 167 for berths in the city). The most severe ice conditions in Indiga are typical for the period from February to April, however, the high salinity of the waters of the Indiga Bay contributes to the fact that the ice is much more easily amenable to mechanical destruction;
- 2) Indiga has favorable hydrological and logistic conditions for the construction of a marine terminal to ship crude oil and petroleum products to the key markets of the European Union and the United States. The depths in the Indiga Bay allow receiving tankers with a deadweight of up to 350 thousand tons of VLCC class. Ice conditions in the area of the proposed terminal dictate the use of ice-class vessels, which limits the tonnage, which means the economic efficiency of sending crude oil directly via transoceanic routes. Nevertheless, vessels of Panamax and Handymax classes with a deadweight of no more than 120 thousand tons are used for the transportation of oil products.

In December 2015, a company of the Rosneft group and a company of the Alltek group completed the creation of a joint venture (JV) to develop projects for the production and monetization of gas reserves in the Nenets Autonomous Okrug. The joint venture included licenses for subsoil use in relation to the Kumzhinskove and Korovinskove fields and funds that will be used for the development of the project. If the JV acquires the right to use subsoil to the Vaneivisskoye and Layavozhskoye fields, a new gas production center will appear in the Nenets Autonomous Okrug, the JV will become the basis for the creation of a new high-tech gas production center in the Nenets Autonomous Okrug, within which it is planned to implement various projects for production, processing, marketing and supply gas of end consumers.

3) On the territory of the Nenets Autonomous Okrug, a raw material base, unique in quality and sufficient in terms of reserves for the construction of an oil refinery, is available in terms of the physical and chemical characteristics of the composition, the oil reserves of the Nenets Autonomous Okrug are represented mainly by light oil (60.5% of oil has a density of up to $0.87~\rm g\,/\,m3)$ cm), little - and medium-

sulfur (the share of oil reserves with a sulfur content of up to 2% is 82.7%). Refining of light, low-sulfur crude oil requires the least amount of capital investment for the production of petroleum products with high added value;

- 4) after the construction of the Barentskomur railway line, oil products of the new complex can be supplied not only by sea to the EU and the USA, but also to the domestic Russian market, which is already experiencing an acute shortage of high-quality (meeting Euro-3 and Euro-4 standards) motor fuel;
- 5) the possibility of creating an efficient power supply system for an oil refinery by building a gas pipeline system in the Nenets Autonomous Okrug to collect and supply a part of associated petroleum gas to a gas pipeline parallel to the Kharyaga Indiga oil pipeline (which will also reduce flaring volumes) or use natural gas from the Kumzhinsky field and modern an environmentally friendly power plant with a capacity of 180 MW with a combined cycle plant with high efficiency (53 55% in power generation mode and more than 80% in combined mode).

As a result of the project implementation, more than 3 thousand new permanent jobs will be created in the Nenets Autonomous Okrug, and more than 5 thousand temporary jobs will be created during the construction process. The total investment in the project (excluding Barentskomur), according to preliminary estimates by the Center for Strategic Research North-West Foundation, will amount to about 250 billion rubles, and its implementation will require the participation of large Russian vertically integrated corporations (VICs), a foreign partner, capable of providing access to the US and EU markets, as well as the so-called Development Institutions (Development Bank, Investment Fund).

2. The project for the construction of a gas chemical complex on the coast of the Barents Sea (tentatively, in Indiga), operating on the raw material base of the Kumzhinskoye gas and gas condensate field, has been announced by private investors and involves the development of the field, the construction of a gas pipeline to the coast in the Indiga region and a modern gas chemical complex and a marine shipping terminal. The annual production of gas condensate will be equivalent to 5-6 billion cubic meters. m, and the gas chemical complex will produce 67.8 thousand barrels of synthetic liquid fuel (GTL). At the moment, the project envisages the production of methanol, urea and ammonia, however, in the future, it may also accommodate the production of motor fuel from methanol. The total estimated investment exceeds 120 billion rubles.

The Kumzhinskoye field was discovered in 1974 and is located in the Pechora delta, 60 km from Naryan-Mar. On it 25 wells were drilled and subsequently mothballed. The proven reserves of C1 natural gas amount to 94.233 billion cubic meters. m, C2 - 10.257 billion cubic meters. m. Recoverable



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reserves of gas condensate C1 are estimated at 4.86 million tons, C2 - 632 ml. tons Gas condensate is the most valuable petrochemical feedstock providing a wide range of end products and a high level of utilization. In the early 1980s, an accident occurred at the field, which they tried to liquidate with a local underground nuclear explosion. It is believed that further development of the field will reduce the excess in-situ pressure, which will lead to the elimination of existing environmental threats. However, a number of experts believe that

Benefits from the implementation of processing projects include:

- 1) in the transition of the Nenets Autonomous Okrug from ensuring the supply of exclusively raw materials to the world market to the production of products with high added value and supplied both to the EU and US markets, and to the main markets of the Russian Federation this will increase the stability of the region's economy, whose macroeconomic indicators today are directly related to fluctuations in oil prices;
- 2) in creating new jobs in the region and strengthening the settlement system in the western part of the okrug;
- 3) in the development of infrastructure (including social) of the Nenets Autonomous Okrug;
 - 4) growth of revenues of budgets of all levels.

Diversification of the economy of the Nenets Autonomous Okrug through the creation of new sectors such as tourism, transport, "urban economy" and mining of solid minerals, as well as through the modernization and restoration of traditional types of farming and the food industry on their basis is an essential component of the strategy. These sectors, even taken together, in the foreseeable future will not be able to surpass the basic oil and gas sector in importance, however, their development will increase the stability of the region's economy and develop the local labor market regardless of the situation on the global energy markets. In addition, almost all new and rehabilitated sectors of the economy are of great cultural and social importance, since they allow preserving the identity and specificity of the territory and local communities.

The agricultural sector of the Nenets Autonomous Okrug is the main source of livelihoods for the indigenous population and one of the components of the region's economy. The uniqueness of the agro-industrial complex of the Okrug lies in the fact that it combines the traditional experience of the peoples of the North and socio-economic innovations of the 20th and early 21st centuries.

The importance of agriculture in the region's economy is primarily due to the fact that the industry ensures the food security of the region. Considering the territorial and geographical remoteness of the Nenets Autonomous Okrug and its underdeveloped transport infrastructure, it is very important to have its

own production in the subject.

In this regard, the priority areas for the development of traditional types of economic activity and the agro-industrial complex are:

- 1. Creation of a modern infrastructure for the production of high quality reindeer products, which implies:
- 1) development of a network of technological complexes for slaughtering and primary processing of reindeer with freezing tanks in traditional places of mass slaughter of reindeer (Oma village, Haruta village, Karataika village, Indiga village, Khongurei village, Nelmin Nos village);
- 2) creation of production for processing reindeer products - skins, endocrine-enzymatic raw materials, which in the future may be raw materials for the pharmaceutical industry;
- 3) construction of a network of trading posts along the reindeer grazing routes for:
- reception, accumulation, primary processing, storage and preparation for transportation of products of traditional industries and traditional crafts of the indigenous small-numbered peoples of the North (venison, fish, game, wild plants);
- providing reindeer herders with food, consumer goods and industrial and household goods, material and technical means; carrying out zooveterinary measures in reindeer herding farms;
- conducting a preventive medical examination of reindeer herders;
 - provision of communication services;
- organization of cultural, educational and other events;
 - providing other services.
 - 2. Rational use of reindeer pastures:
- 1) carrying out a complex of geobotanical surveys and developing projects for on-farm land management of the territory of reindeer pastures of reindeer herding farms, creating an information base for the reindeer capacity of pastures, optimizing the borders of pastures;
- 2) In order to timely detect and eliminate cases of disturbed movement of reindeer on adjacent land plots, to comply with pasture rotation, it is necessary to introduce a system of satellite remote monitoring of the movement of reindeer herds.
- 3. Activities for the development of the fishing industry in the region:
- 1) financial recovery, restructuring, technological and managerial modernization of fishing collective farms;
- 2) renovation of the existing fleet and creation of its own fishing fleet for coastal fishing for the extraction of aquatic biological resources in the inland sea water bodies of the Nenets Autonomous Okrug;
- 3) construction of a fish processing enterprise in Naryan-Mar; to provide the enterprise with raw materials, it is necessary to build a network of fish



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receiving points equipped with refrigeration equipment at the largest fish sites (Krasnoye settlement, Nelmin-Nos settlement, Andeg village, Oksino village, Velikovisochnoe village, Farikha site), as well as the purchase of water and land vehicles for transporting fish;

- 4) in the west of the district the construction of fish receiving points equipped with refrigeration equipment, in the settlement of Indiga, with. Nes, s. Nizhnyaya Pësha and with. Oma; purchase of land vehicles for transportation of products to Arkhangelsk;
- 5) in the east of the district construction of 5 refrigerating chambers (2 Karatayka village, 2 Ust-Kara village, 1 Varnek village), sale of fish on the territory of the Komi Republic;
- 6) construction of a fish hatchery in the area of Naryan-Mar (Lake Kharitonovo) to restore stocks and stabilize the abundance of coregonid fish species at an optimal level;
- 7) creation of fish farms for the implementation of commercial and pasture aquaculture aimed at providing the population of the district with high-quality fish products obtained without exceeding the norms for removing fish from water bodies and restored as a result of fish farming;
- 8) improvement of the legal and regulatory framework governing the fishing industry in the region;
- 9) reclamation work (technical and biological reclamation) on the main fishery reservoirs of the district, taking into account scientific recommendations;

10) carrying out research work to study the reserves of aquatic biological resources of the inland water bodies of the district;

- 11) providing the industry with qualified personnel, recruiting graduates from specialized educational institutions of Arkhangelsk, Murmansk, Salekhard.
- 4. Construction of modular points for the acceptance, cleaning and storage of wild plants in the municipalities of the district.
- 5. Modernization of existing and construction of new livestock farms and workshops for milk processing in order to preserve and develop the industry on a scale necessary to ensure the consumption of dairy products made from fresh raw materials, increase the volume and range of dairy products of our own production.
- 6. Development of vegetable growing for year-round supply of greenhouse vegetables to the residents of the district by reconstructing a greenhouse complex in the city of Naryan-Mar.
- 7. Stimulating the growth of the number of economic entities representing small forms of business.
- 8. Formation of human resources in the agroindustrial complex.

For the development of traditional types of economic activity and the agro-industrial complex, it is necessary to improve the mechanisms for providing state support.

- 9. Reorientation of hunting activities towards hunting tourism, which will require:
- 1) modernization and technical re-equipment of executive authorities responsible for the protection and reproduction of wildlife and habitats, maintaining state records, control and supervision over the observance of hunting legislation;
- 2) creation of an appropriate tourist product and its state support;
- 3) training and certification of gamekeepersguides;
- 4) creation of infrastructure for hunting tourism (hunting bases and hunter's houses on the basis of hunting huts);
- 5) organizing a range of services such as transportation, food according to the recipes of hunting and traditional Nenets cuisine (catering), entertainment and active recreation (excursions to significant places, untouched corners of nature, fishing, picking mushrooms and berries, sports shooting, photography hunting for rare animals and birds, rental of hunting, tourist and sports equipment, gear and outfit, sale of souvenirs, etc.);
- 6) conducting advertising work (duplicating booklets, calendars, publishing popular literature), using the media, global computer networks, holding exhibitions, seminars, conferences.

The Nenets Autonomous Okrug possesses natural - climatic and cultural - historical potential for the development of the tourism services industry. Ethnocultural material is presented by archeological monuments and traditions of culture and economy of indigenous peoples and Old Believers. Natural monuments, flora and fauna of the region are a resource for the development of eco - fishing and hunting tourism. Specific natural and climatic conditions create opportunities for extreme tourism.

The strategic task is to develop a concept for the development of tourism in the Nenets Autonomous Okrug and, on its basis, the transformation of complex tourist services into a new industry that complements the basic raw material sector along with traditional types of management.

To realize the tourist potential, it is necessary to include the Nenets Autonomous Okrug in the route map of the North-West of Russia and position it as one of the tourist regions of the North of Russia for the key markets - Moscow and St. Petersburg and part of the inbound tourist flow.

Time-consuming and difficult transport accessibility of tourist resources due to their remoteness and scattering is the main limitation of the potential for their commercialization and narrows the range of potential consumers.

1. Priority areas for the development of



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ethnocultural tourism include:

- 1) firstly, an area within a radius of 25-40 km around Naryan-Mar, which has a relatively high transport accessibility from Naryan-Mar in particular, Lake. Gorodetskoe (a complex of historical and cultural monuments), the mouth of the river. Ortinka (Orty settlement). This direction requires the development of its own tourist excursion routes and their infrastructure equipment, the creation of an "industry" of souvenirs, the training of guides, the development of the hospitality sector in Naryan-Mar and the optimization of external air traffic in Naryan-Mar to receive the flow of tourists, marketing;
- 2) secondly, the western part of the Nenets Autonomous Okrug. It is necessary to use the possibilities of inclusion in tourist routes passing through Arkhangelsk and the northeastern districts of the Arkhangelsk region, arising due to the completion of the construction of the Mezen-Nes highway. It is necessary to form a tourist product based on acquaintance with the life of nomadic reindeer herders, including tours with living in tundra families in tents, participation in driving herds, winter fishing and acquaintance with the national cuisine. This will require the establishment of special training for guides, forming a new profession for the indigenous people.
- 2. The development of fishing and hunting tourism involves marketing focused on the foreign and Russian markets, the development and equipment of routes (preparation of camping sites for hunting on the basis of hunting huts) and the creation of hunting farms that perform control and supervisory functions and functions of a tour operator. An active position of the regional authorities is necessary in terms of obtaining federal licenses and quotas (for hunting), regulating competition between fisheries and fishing tourism for the use of water resources (in particular, it is necessary to differentiate areas according to their functional purpose), establishing the restoration of fish species valuable for tourism. Providing a package of services related to:
- 1) with the execution of documents, such as the right to import weapons for foreigners, registration of rights to trophies and catch, coordination of the arrival of foreign tourists in the territory with a regulated visit;
 - 2) with transportation (air transport)
- 3) accompanied by guides and huntsmen guides.
- 3. Extreme and ecological tourism rafting (rivers Kara, Silovaya, Sibirchatayakha, B. Rogovaya, B. Oyu, etc.), ski trips (Pai-Khoi ridge), sailing trips in the White Sea (ports of the Arkhangelsk region Kanin peninsula, 6th category of complexity). This segment of tourism can rely on the potential and attractiveness of unique natural monuments, such as the geothermal spring, the Pymva-Shor state natural monument (it is necessary to study the possibilities of

constructing a water bottling line and its implementation in the domestic market of the region and beyond), Big Gate canyon in the area of the Belaya River, unique flat tundra. Investments are needed in the development of tours and equipping the routes with infrastructure (the project for the construction of a health complex in the area of the village of Volokovaya should be considered),

It is necessary to strengthen the economic (functional) basis for the development of the city of Naryan-Mar and the village. Seekers, having formed a key logistics and administrative and management hub for the northern part of the Timan-Pechora oil and gas province.

- 1. The development of the logistics and service function of Naryan-Mar on a modern technological platform will be associated with the further development of oil production and, to a greater extent, gas and gas condensate in the Naryan-Mar region, as well as with the complication of the structure of the Okrug's economy and the development of the consumption sector. The development of modern logistics will require the fulfillment of a number of conditions:
- 1) modernization of the airport, which makes it possible to form on its basis the main regional hub for small regional aviation and for external (with other centers) air traffic, ensuring the delivery of seconded highly qualified shift workers (engineering and technical and managerial personnel), the supply of the most valuable technological equipment and the possibility of increasing the efficiency of the system delivery of goods and foodstuffs to the Nenets Autonomous Okrug;
- 2) the completion of the construction of the road to Usinsk (with a possible branch to Ukhta) and the modernization of the Naryan-Mar port will improve the efficiency (economy) of the logistics of consumer goods and foodstuffs, as well as restore the function of Naryan-Mar as the main transshipment hub for industrial mining projects;
- 3) formation of a new generation industrial and logistics park for the location of oilfield service enterprises and production companies.
- 2. The development of sectors of the so-called urban economy in Naryan-Mar and the district as a whole is constrained by specific restrictions arising from the peculiarities of the organization of urban space and real estate. Naryan-Mar and the village. The have a characteristic micro-district seekers development structure, the model of which was formed in the Soviet period and was focused on housing placement. In the current situation of the market model of management, such a structure of the organization of urban space imposes significant restrictions on the possibilities of the dynamic development of trade, services and entertainment - the basis of the modern "urban economy".

The antithesis of the concept implemented in



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Naryan-Mar and other settlements of the Russian North is the Scandinavian and North American approaches to the development of small urban settlements in the north, which involves the allocation of the public - commercial core of the city and the of low-rise formation dense buildings. Implementation of the Scandinavian - North American model is an important condition for administrative strengthening and managerial functions in Naryan-Mar and improving the quality of life in the city.

It is necessary to make investments:

- 1) in the formation of a modern telecommunications infrastructure. In Naryan-Mar and the village. It is necessary for the searchers to create a large satellite communication center, and provide the entire territory of the city with the possibility of connecting to a high-speed fiber-optic network, or provide coverage of the main part of the city with Wi-Fi / Wi-Max wireless Internet access systems;
- 2) in the development of a comfortable (and taking into account climatic conditions, the scale of settlements and the composition of residents) urban environment and the environment as a whole - it is necessary to form a concept of a modern small city of the Far North, as well as a development strategy for Naryan-Mar, on the basis of which it is necessary to revise the general plan and approaches to capital construction and city development management. Such a concept should take into account the inherited structure and morphology of small towns in the Far North, deployed during the Soviet period, and the main factors behind the failure of the concept of standardized microdistrict development in specific northern conditions. It is also necessary to take into account the experience of urban planning in the northern regions of Canada and the United States, as well as in Scandinavia. It is necessary to ensure the supply of housing in Naryan-Mar,
- 3) in the formation of a powerful cultural activity in Naryan-Mar, not necessarily associated with the traditions of the indigenous peoples of the Far North, but rather focused on the request of visiting specialists.

The Nenets Autonomous Okrug has a significant, but currently poorly studied, natural resource potential in terms of solid minerals. Due to insufficient exploration of reserves and the lack of the necessary transport and energy infrastructure, the

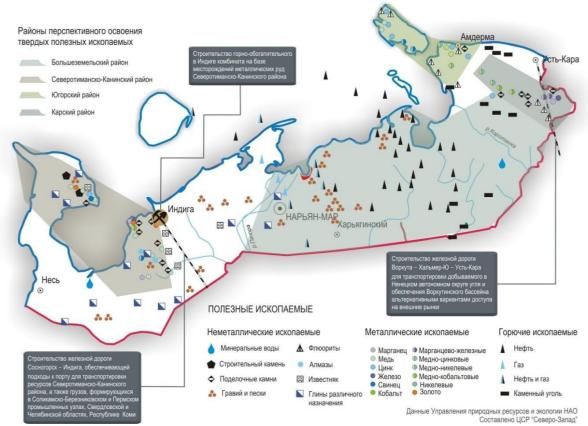
implementation of possible projects for the extraction and processing of solid minerals in the Nenets Autonomous Okrug is only possible in the long term and should be synchronized with the development strategy of Russian Railways. Taking into account the low availability of the most promising deposits of non-hydrocarbon minerals, their poor exploration and poor infrastructure equipment of the district as a whole, regional executive authorities will need to initiate and provide significant support at all stages of implementation to launch pilot projects.

- 1. Lobby for financing of further exploration and exploration work on promising areas from the federal budget.
- 2. To form a portfolio of pilot projects of an integrated (industrial and infrastructural) nature and provide:
- 1) attraction of specialized investors to projects and support;
- 2) the format of public private partnership (PPP), which presupposes the sharing of risks and costs for the development of fields and the necessary transport and social infrastructure between the corporation and the state.

Regional executive authorities need to provide support to potential investors in structuring PPP projects and promoting them at the level of Development Institutions. In particular, projects of an industrial and infrastructural nature can receive financial support from the Investment Fund of the Russian Federation in the form of subsidies at the request of a constituent entity of the Russian Federation, guarantees of the Investment Fund of the Russian Federation in case of approval of a PPP project (decision of the Government of the Russian Federation on the most large-scale new development projects) and credit financing through the State Corporation "Bank for Development and Foreign Economic Affairs" Vnesheconombank ".

One of the pilot projects may be the development of coal reserves in the Ust-Kara Amderma region. One of the partners can be the Komi Republic, where the Institute of Geology of the Komi Scientific Center of the Ural Branch of the Russian Academy of Sciences and the Vorkuta Mining Institute are located. Transportation of raw materials can be carried out both by rail in case of approval and implementation of the Ural Industrial - Ural Polar PPP project, and by sea, subject to the modernization of the Amderma and Ust-Kara berths.





Pic. 2 Opportunities for the development of solid minerals in the Nenets Autonomous Okrug

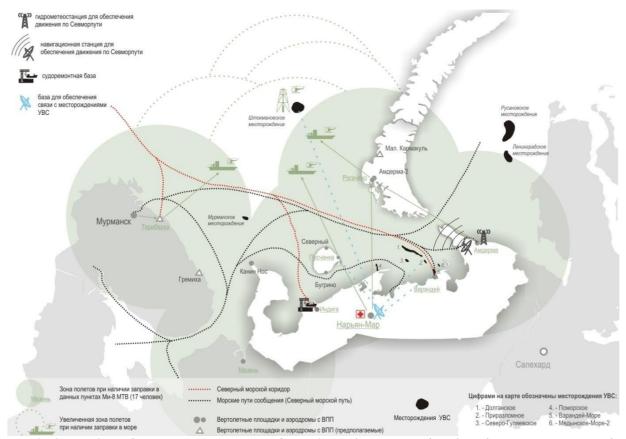
- 3. Support the initiative of Russian Railways to build the Barentskomur and Vorkuta Ust-Kara highway (projects are included in the Strategy for the Development of Railway Transport in the Russian Federation until 2035), providing:
- 1) synchronous commissioning of large sand and gravel deposits located along the projected highway for the purpose of providing the project with construction materials;
- 2) having formed a portfolio of mining projects in the zone of influence of the new railway (thereby providing the possibility of forming a PPP project).

To include the Nenets Autonomous Okrug in projects for the development of Arctic resources and the restoration of the Northern Sea Route (NSR), it is

necessary to envisage the possibility of using the created maritime transport infrastructure, local aviation systems and satellite communications for the purpose of participating in production projects on the shelf of the Arctic seas, meteorological and navigation services for sea vessels in the water area. The territory of the Nenets Autonomous Okrug can become a convenient "jump zone" for operators of offshore platforms and a communication center for ships using the NSR. The combination of the coastal Arctic and border status of the territory creates the basis for increasing the status and significance of the Nenets Autonomous Okrug in the context of the state strategy for the development of resources and the potential of the Arctic.







Pic. 3 Functions of the Nenets Autonomous Okrug in the framework of projects for the development of the Arctic

Climatic changes in the Arctic zone limitations or opportunities for the Nenets Autonomous Okrug

According to the UN Intergovernmental Panel on Climate Change, the average temperature on Earth has risen by 0.7 °C since the start of the industrial revolution, and a large proportion of the warming observed in the last 50 years is caused by human activities, primarily the release of gases. causing the greenhouse effect (carbon dioxide and methane). At the same time, according to the Arctic Council, warming in the Arctic is happening twice as fast as in other parts of the planet: ice covered with snow reflects 85 - 90% of sunlight, while sea water - only 10%, and the earth's surface - 20% ... As a result, ice melting reduces sunlight reflection and increases temperatures in the Arctic, which in turn accelerates the melting process.

Despite the fact that not all scientists agree with the concept of global warming (many researchers consider these processes within the framework of natural climate variability or believe that warming has been observed for too short a time to draw final conclusions), in the medium and long term for the Nenets Autonomous districts open up both new opportunities and risks. The first is largely associated with easier access to hydrocarbon reserves on the shelf of the Arctic seas. According to the US Geological

Survey, the reserves of the Arctic shelf in the Arctic Circle amount to 47.2 billion cubic meters. m of natural gas, 89.9 billion barrels of oil, 44.1 billion barrels of gas condensate. Of these, 27.6 billion cubic meters. m of natural gas, 12.7 billion barrels of oil and 21.9 billion.

Risks for the Nenets Autonomous Okrug are mainly associated with changes in weather conditions - a longer summer increases the period during which a ban on the movement of vehicles on the tundra is in effect, which will require a serious adjustment of the cargo delivery schedule to ensure oil production. Within the framework of the Arctic Climate Impact Assessment project, experts from the Arctic Council also noted the risks for reindeer husbandry: global warming can contribute to changes in flora and fauna, in particular the reduction of reindeer lichen or the spread of insects, which will lead to changes in the behavior and diet of reindeer. The later freezing of rivers in autumn and their early breaking up of ice in the spring can affect the migration routes of reindeer. More frequent snowfall can also have a negative impact on reindeer husbandry.

Melting ice can also significantly affect shipping in the Arctic: we are talking about the possibility of more active use of the transit potential of the Northern Sea Route.

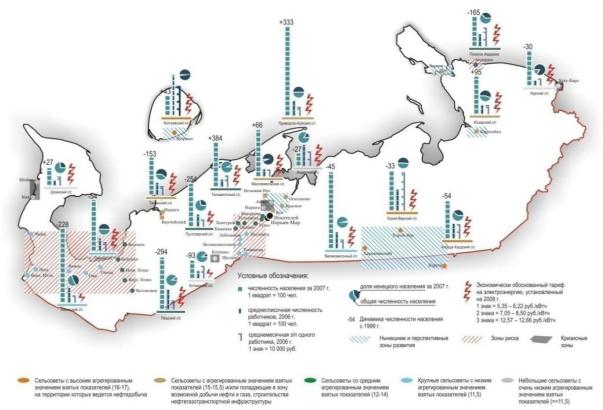
It is necessary to make the process of



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transformation of the settlement system of the Nenets Autonomous Okrug manageable and provide for mechanisms to mitigate the consequences of these changes for residents by conducting a comprehensive audit of the state of small and medium-sized settlements (their provision with energy and social infrastructure; age composition and potential of human capital; budgetary provision and inclusion in special programs development and support) and an assessment of their development potential (based on an analysis of the economic base and the prospects for its development). A preliminary analysis indicates that a significant part of the Okrug's settlements, which today are designated as settlements with an average level of development, are in fact at risk. because these settlements lack competitive and economically viable industrial specialization and are

rapidly losing population; the engineering infrastructure of these settlements is outdated and is slowly being updated precisely because of the uncertainty of their future fate and function. On the other hand, there are zones with a significant prospect of growth in the demand for labor resources, including those permanently located on the territory - this is mainly the zone of the developing oil and gas production complex and the city of Naryan-Mar. It is obvious that the competent redistribution of the population and its preparation for new tasks will simultaneously reduce social losses and budget costs in the risk zone and provide conditions for the accelerated deployment of the updated settlement system, equipped with more mobile energy and modern means of communication.



Pic. 4. Zones of crisis, risk and new opportunities - the basis of the development potential of the modern settlement system of the Nenets Autonomous Okrug

Based on the audit and assessment, mechanisms should be formed:

1. Integration into the modern labor market (social and economic integration) of people leaving the settlements of the 3rd and 4th groups, including retraining programs focused on the needs of the developing basic sector (OGS and oilfield services), transport logistics and the so-called urban economy (sectors of services) - only the policy of social and economic integration will make it possible to turn the forced migrations of the population of degrading settlements from an item of "inevitable costs" into an

item of "investments in the future of the economy of the Nenets Autonomous Okrug."

In addition, incentives should be created for employers to participate in the formation of the content (educational program) and the system of requirements for applicants, as well as to hire graduates of the retraining program - one of the possible mechanisms is to form a joint supervisory board of the Retraining Program with the participation of employers and joint working groups to form the Retraining Program ...

2. Development of housing policy in Naryan-



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Mar and the largest settlements of the 1st and 2nd groups in order to create opportunities to manage the direction of migration of people from the shrinking settlements of the 3rd, 4th and 5th groups. Elements of this policy can be:

- 1) participation of the budget in the engineering preparation of territories for new construction;
- 2) offset of real estate in collapsing settlements at a fixed (non-market) price the issue of federal financial participation in this kind of instrument should be resolved within the framework of the Resettlement Program from the Far North and equivalent areas. Often, the lack of the opportunity to sell real estate (in the absence of demand) in shrinking settlements leads to a delay in the process of transformation of the settlement system, which, in turn, leads to an increase in budgetary costs associated with supporting energy, transport and social infrastructure;
- 3) subsidizing the interest rate on mortgage loans issued to migrants from shrinking settlements in Naryan-Mar and settlements with growth potential.
- 3. Optimization of engineering, energy, transport and social infrastructure in settlements with a decreasing population and a weakened economic base, as well as a set of measures for the deployment of modern local infrastructure in promising and sustainable settlements.
- 4. "Point" creation of new economic opportunities in the most important settlements with a weakened economic base, in particular by subsidizing investment projects in traditional economic sectors (processing of reindeer and hides, fish and other products of the industry) and included in the tourism development program.

The power industry of the Nenets Autonomous Okrug needs modernization and development. At the same time, it is necessary to take into account the climatic features, the existing structure of the settlement system and the features of the inherited system of heat and power supply in settlements and the natural resource potential of the territory, which makes it possible to actively develop both small traditional generation based on available local energy sources and renewable energy.

Difficult climatic conditions place high demands on the reliability of the power industry in general and on its capacity. Low population density and landscape features do not allow the formation of a unified power supply system based on large generating capacities and high-voltage transmission lines, which is typical for most Russian regions. At the same time, in the settlements themselves, centralized heat supply and power supply systems have been deployed, which are based on traditional generation at diesel power plants and boiler houses. Power supply for Naryan-Mar, Krasnoye and Telviska is carried out by the State Unitary Enterprise NAO Naryan-Marskaya Power Station, the main fuel of which is natural gas.

The document detailing the main directions of the energy sector in the Nenets Autonomous Okrug is the Concept for the Development of the Energy Complex of the Nenets Autonomous Okrug and Improving the Energy Efficiency of the Regional Economy. The concept is the basis for the development of appropriate targeted programs.

Modernization of the energy sector in a number of settlements should involve the transfer of head sources to readily available local types of energy sources, such as associated oil, natural gas and stable gas condensate "gasoline":

- 1. The use of these fuels for the generation of electricity and heat in the village councils of the Nenets Autonomous Okrug is due to the following factors:
- 1) availability of fuel in areas where production is located. At the moment, associated petroleum gas in the Nenets Autonomous Okrug is mainly used by oil companies to meet their own needs either it is pumped back into the reservoir, or as fuel for electricity and heat generation at oil fields or shift camps;
- 2) compliance with the general goals of reducing the burden on the environment and transition to sustainable resource use. In recent years, the Government of the Russian Federation has been making efforts to increase the share of associated petroleum gas (APG) utilization. Since 2012, the level of APG flaring has decreased to 5% of the production level (Resolution of the Government of the Russian Federation "On measures to stimulate the reduction of air pollution by products of associated gas flaring" dated January 8, 2009). On the other hand, in accordance with licensing agreements, oil companies are obliged to use petroleum gas, and until recently, state regulation of the selling price of petroleum gas was an important obstacle to the use of APG. Since February 9, 2008 there is a market procedure for determining the cost of APG sold to gas processing plants, which makes it economically justified to organize the collection and field treatment of gas, the construction and operation of compressor stations and pipelines. Combustion of large volumes of associated petroleum gas is one of the main sources of environmental pollution in the Nenets Autonomous Okrug (especially in oil production areas): from 1000 cubic meters. m of flared APG, about 3 tons are emitted. carbon dioxide. Combustion of large volumes of associated petroleum gas is one of the main sources of environmental pollution in the Nenets Autonomous Okrug (especially in oil production areas): from 1000 cubic meters. m of flared APG, about 3 tons are emitted. carbon dioxide. Combustion of large volumes of associated petroleum gas is one of the main sources of environmental pollution in the Nenets Autonomous Okrug (especially in oil production areas): from 1000 cubic meters. m of flared APG, about 3 tons are emitted. carbon dioxide.



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As a fuel for generating electricity and heat, associated petroleum gas can be used in settlements located in the immediate vicinity of oil fields (Bugrino, Khorey-Ver and Kharyaginsky), but in this case, a distribution pipeline network will need to be built. Another option is to install associated petroleum gas generation directly at the fields and supply power to settlements through the construction of power lines.

2. Natural gas can become the basis of the fuel and energy balance of the settlements of the Nenets Autonomous Okrug mainly due to the ease of use of natural gas in the energy sector, high efficiency and economic efficiency of gas cogeneration plants and the availability of this type of energy in close proximity to the main regions resettlement of residents of the district (Naryan-Mar and Seekers).

The reserves of free gas and gas caps of categories A+B+C1 in the Nenets Autonomous Okrug amount to 76 billion cubic meters. m. It is advisable to study the possibilities of expanding the use of natural gas from the Vasilkovskoye field as a fuel for the generation of electricity and heat in settlements located in the basin of the river. Pechora:

- 1) construction of cogeneration plants on natural gas (mini-CHP) in the above-mentioned settlements for the supply of heat and electricity;
- 2) It is also advisable to consider the option of using excess power capacities of a number of fields to supply power to the nearest settlements, subject to the construction of a power transmission line (transmission line) (for example, the capacity of the Vasilkovskoye field to supply power to the Krasnoye settlement; sources of the Musyushorskoye oil field to supply power to the Khorey-Ver settlement).

The peculiarities of the extreme geographical position of the Nenets Autonomous Okrug, low population density, focal settlement system, low infrastructure equipment, high cost of energy carriers delivery and the excess of energy generated in certain districts of the okrug over real needs necessitate the use of renewable energy sources, such as wind, small hydropower and the energy of the ebb and flow. To date, wind power seems to be the most promising type of alternative energy for the Nenets Autonomous Okrug.

1. Wind power generation - for the Nenets Autonomous Okrug, hybrid (wind-diesel) installations may become the most promising. At the moment, wind diesels are installed in the Leshukonsky, Mezensky and Primorsky districts of the Arkhangelsk region as part of the implementation of the program of the State Unitary Enterprise "Arkhoblenergo" for the modernization of the electric power industry. If we compare the options for power supply in the North from a 500 kW diesel station and a wind diesel station with one 200 kW diesel generator and four 100 kW wind power plants (WPP) with an average annual wind speed of 6.7 m/s, then the cost of a wind diesel station was USD 378 thousand, and diesel - USD 125 thousand. However, the fuel savings yielded \$ 90,000, and the payback period was less than three years. Placing wind diesels will allow less fuel use during low-load periods (night and summer), as well as reduce the installed capacity of generators calculated for peak loads. As a result, the installed capacity utilization factor will increase (now the average capacity utilization rate for diesel power plants in NAO village councils is 12%; for comparison: the installed capacity utilization factor (ICUF) for diesel power plants in Russia is 18%; ICUF for a wind power plant (WPP) in Europe is 19-30 %). On the other hand, the presence of a diesel generator makes it possible to compensate for the instability of the wind flow. installed capacity utilization factor (ICUF) for diesel power plants in Russia - 18%; ICUM for a wind power plant (WPP) in Europe - 19-30%). On the other hand, the presence of a diesel generator makes it possible to compensate for the instability of the wind flow. installed capacity utilization factor (ICUF) for diesel power plants in Russia - 18%; ICUM for a wind power plant (WPP) in Europe - 19-30%). On the other hand, the presence of a diesel generator makes it possible to compensate for the instability of the wind flow.

- 2. Small hydropower the Nenets Autonomous Okrug is characterized by a dense river network (on average 0.53 km per 1 sq. Km of area), which makes it possible to locate small hydropower facilities (especially in the areas of the Timansky and Kaninsky Ridges, the Pai-Khoi ridge). There are two types of small hydroelectric power plants - with a reservoir (blocking of the channel is required) and rivers operating in a natural mode. The main disadvantage of the former is the impact on the environment (changes in the fish habitat, landscape, recreational and navigation conditions), and the latter, the low guaranteed capacity, since the amount of electricity generated varies depending on the volume of the available river flow. The cost of electricity production at small hydroelectric power plants is from 2 to 7 cents per 1 kW * h of electricity, and capital investments in the construction of power plants - USD 1,500 - 6,000 per 1 kW. Taking into account the harsh climatic conditions of the Nenets Autonomous Okrug (freezing of rivers in winter), the operation of small hydroelectric power plants is possible only in spring and summer (the period of opening rivers from ice, the greatest flow and the possibility of producing a maximum of electricity, but also of a minimum load).
- 3. Tidal power The profitability of tidal power plants is ensured when the tidal height difference is at least 5 m there are no more than 20 places in the world suitable for the construction of tidal power plants (TPS). The coastal strip of the Nenets Autonomous Okrug requires additional study for the feasibility of placing the TPP. In any case, taking into account the natural and climatic conditions of the district, it can be assumed that a structure consisting



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of underwater turbines will be in demand. It is believed to have a lower impact on the environment, but it requires more maintenance and transmission costs for the generated electricity. Tidal power plants have a number of advantages:

- 1) there is no need to build reservoirs;
- 2) electricity generation does not depend on the water content of the year (ebb and flow have constant energy for each month) and is more stable than wind power plants;
- 3) capital investments in construction per 1 kW of installed capacity are not much higher than those for (small) HPPs (\$ 2,400 versus \$ 1,500–2,000).

Potential partners of the administration of the Nenets Autonomous Okrug in conducting research on the feasibility of using wind, small hydropower and tidal energy can be JSC RusHydro (in November 2008, the company began to identify promising sites for the construction of wind farms, is working on projects to use tidal energy in the Mezen) and the New Energy Foundation. Technological advice on the use of wind energy can be provided by the Committee on the Problems of the Use of Renewable Energy Sources of the Russian Union of Scientific and Engineering Public Organizations. One of the co-investors of the project to modernize the power supply of the village councils may be the northern environmental financial corporation NEFCO (created by Denmark, Finland, Iceland).

Based on the principle of the geographical concentration of settlements and types of available energy resources, 5 regions were identified, for which a forecast of consumption of primary energy resources was formed:

- 1) western region (Peshsky, Omsky, Kaninsky and Shoinsky village councils);
- 2) central region (Telviso village council without Telviski, Pustozersky, Velikovisochny, Rimorsko-Kuisky, Malozemelsky, Andegsky, Kotkinsky);
- 3) eastern region (Yusharsky, Karsky, Khoseda-Hardsky village councils, Amderma settlement);
- 4) Naryan-Mar region (Naryan-Mar city, Seekers village, Telviska village, Krasnoe village);
- 5) oil production area (Khorey-Versky, Kolguevsky village councils, village Chernaya).
- 1. Energy of the region, including Naryan-Mar, the village of Seekers, with. Telviska and the village. Krasnoe, based on the resources of the Vasilkovskoye field. An increase in energy demand is expected as a result of the development of the so-called urban economy in the administrative center of the region. However, growth will be insignificant in the event of a large-scale introduction of energy-efficient technologies, thanks to which Naryan-Mar will not face a shortage of electricity and heat.
- 2. The central region will experience a serious structural change in the fuel and energy balance due

to the gasification of a significant part of the settlements with the resources of the Vasilkovskoye field.

- 3. In the area of concentration of the oil production complex, a significant increase in energy consumption will be caused by an increase in production and a set of related works. Optimization of the TEB structure here is associated with the use of associated gas and excess energy capacity of the oil industry for the needs of the energy sector of nearby settlements.
- 4. The production dynamics will significantly affect the structure and volumes of the fuel and energy supply in the western region, where (in the Indiga region) the production of light oil products and synthetic oil will be located. The production of our own petroleum products should also make them more affordable for the region's energy sector.
- 5. The reduction in energy consumption from all types of sources in the eastern region is due to the modernization of energy equipment, which implies a decrease in specific indicators of fuel consumption, and the absence of positive demographic dynamics and large energy-intensive projects. Changes in the TEB structure in this area are associated with the prospects for the use of liquefied associated gas.

In addition to the mining industry and the processing of hydrocarbons, the factors supporting the dynamics of the fuel and energy balance include the possibility of constructing a number of slaughterhouses, trading posts and fish receiving points for the needs of traditional activities, as well as the deployment of tourism infrastructure facilities. Thanks to modern energy efficient generation technologies, these facilities will not cause a significant increase in fuel consumption.

Preconditions for the development of renewable energy exist in a number of settlements in the western and eastern regions, which are remote from the regions of hydrocarbon production and processing and have suitable natural and climatic conditions. For NAO, renewable energy is an alternative to diesel power generation, the share of which in the district balance is relatively small. This determines the insignificant share of renewable energy sources in the promising fuel and energy balance of the region.

The implementation of the transport and transit potential of the district, as well as an increase in the mobility of the population, the quality of budget services and an increase in the overall transport connectivity of the territory of the Nenets Autonomous Okrug is impossible without the comprehensive development of the infrastructure framework of the Nenets Autonomous Okrug, which is characterized by unique features associated with the northern position of the region, low population density and features of the relief and landscape.

The development of the district's transport infrastructure is a strategic goal not only at the



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regional, but also at the federal level, from the point of view of ensuring the development of mineral deposits and increasing the availability of transport services for the population of remote and hard-to-reach areas. The Nenets Autonomous District (along with the Komi Republic, Murmansk and Arkhangelsk Regions) also has the greatest need in the North-West Federal District for the development of socially significant passenger air transportation.

The main projects for the development of the infrastructure of the Nenets Autonomous Okrug are included in the "Transport Strategy of the Russian Federation for the period up to 2035". As the main directions for the development of transport infrastructure in the Northwestern Federal District for the period 2016 - 2035. highlighted:

- 1. On railway transport technological lines 1) Sosnogorsk Indiga and 2) Vorkuta Ust-Kara.
- 2. In road transport reconstruction of road sections included in the network of federal roads in the direction North-East Polar Ural Syktyvkar Vorkuta with access to Naryan-Mar.

- 3. In air transport the development of ground infrastructure to ensure regional traffic in the Nenets Autonomous Okrug.
- 4. In maritime transport the development of the Northern Sea Route and the infrastructure of Arctic ports.

In other words, a key element in the development of the transport infrastructure of the Nenets Autonomous Okrug is its integration with the infrastructure of the Arkhangelsk Region, the Komi Republic and its subsequent inclusion in the infrastructure of the Russian Federation.

The construction of a deep-water port in the icefree Indiga Bay of the Barents Sea and the construction of an oil terminal there with a capacity of up to 30 million tons is an important step towards the development of the resource potential of the Nenets Autonomous Okrug, however, the disclosure of the transport and transit potential of the Nenets Autonomous Okrug will become possible only if the project is implemented for the construction of the railway line Sosnogorsk - Indiga.



Rice. 5. Development of the railway infrastructure of the Nenets Autonomous Okrug.

Advantages of the port of Indiga over "competitors" in the developing north-western system of ports This project is not only an integral part of the development of the Sosnogorsk branch of the Northern Railway, but will also allow the port of Indiga to be used not only as the most promising loading port and terminal for the transportation of hydrocarbons in the Barents sea, but also to form a port of a wide profile, thereby placing the port of Indiga on a par with the main Russian ports in terms of dry cargo. The creation of a large multi-purpose Arctic port is an important element of the strategy of the Russian Federation for the development of the Arctic and its resources, and will also contribute to the revitalization of the Northern Sea Route.

Thus, in the future, the direction Solikamsk - Indiga (Barentskomur), along with the Belkomur project, will be able to strengthen the transport and transit function of the Arctic coast of the Russian Federation and become a real competitor to other transport directions. The length of the sea transport arm from Indiga to the main world ports (Rotterdam, New York, Rio de Janeiro, Calcutta) is comparable to similar directions from the port of Arkhangelsk, while the railway arm from Solikamsk (Perm Territory) to Indiga ("Barentskomur") is 102 km shorter than from Solikamsk to Arkhangelsk ("Belkomur"), 683 km shorter than to the port of Ust-Luga, and 1,096 km shorter than to Murmansk. Reduction of the sea transport shoulder when using the Northern Sea Route



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from Indiga to Vancouver, Yokohama and Shanghai ranges from tens of thousands to several thousand kilometers. A relative disadvantage of the Barentskomur project in comparison with Belkomur is the greater volume of new railway construction (1,016 km of new construction on 1177 km of the highway in the direction of Solikamsk, 221 km of new construction more than in the direction of Solikamsk-Arkhangelsk). It should also be taken into account that the cost of sea freight is market value, while transportation by rail is regulated by tariffs. At the end of 2008, the cost of sea freight decreased several times, but freight in ice conditions is about twice as expensive. In addition, for the transportation of certain types of cargo in high latitudes, there are no formatted types of ships. A relative disadvantage of the Barentskomur project in comparison with Belkomur is the greater volume of new railway construction (1,016 km of new construction on 1177 km of the highway in the direction of Solikamsk, 221 km of new construction more than in the direction of Solikamsk-Arkhangelsk). It should also be taken into account that the cost of sea freight is market value, while transportation by rail is regulated by tariffs. At the end of 2008, the cost of sea freight decreased several times, but freight in ice conditions is about twice as expensive. In addition, for the transportation of certain types of cargo in high latitudes, there are no formatted types of ships. A relative disadvantage of the Barentskomur project in comparison with Belkomur is the greater volume of new railway construction (1,016 km of new construction on 1177 km of the highway in the direction of Solikamsk, 221 km of new construction more than in the direction of Solikamsk-Arkhangelsk). It should also be taken into account that the cost of sea freight is market value, while transportation by rail is regulated by tariffs. At the end of 2008, the cost of sea freight decreased several times, but freight in ice conditions is about twice as expensive. In addition, for the transportation of certain types of cargo in high latitudes, there are no formatted types of ships.

In addition to the implementation of the Belkomur project, the construction of a new cargoforming line Vorkuta - Ust-Kara is also of great importance for connecting the district with Vorkuta and in general with the Komi Republic and bringing the products of the Pechora coal basin to new markets.

Air transportation is the backbone network of domestic communications in the region. A number of tasks are implemented through air transportation in the district, including

- 1) passenger traffic between settlements;
- 2) social services (execution of urgent sanitary assignments and search and rescue operations);
- 3) aerial work for servicing oil and gas, construction and geological organizations;
 - 4) services for reindeer herders and tourists;
 - 5) various types of aerial photography;

6) transportation of goods on external sling and delivery of dangerous goods.

Taking into account the low density and high dispersion of the population across the territory of the Nenets Autonomous Okrug, the underdevelopment of the road network and, often, the economic inefficiency of its development in comparison with air transport, as well as the harsh climatic conditions, in this regard, aviation should become the main direction of development of internal transport.

The Nenets Autonomous Okrug is in a more advantageous position in comparison with other regions in terms of aviation development. The lack of railways, the underdevelopment of internal highways and the lack of communication with the federal road network made the regular operation of air transport services a vital issue. At the same time, there are a number of problems, the solution of which is strategically important for the harmonious development of the region in the future, namely:

- 1. Maintaining and expanding the network of routes of local air lines with access to the regions adjacent to the Okrug:
- Naryan-Mar Nizhnyaya Pesha Oma Nes Mezen Arkhangelsk;
- Naryan-Mar Indiga Nizhnyaya Pesha Mezen Arkhangelsk;
 - Naryan-Mar Usinsk.
- 2. Renovation of the aircraft fleet of JSC Naryan-Marsk JSC.

The aircraft fleet of JSC "Naryan-Marsk JSC" consists of 17 Mi-8 helicopters of various modifications, produced in the period from 1981 to 1991, and 8 An-2 aircraft, produced in the period from 1968 to 1987.

In the period 2015 - 2020. The calendar life of three Mi-8T helicopters and three Mi-8MTV-1 helicopters has expired. In 2021, 2022, 2025 and 2026, eight more helicopters will end their calendar resource - 2 in each specified year.

Thus, by 2026, it is necessary to purchase at least 14 Mi-8 helicopters to replenish the aircraft fleet. Considering the expansion of the route network of local air lines and the need for helicopter transportation of companies - subsoil users, it will be necessary to purchase additional helicopters.

It is required to replace the technically and morally obsolete An-2 aircraft with aircraft with more optimal technical and economic characteristics, capable of taking off / landing on the runways on which the An-2 aircraft is capable of taking off / landing.

One of the replacement options is the TVS-2MS aircraft, manufactured by FSUE

"SibNIA im. SA Chaplygin "(Novosibirsk), which is a deeply modernized aircraft An-2.

3. Reconstruction of the airport complex of the Naryan-Mar airport and maintenance of helipads and



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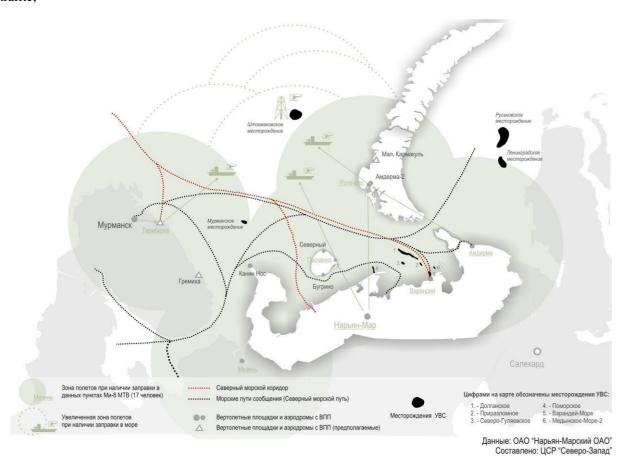
airstrips in the settlements of the district in a standard condition, which consists in carrying out the following activities:

- reconstruction of an artificial runway (strengthening and lengthening) of the Naryan-Mar airfield to ensure the possibility of receiving modern cost-effective aircraft. At present, the runway of the Naryan-Mar airport, due to its technical condition, does not allow to receive aircraft with a maximum take-off weight of over 60 tons more than twice a day.
- construction of a cargo-passenger terminal at the Naryan-Mar airport to service air passengers, both on interregional and local air lines, including the transportation of watches to the fields, handling cargo and luggage, placing a border and customs point to ensure flights to offshore drilling rigs (offshore transportation) and organization of international charter flights;
- construction of a hotel in Naryan-Mar to accommodate transit passengers;
- routine repairs of helipads and runways in the settlements of the Okrug to maintain them in a state of airworthiness, equipping them with equipment necessary for flights and the organization of passenger traffic;

- reconstruction or construction of service and passenger buildings in the settlements of the district to serve passengers and accommodate personnel of helipads and runways.
- 4. Overcoming the shortage of aviation personnel.

An important area of work of air transport is the activity to meet the need for the transportation of passengers and cargo of commercial organizations and, first of all, subsoil user companies.

The seasonal volume of work in the Nenets Autonomous Okrug on the use of aviation in the national economy is increasing annually by 10-15%. To date, JSC "Naryan-Marsk JSC" has practically exhausted its possibilities to meet the growing demand for air transportation, as a result of which third parties are involved in the work. The renewal of the aircraft fleet and the modernization of the existing aviation infrastructure will allow in the future not only to meet the demand of companies in the domestic market for cargo and passenger air transportation, but also to serve external customers, for example, in the implementation of oil and gas projects on the shelf of the Barents Sea.



Pic. 6. The area of flights of helicopter aviation, the possibility of increasing the area of flights

The deployment of paved road infrastructure is critical for the socio-economic development of the

region. Main priority areas:

1) development of the internal road system, in



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compliance with the principle of economic efficiency and expediency and environmental safety;

2) connection of the road system of the Nenets Autonomous Okrug with the federal road network.

In modern conditions, a developed network of paved roads will be a reasonable decision only within the main area of settlement of settlements in the Naryan-Mar region and the village. Seekers.

In the second direction, the most promising is the completion of the Syktyvkar - Ukhta - Pechora - Usinsk - Naryan-Mar highway project. This project is a key object for the construction of sections of the Northern Transport Corridor St. Petersburg - Medvezhyegorsk - Kargopol - Syktyvkar - Kudymkar - Perm with access to Vorkuta, Naryan-Mar, Salekhard, Solikamsk and solves an important strategic task for the Nenets Autonomous Okrug - providing access to the infrastructure network Komi Republic.

The strategic importance of this road at the federal level is due to the need to develop oil and gas and mining complexes in the northern regions of the Komi Republic, the Nenets Autonomous Okrug, on the shelf of the Barents Sea, the construction of nonferrous metallurgy enterprises, trunk gas pipelines from the Timan-Pechora oil and gas province and the Yamal gas field.

The Pechora River and the small rivers of the Okrug are transport arteries through which "northern delivery" and passenger transportation are carried out. The operational efficiency of the river network is reduced as a result of the termination of dredging operations. There is a need to adopt a comprehensive program of joint actions by the administration of the Nenets Autonomous Okrug and the government of the Komi Republic to transform the river. Pechora into a high-tech infrastructure network with dredging activities.

In view of the high dynamics and instability of the settlement system, as well as in connection with difficult climatic conditions and low infrastructure facilities, it is necessary to improve the system of providing budget and social services to the population, ensuring the simultaneous:

- 1) improving the quality of services;
- 2) expanding their spectrum;
- 3) reduction in the unit costs of their provision due to the following areas:
- 1. To "complete" the system of budgetary social infrastructure to the level required to provide high-quality social services to the population, strengthening the functions of Naryan-Mar as a center for the provision of comprehensive services and filling the gaps in the system of medical, educational, social and cultural services in rural areas, taking into account the provision of the optimal balance between the quality of the services provided and the possibilities for their receipt by the population, as well as the availability of facilities and services of social

infrastructure, transport, communications and information for people with disabilities and other low-mobility groups of the population. Determine the spatial structure of the budgetary network. Due to the peculiarities of settlement in the region, the functions should be improved and the specialization of the elements of the social infrastructure network should be strengthened. In particular:

1) the system-forming functions of Naryan-Mar should be strengthened as a center for the provision of comprehensive (social, educational, medical and cultural) services for all residents of the region. In the health care sector, the city of Naryan-Mar needs further development of general and specialized medical care: primary health care for children and adults, multidisciplinary inpatient medicine, perinatal medicine and dentistry. The air ambulance department, based in Naryan-Mar, is one of the important components ensuring the availability of comprehensive medical services for rural residents of the region.

The system of educational institutions of various levels in Naryan-Mar needs extensive development due to the growth of the city's population and the increase in demand for services at various levels of education (preschool, primary, secondary and primary vocational, secondary vocational, adult education).

social Comprehensive services the population should include multidisciplinary services for all age groups, including semi-stationary services for children and adolescents, rehabilitation of children and adolescents with disabilities, services for elderly citizens and disabled people, various types of social assistance for families and children, services of a gerontological center and inpatient services for the elderly and disabled people. In order to comply with the requirements of the Labor Code of the Russian Federation, it is necessary to create a "Occupational Safety Center" and a "Laboratory for Testing Measuring Instruments".

In addition, it is advisable to develop the social sphere through the development of public-private partnerships, the formation of mechanisms for attracting non-state (private) organizations for social services to the population, primarily senior citizens, the provision of spa services, rehabilitation services, as well as social services in stationary conditions and at home.

2) in rural settlements, it is necessary to improve the quality of existing types of services, which include the outpatient-polyclinic level of health care (as well as outpatient and inpatient departments in local hospitals), preschool and primary (primary and secondary) education, some social services and cultural institutions (DK, houses of folk art and houses of film and video screenings). It is necessary to ensure the "basic completeness" of social infrastructure in accordance with the size and age structure of the



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population and some specific features of settlements, as well as optimization of the placement of types of social infrastructures within settlements in order to increase the efficiency of budget expenditures and renew the fixed assets of service establishments of various types.

Medical care for the population of the Nenets Autonomous Okrug has a number of features that affect the timing and quality of medical care and, as a result, the health of the population of these territories:

- remoteness of settlements and lack of transport infrastructure;
 - harsh natural and climatic conditions;
- the specifics of the traditional way of life of the indigenous peoples of the North (nomadism);
- uneven development of the network of health care institutions due to geographic, demographic and other conditions.

Progress in information and telecommunication technologies has created the basis for a fundamentally new direction in the organization and provision of medical care to the population - telemedicine.

Territorial factors determining the development of telemedicine in the Nenets Autonomous Okrug:

- remoteness of settlements from the district center;
- lack or limited terrestrial communication between settlements;
- irregularity and high cost of passenger air transportation;
 - harsh climatic conditions;
 - lack of qualified medical personnel;
- changes in the settlement system in connection with the development of the oil and gas industry (the emergence of temporary locations shift camps of oil and gas companies).

Modern organizational and economic trends require further development of telemedicine in the Nenets Autonomous Okrug:

- organization of interaction with subsoil users to conduct telemedicine consultations for employees working on a rotational basis;
- introduction of remote monitoring of children of the first year of life in the settlements of the district;
- improving the quality and availability of medical care to the population through preventive examinations, medical examination, health monitoring using remote technologies;
- implementation of a medical care program for acute coronary syndrome (ACS) with remote counseling and timely thrombolytic therapy in medical organizations in remote settlements.
- expanding the telemedicine network of the region connecting feldsher and obstetric points,

primarily the most remote from the center, to the district telemedicine network in 2021 - 2024."

The proposed framework principle for the placement of social infrastructures is based on the responsibility of regional executive authorities for providing the population of the region with high-quality social services - subject to the political rejection of various options for the mass resettlement of residents of rural settlements to other settlements in the region or beyond. This means the need to maintain and improve the standard of living within the existing settlement system, taking into account its tendency towards optimization.

The social infrastructure existing today largely corresponds to the proposed principle - from the point of view of completeness, that is, the formal availability of facilities (however, in a number of settlements there is a shortage of certain types of infrastructures). Therefore, the main content of the reorganization of the system for the provision of basic social services in the countryside is the concentration of various types of social infrastructures in one building in villages for up to 500 people, which will ensure higher efficiency of budget expenditures, and renewal of funds in other villages. These works involve the attraction of significant earmarked funds.

- 2. Improving the efficiency of the network of social infrastructures implies making the budgetary network more mobile by introducing the principle of remote provision of part of budgetary services using advanced communication, medical, educational and social-humanitarian technologies. This requires:
- 1) develop (possibly, together with the Ministry of Social Development and other specialized federal departments, as well as other constituent entities of the Russian Federation) a concept for the formation of a system of "remote" provision of budgetary and social services;
- on the basis of an optimized (in accordance with the framework principle proposed above) social infrastructure (combining basic infrastructures into one node in villages with a population of up to 500 people and updating fixed assets in larger villages) to form a material and technical base - for example, to deploy a network of satellite communication stations and equipped educational, medical and service centers in the main settlements - human resources (advanced training and retraining program for the personnel of budgetary network institutions) for the implementation of a system of "remote" provision of budgetary and social services, as well as external partner networks and educational content for the tele-education network ;the central link in the system of providing remote services to the rural population of the region should be the key industry service institutions of the city of Naryan-Mar (in particular, the District Hospital, the



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Center for Comprehensive Social Services, institutions of secondary and vocational education, etc.).

A concept for the development of a remote system for the provision of educational services should be formed, covering not only the organization and technological platform (including the basic software product of tele-education - the so-called knowledge management system), specialization and content - that is, the content and range of educational products. It is necessary to involve companies operating in the Okrug and leading educational centers outside the Nenets Autonomous Okrug in determining the specialization and forming the content. The institution of vocational education can be defined as a key partner of the tele-education system (distance learning), which ensures the formation and development of content.

"The modernization and development of the cultural sphere in the district forms a modern cultural policy that will strengthen the cultural, historical and symbolic potential of the territory and join the developing global industry of exploring diversity". The goal of cultural policy is to capitalize on cultural potential through the inclusion of a region in cultural exchange with other regions - or a "map of cultural regions". The criteria for the formation of cultural exchange are:

- 1) cultures of indigenous small-numbered peoples of the Far North (reindeer husbandry and fishing as an integral part of their culture);
 - 2) Old Believers;
 - 3) polar cities and arctic regions;
- 4) The development of a "living culture" exclusively "for internal use" in modern conditions is unreasonable and practically impossible - paradoxical as it may seem, but such a scenario leads to the actual extinction of the cultural tradition and its transformation into a museum exhibit. The inclusion of the Okrug in cultural exchange is an important tool for stimulating economic cooperation between the Nenets Autonomous Okrug and the regions of the Far North in the tourism industry. At the same time, participation in the industry as an independent element (an element of an interregional tourist and recreational cluster) is more profitable than completing all (extremely expensive) cluster elements on the territory of the region. Design forms are the basis for the implementation of a new cultural policy:
- 1. A unified calendar of events has been formed, consistent with the calendars of the main partners (in order to avoid overlaps and competition), the introduction of an event series with initiatives for the development of the tourism industry.

One of the main elements that create the uniqueness of the tourism industry and form an attractive image of the region as a whole is a variety of national holidays and traditional cultural events (including at the interregional level). In the Nenets

Autonomous Okrug, this direction is represented by the Day of the Deer, the holiday of the Komi song "Vizula yu" ("Fast-flowing river"), the national games "Kanin 'Mabeta", the district folklore competition "Pechoryanochka", cross-country snowmobiles for the Cup of the Hero of the Soviet Union, Hero of Russia Artur Chilingarov "Buran Day", reindeer racing "Syamyanhat Meret".

In recent years, the Nenets Autonomous Okrug has been actively involved in international crossborder and global research, political, educational, ethnographic "calendars of events". Examples of the participation of the Nenets Autonomous Okrug are the international scientific and practical oil and gas conference "EUROARCTIC", the Days of the Nenets Written Language. The development of horizontal network connections between organizations is an essential condition for creating an image of the region and participating in an adequate information field. There is potential to expand the district's participation in the international network of educational organizations, public and scientific organizations specializing in Arctic research (UArctic). The main center for such events was the Nenets Museum of Local Lore and the Nenets Agricultural and Economic College, on the basis of which the scientific and practical conference "Avvakum readings" and the conference "Science. interregional Education. Production".

- 2. Cultural Entrepreneurship Support Program - the indigenous peoples of the North of the Nenets Autonomous Okrug are involved in a number of commercial and non-profit activities related to the realization of cultural potential and the inclusion of the okrug in intensive cultural exchange. The greatest development is received by "cultural entrepreneurship" in the form of the development of arts and crafts and the production of souvenirs (the club of Nenets masters "Tukocya"), creativity (Nenets artists P. Vyucheysky, N. Vyucheyskaya, N. Valeyskaya, writers L. Valei, E. Taibarei, masters A. Ledkov, V. Vylka and others).
- 3. A project for the development of historical ethnographic tourism, using the unique potential of historical sites:
- 1) in the area of the lake. Gorodetskoe (25 30 km from the city of Naryan-Mar) concentrated unique monuments of history and culture "Pustozerskoye settlement (XV XX centuries)", "ancient settlement and sanctuary of the V-XIII centuries. on the river Gnilka "- archaeological monuments, a complex of architectural monuments in the village. Mouth (late XIX early XX century), monuments of ethnology, sanctuary "Sierra Hill" XV-XIX centuries. a few kilometers south of Lake Gorodetskoye and "Heybidya Ten" an idol installed at the site of mass executions of the Nenets of the 17th century;
 - 2) near the mouth of the river. Ortinka (40 km



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south of the city of Naryan-Mar) is a medieval archeological monument "Orty settlement";

3) Vaygach Island is the holy land of the Nenets. Monuments of ethnology are concentrated on the island - the Nenets sanctuaries of the 17th - 20th centuries. ("Mountain of idols", "Hare stone", "Semiliky idol", etc.), archaeological monuments related to the culture of the Donenets population (sikhirta).

Today, tourism activities are carried out in the following areas:

Advertising and informational promotion of the tourist and recreational potential of the Nenets Autonomous Okrug:

- 1) participation of the district in the federal mobile guide "TopTripTip Traveling in Russia" (iOs, Android) was organized;
- 2) work is underway to prepare information in Russian and English (100 objects), a tourist mobile application for the district has been launched;
- 3) organized the publication of information about the tourist potential of the district on the National Tourist Portal of the Russian Federationwww.russia.travel (currently published information on 42 objects);
- 4) organized interaction with the national tourist offices of the Russian Federation abroad; information about recreation opportunities in the district was sent to offices in Germany, Austria, China, UAE, Finland;
- 5) preparation and publication of press releases on tourism topics was organized, 28 releases were published (for the period from March to August); distribution of press releases to federal specialized media was organized, citation index of key news in the field of tourism in the NAO 5;
- 6) monitoring of tourist opportunities for the development of domestic and inbound tourism in the territories of municipalities (Nes, Amderma, Indiga, Vaygach Island, Haruta, Ustye, Kotkino) was carried out.
- 7) registration of district projects in the field of event tourism for the regional stage of the National Russian Event Awards in the Northwestern Federal District was organized; a total of 5 projects were registered, all 5 projects reached the final of the regional stage of the award;
- 8) organized a presentation of regional tourism products at the largest international tourism exhibitions in Moscow ("Hunting and Fishing in Russia", "Intourmarket", "MITT"); the entire stand of the Nenets Autonomous Okrug was visited by more than 2,000 people, a base of business contacts was formed (more than 60 Russian and foreign tour operators);
- 9) speeches and presentations were organized at interregional conferences on the development of Arctic tourism:

10) prepared 3 presentations of the district's

tourist and recreational potential of various orientations ("Accessible Arctic", the development of youth tourism in the NAO, the tourist and recreational potential of the NAO);

11)holding the All-Russian tourist and local history project "Friendship Forum: Nenets Autonomous Okrug: Gateway to the Arctic" with the participation of representatives of federal authorities and the media.

Promoting the development of tourism infrastructure and attracting investment in the tourism sector:

a project has been developed to create a tourist cluster in the Okrug, the basis for the creation of which will be the creation of tourist bases with the working name "NAOArktika".

Assistance in improving the quality of tourist services and expanding the range of tourist regional products:

there is a training program on tourism skills "School of Security" in the framework of the "School of Arctic Tourism", aimed at the development of youth tourism and youth tourism: on the basis of the Center for Arctic Tourism;

a modular tour package designed for an individual tourist.

As part of scientific support for state regulation of tourism development in the Nenets Autonomous Okrug, improving the regulatory framework in the field of tourism:

- the Council for the Development of Tourism in the Nenets Autonomous Okrug was created and is operating;
- a technical assignment was developed for the provision of services for the implementation of research work "Concept for the integrated development of tourism in the Nenets Autonomous Okrug until 2025", a package of documents for organizing public procurement was prepared;

Interregional cooperation in the field of tourism: the inclusion of tourist routes in the Nenets Autonomous Okrug in the global interregional project of the Northwestern Federal District "Silver Necklace" was ensured.

- 5. An important element of cultural policy is the optimization of the network of cultural institutions, namely:
- creation of a centralized library network on the basis of the A.I. Pichkova. Target:
- 1) the formation of a consolidated electronic library and information resource, the organization of unified access to it;
- 2) popularization of unique information about the history, geography, socio-economic development of the Arctic Circle and the cultural heritage of the indigenous peoples of the North;
- 3) creation of a branch of the Presidential Library. B.N. Yeltsin.



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High-quality and effective public administration at the regional and municipal level today determines not only the attitude of investors to the territory, but also the opportunity to receive the necessary support (organizational and financial) from the federal center, and for the regions of the Far North, which will have to simultaneously solve

- 1) tasks to improve the quality of life of the population in accordance with the changing state of affairs in the Russian Federation and;
- 2) the problem of comprehensive redesign and renewal of the entire system for the provision of budgetary services (transition to remote mechanisms for the provision of budgetary services and reforming the budgetary network itself), this is also a question of the sufficiency of the available resource base (mainly the revenue side of the budget and management resources).

The situation with the redistribution of powers between the regional executive bodies of the Arkhangelsk Region and the Nenets Autonomous Okrug, as well as the unfinished administrative reform, determine the relevance of the following directions of development of the public administration system:

Completion of the administrative reform in the Nenets Autonomous Okrug presupposes:

- 1. Improvement of the organizational chart of regional executive authorities and the system of public administration as a whole improving the structure of regional executive authorities can be limited by optimization, which consists of;
- 1) in bringing the number of personnel of departments and state inspections into line with their functional load and tasks to be solved;
- 2) in restoring a rigid relationship between the amount of financial resources, powers and the list of tasks to be solved within each unit of regional executive bodies;
- 3) in the implementation of the transfer of security functions to subordinate institutions.
- 2. Improving the quality and intensity of interaction between regional executive authorities and local self-government bodies in order to effectively fulfill the powers of the Nenets Autonomous Okrug, achieve the goals and objectives of the socioeconomic development of the region.
- 3. Increasing the efficiency of performance of service functions of regional and municipal authorities by strengthening the institutional and organizational base:
- 1) improvement of the register of state (municipal) and budgetary services (grouping by industries, programs and types of activities according to the classification of public (budget) services, their assignment to individual responsible bodies and their actual transformation into "result units");
 - 2) development of a system of standards

and administrative regulations (including electronic) for the provision of state (municipal) services. The standards are binding rules that establish, in the interests of the recipient of the public service, the requirements for the provision of public services, including the characteristics of the process, form, content and result of the provision of this public service and the performance of the public function. Consolidation of quality standards for the provision of public services serves the purpose of guaranteeing that a citizen receives services of a given quality in the minimum necessary period for this, in conditions of comfort and accessibility General requirements for public services, types of public services, the content of quality standards, the procedure for compensation to citizens and organizations in the event of the provision of services of inadequate quality, the procedure for the development and adoption of quality standards for public services, the principles of their financing should be enshrined in regional legislation. Administrative regulations for the execution of public functions and administrative regulations for the provision of public services determine the timing and sequence of actions (administrative procedures) of the executive body, the procedure for interaction between its structural divisions and officials, as well as its interaction with other executive bodies and organizations in the performance of public functions, or provision of public services to regional executive authorities; the principles of their financing should be enshrined in regional legislation. Administrative regulations for the execution of public functions and administrative regulations for the provision of public services determine the timing and sequence of actions (administrative procedures) of the executive body, the procedure for interaction between its structural divisions and officials, as well as its interaction with other executive bodies and organizations in the performance of public functions, or provision of public services to regional executive authorities; the principles of their financing should be enshrined in regional legislation. Administrative regulations for the execution of public functions and administrative regulations for the provision of public services determine the timing and sequence of actions (administrative procedures) of the executive body, the procedure for interaction between its structural divisions and officials, as well as its interaction with other executive bodies and organizations in the performance of public functions, or provision of public services to regional executive authorities;

3) formation of a widely available electronic interface for interaction of citizens with regional executive authorities and local self-government bodies on the availability, quality and range of provided state (municipal) services - preparation of the infrastructure of the electronic government of the Nenets Autonomous Okrug;



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- 4) constant monitoring and calculation of the rating of public (municipal) services in terms of quality and accessibility to their recipients, as well as the introduction of the practice of regular sociological surveys, benchmarking (structured comparative analysis of the services provided and processes related to their provision with the best analogs in the world, country or region in terms of recruitment formalized evaluation criteria;
- 5) to develop the regulatory and methodological base and practice of transferring to remote execution of a number of administrative and managerial processes, primarily related to direct interaction with consumers of state (municipal) services.

Not only the timeliness of the fulfillment of budget obligations, but also the quality of their fulfillment depends on the efficiency of budget management in the district. To improve the efficiency of budgetary management in the Nenets Autonomous Okrug, it is necessary to carry out:

- 1. Transition to effective management the system of state and municipal government is based on a program-project approach, which assumes the presence of a system of links between the activities of regional executive authorities and local governments and quantitative indicators that allow assessing its results. Therefore, it is necessary:
- 1) fix the priority goals and objectives for the district administration within the framework of the medium-term program of socio-economic development, which, in turn, is linked to the budget planning system;
- 2) to implement end-to-end implementation of management accounting mechanisms for the expenditure of budgetary funds by regional executive authorities and local governments, which allow obtaining reliable information on costs and conducting regular external audits;
- 3) create a regular rating of the effectiveness of budget programs with the involvement of third-party experts. Modernize the internal audit mechanism (check not only the justification of expenditures and targeted use of budget funds, but also the economy, productivity and effectiveness) of the activities of regional executive authorities and local self-government bodies, conducted by the Accounts Chamber of the Arkhangelsk Region.
- 2. Implementation of a Results Based Budget (RBB). This will require a revision of the fundamental foundations of regional finance management (its goals, objectives and mechanisms) and the formation of a full-fledged target program budget:
- 1) introduce modern budgeting technologies in regional municipal executive authorities. Expand the independence of the main

administrators of budgetary funds in determining the directions of spending money (including the ability to move budgetary savings) and fix the results of their activities.

- 2) to maximize the share of the program part of the budget and to impose strict requirements on it regarding the mechanisms of mutual coordination of activities, their costs and goals and objectives;
- 3) create permanent financial reserves to cover temporary cash gaps;
- 4) the final transition to medium-term budget planning, where medium-term limits (for 3 years) are protected and approved for all main administrators of budgetary funds (GRBS). These limits are adjusted to a minimum from year to year;
- 5) modernization of the accounting system (accounting for the classification of services) in the public sector and changing the forms of state reporting of executive bodies of state power and control over their activities.

The development of the personnel potential of executive bodies of state power and local self-government bodies can be carried out by improving the system of motivation of civil servants, combating corruption, developing the practice of regular certification and implementation of individual plans for professional growth by employees, as well as an active personnel policy of executive bodies of state power and local self-government bodies. Supposed:

- 1. Formation of a modern system of motivation of civil servants, orienting officials to achieve a specific result (distribution of a certain share of saved budget funds in the form of bonuses to responsible managers, sanctions for unattainable results), development of a standard procedure for the provision of reports by budget planning entities (chief administrators, administrators and recipients of budget funds) on the results and main directions of their activities.
- 2. Development of effective anticorruption mechanisms, including:
- 1) anti-corruption external and internal expertise of draft laws and other regulatory legal acts:
- 2) depersonalization of interaction of civil servants with citizens and organizations through the introduction of a "one window" system, electronic exchange of information;
- 3) detailed regulation of the procedures for interaction with consumers of public services and the division of administrative and managerial procedures at a stage with their implementation by authorities independent of each other (which will allow the introduction of mutual control).
- 3. Professional development of public administration employees, programs for individual professional growth of employees, implementation of



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regular and comprehensive programs for retraining and advanced training of employees of public administration bodies.

- 4. An active personnel policy, including:
- 1) creating conditions for the development of human resources in the civil service and strengthening the human resources of the municipal service;
- 2) development and implementation of modern forms of accounting and evaluation of the activities of employees, contributing to the formation of a highly professional staff on a competitive basis, as well as ensuring the compliance of employees with professional and ethical requirements for their activities;
- 3) creation of effective mechanisms for the promotion and rotation of personnel, ensuring adequate working conditions and remuneration of employees in accordance with the activities performed;

4)improvement of the practice of implementation of training and retraining of district and municipal management personnel.

For the development of modern information and telecommunications infrastructure, the implementation of common tasks and the preparation of technical solutions in the Nenets Autonomous Okrug, it is necessary to provide for:

- an increase in the number of users of broadband access services to telecommunication systems;
- transition to new generation communication networks;
- complete digitalization of the telephone network conversion of information from analog to digital form in the amount of 100%;
- significant reduction in operating costs for the maintenance and operation of networks.

In order to development of mobile radiotelephone networks foreseen

implementation of the following activities:

- construction of networks of broadband wireless access to telecommunication systems;
- construction of high-speed transport networks;
- increasing the coverage of networks of the 2nd and 3rd generation in order to provide broadband access, including to the Internet;
- transition to integrated solutions for mobile radiotelephone and fixed communication networks:
- development of services based on an intelligent network with modern technologies;
 - introduction of new services.

The implementation of the strategic initiative, which ensures an increase in the indicator of

broadband access to information networks and the transition to new generation communication networks, will make it possible to provide broadband access services throughout the territory of the Nenets Autonomous Okrug.

The primary task is to modernize information technologies, social telecommunications, achieve maximum efficiency in the provision and availability of state and municipal services, increase the efficiency of state and municipal management, as well as the level of awareness and mobility of the population through modern technologies.

The main tasks include:

- provision of state and municipal services through multifunctional centers based on access to all information data in a "one window" format and through electronic communication channels;
- implementation of state policy in the field of social protection of the population, ensuring a transparent mechanism for providing citizens with measures of social support and control over the targeted use of allocated funds through the introduction of an integrated information system for the provision and accounting of social services using unified electronic media;
- formation of a unified system of organizational and technical norms, requirements of methodological materials, ensuring the effective development of information and technological infrastructure in compliance with the priorities of modernization of the public administration system;
- development and implementation of electronic administrative regulations into the system of state and local authorities;
- implementation on the territory of the region of the Concept for the formation of electronic government in the Russian Federation on the basis of modern software solutions;
- ensuring large-scale introduction of domestic navigation technologies and services in the transport complex using the glonass system;
- ensuring the introduction of domestic geoinformation systems and software and technological platforms for using the results of space activities in the work of state authorities and local governments, production activities of economic entities;
- standardization, unification and ensuring the compatibility of all solutions within the framework of informatization, as well as improving the legal and methodological framework governing informatization processes;
- ensuring the security of information systems, their protection, safety, integrity and reliability;



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- creation of an information technology infrastructure for archives, libraries and museums, the gradual transition of archival, library and museum funds to electronic form, as well as providing users with access to the electronic funds of these organizations using the Internet.

In order to increase the availability of communication services, increase the number of users of broadband access to telecommunication systems and create new generation communication networks, the following technical solutions are proposed:

- digitalization of the public telephone network by replacing analog automatic telephone exchanges with digital automatic telephone exchanges of new generations with their own architecture;
- development of multi-service infrastructure;
- construction of regional and interregional high-speed transport networks (FOCL);
- organization of terrestrial communication channels for settlements of the Nenets Okrug to reduce dependence on the satellite resource;
- transition to new generation communication networks.

It is planned to implement innovative projects on the territory of the Okrug using Russian communication equipment, which will make it possible to achieve the best economic results for telecom operators through the introduction of new promising services.

The transition to the concept of partnership involves expanding the range of mechanisms used to attract financial resources and the development of a partner network, including:

- 1. Expanding the practice of participation of the district and municipalities in key development projects through direct (using debt financing) and indirect financing through the provision of state (regional and municipal) loan guarantees.
- 2. Expanding participation in key development projects by forming a partner network, contributing to the implementation of the project through organizational efforts to attract partners such as the Development Bank, private business, and expert organizations.
- 3. An effective methodology for managing public debt, calculating the limits of its size in terms of ensuring budget sustainability and shaping a debt financing policy.
- 1. The Nenets Autonomous Okrug is a constituent entity of the Russian Federation. The most important condition for the successful implementation of the Strategy for the socio-economic development of the Nenets Autonomous Okrug is the establishment of long-term partnerships with the Arkhangelsk Region in the form of an agreement on the exercise of powers

and income distribution, taking into account the characteristics of the region in comparison with the Arkhangelsk Region, and the need for a radical restructuring of the system for the provision of budgetary and social services, specific development of the basic transport and telecommunications infrastructure, as well as the full use of opportunities for further development of the oil and gas production sector.

An agreement on the execution by the Administration of the Nenets Autonomous Okrug of the powers of the Arkhangelsk Region on the territory of the okrug and the distribution of income received on the territory of the okrug, or a system of separate agreements on the joint execution of specific powers by the Administrations of the Arkhangelsk Region and the Nenets Autonomous Okrug and the mixed financing of these powers from the regional and regional budgets, must be of a long-term nature, that is, cover a period exceeding the established cycle of appointment of senior officials of regional executive bodies.

- 2. Work on the development of effective interaction with the federal center within the framework of the implementation of the Strategy (primarily its project part) consists in studying and using the possibilities of obtaining support from the government of the Russian Federation (Federal Target Program (FTP) and individual programs within the framework of Priority National Projects). Interaction with the development institutions created in recent years the Investment Fund and the Development Bank is also important here.
- 3. The system of policies and sectoral programs implemented with budget funds. Programs should form the backbone of a medium-term budget planning system. In the context of significant and increasing budgetary revenues from the development of the oil and gas sector in the region (target scenario of the Nenets Autonomous Okrug), the main mechanism is the district state programs and cofinancing by the district budget of municipal programs.
- 4. Using the potential of international and interregional cooperation will make it possible to more effectively solve the tasks of this Strategy due to the access opening up within the framework of interaction to advanced technologies and best world practices for solving the problems of socio-economic development of territories, as well as opportunities for entering foreign markets and attracting investments.

The Nenets Autonomous Okrug cooperates with partners in the Barents Euro / Arctic Region (hereinafter - BEAR). Enhancing participation in the Barents cooperation through representation in the working groups of the Barents Regional Council and joint working groups of BEAC and BRS, participation of the region in the implementation of the Kolarctic



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	$\mathbf{JIF} = 1.50$	$0 \qquad \mathbf{SJIF} \; (\mathbf{Morocco}) = 7.184$	OAJI (USA)	= 0.350

Cross-Border Cooperation Program between Russia and the European Union, as well as using the possibilities of other instruments operating in northern Europe aimed at development of cooperation between northern regions (Northern Dimension Partnership, Norwegian Barents Secretariat, etc.), will expand the network of potential partners of the Nenets Autonomous Okrug and will contribute to the promotion of priority projects and initiatives for the region in various areas of development.

The active development of the interregional format of interaction within the framework of the Shanghai Cooperation Organization opens up prospects for the regions to intensify mutually beneficial international relations and expand the partner base in the SCO member states. Participation in the work of intergovernmental commissions on cooperation with the SCO member states, using the opportunities created within the organization of governing and advisory bodies, such as the SCO Business Council and the SCO Interbank Consortium, can become tools for establishing ties and promoting the cultural, tourist, and investment potential of the

Nenets Autonomous Okrug., participation in the activities of the Council for Regional Cooperation ("the Governors' Club") planned to be established, assistance to foreign missions and trade missions of the Russian Federation,

In the field of interregional cooperation, the priority for the Nenets Autonomous Okrug is interaction with the constituent entities of the Russian Federation adjacent to the territory of the NAO, as well as with regions fully or partially included in the land territories of the Arctic zone of the Russian Federation, on the basis of existing cooperation agreements, in particular, agreements with the Republic of Komi, the Yamalo-Nenets Autonomous Okrug, the Republic of Karelia, as well as agreements between the "Arctic" subjects of the Russian Federation.

The tasks and directions of social and economic development of the Nenets Autonomous Okrug established by this Strategy determine the following priority directions for the development of international and interregional cooperation and promising types of joint activities.

Table 1. Priority directions for the development of international and interregional cooperation and promising types of joint activities.

Direction of interaction	Promising types of joint activities
Support for traditional types of farming and the agro-industrial complex	Organization of production of products with a high degree of processing and its promotion to foreign markets, including deep processing of "by-products" of reindeer husbandry (scrap horns, tails, hooves antlers, blood, etc.), the development of technologies of deep
	processing of aquatic biological resources, processing of reindeer skins.
	Development of the resource potential of fisheries by organizing the breeding and cultivation of aquatic organisms in natural and artificial reservoirs, implementation of projects for the development and application of marine biotechnology.
	Introduction of modern technologies in the field of dairy farming, construction of small-scale farms for milk processing and production of dairy products.
	Introduction of innovative technologies for year-round cultivation of vegetable products and other agricultural crops in a closed soil.
Energy optimization, modernization and development	Introduction and expansion of the use of renewable energy sources to ensure energy independence and energy security of settlements, as well as reduction of budgetary costs for the "northern delivery".
	Development and implementation of projects in the field of energy saving and energy efficiency, modernization of housing and communal services on the basis of modern energy saving technologies.



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Sector modernization and efficiency improvement budget services	The introduction of innovative methods of diagnosis, prevention and treatment of diseases using remote technologies, including mobile technologies, the introduction of new organizational forms of medical care and the creation of a system of continuous education and improvement qualifications of medical personnel to ensure the availability and improve the quality of medical care, including emergency, to the population of remote areas.
	Development of types of medical services aimed at strengthening the health of the population, preventing the occurrence of diseases caused by lifestyle or the influence of environmental factors, formation and implementation of healthy lifestyle programs.
	Development and implementation of educational programs for training, retraining and improvement qualifications of specialists in working specialities, taking into account the needs of the NAO (for example, in specialists in the field of production and processing of hydrocarbons, information and communication technologies, etc.)
Development of tourist and recreational potential	Formation and promotion on the basis interregional cooperation of complex tours through combinations of objects of tourist display, as well as acquaintance with the historical,
	cultural, architectural, natural the diversity of several regions.
	Development of environmentally friendly types of tourism in the Arctic, including in places of traditional residence and traditional economic activities of the indigenous small-numbered peoples of the North, the promotion of Arctic tourism on the national and international markets.
	Development of expeditionary activities, scientific and educational tourism, implementation of complex research and scientific projects in the Arctic.
Ensuring an open and intensive cultural and human exchange	Implementation of joint initiatives aimed at active participation in the process of world cultural integration, including using modern information and telecommunication technologies.
	Ensuring the ethnocultural development of indigenous small peoples of the North.
Preservation and protection of the natural environment	Implementation of measures aimed at preserving the biological diversity of the Arctic flora and fauna in the context of expanding economic activity and global climate change, including monitoring the state of ecosystems and flora objects, minimizing negative anthropogenic impact on the environment, the introduction of mechanisms that stimulate the rational use of mineral and raw materials biological resources, as well as energy and resource conservation.
	Development of effective systems for handling production and consumption waste, recycling and processing of solid household waste, water management, including the rational use and protection of water resources, water treatment, municipal and industrial water supply, wastewater treatment and other issues water sector.



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Tab. 2. Variants of regional state programs in accordance with the main directions and projects of socioeconomic development

	ctions and projects of social and economic oment of the Nenets Autonomous Okrug	Possible regional government programs
X.10.1.	The main directions of development of the oil and gas complex as a basic sector of the economy	"Development of the mineral resource base of the Nenets Autonomous Okrug"
X.10.2.	Diversification of the economy Nenets Autonomous Okrug. Formation of new sectors	
X.10.2.1.	Reorganization and development of traditional types of business	"Development of agriculture and regulation of markets for agricultural products, raw materials and food in the Nenets Autonomous district " (creation modern infrastructure for the production of high quality reindeer products; rational use of reindeer pastures; use of the resource potential of coastal and lake-river fishery; construction of modular points for the acceptance, cleaning and storage of wild plants in the municipalities of the district; development vegetable growing for year-round supply of greenhouses to the residents of the district, growth in the number of economic entities representing small forms of business; formation of personnel Potential agro-industrialcomplex) State program of the Nenets Autonomous Okrug "Preservation and development of the indigenous small-numbered peoples of the North in the Nenets Autonomous Okrug" (creation of a network of trading posts, state support of trading posts)
X.10.2.2.	Tourism and recreational potential of the territory	"Development of tourism in the Nenets Autonomous district" (reorientation huntingactivities towards hunting tourism, the development of fishing tourism, ecological, ethnocultural and extreme tourism)
X.10.2.3.	"Urban Economy" in Naryan-Mar	Co-financing municipal programs for the modernization and development of the road network of the Nenets Autonomous Okrug (road construction Naryan-Mar - Usinsk and Nes - Mezen) "Creation of a unified communication and data transmission network in the Nenets Autonomous Okrug" (formation modern telecommunications
X.10.2.4.	Production development opportunities solid minerals	infrastructure) "Development mineral and raw base Nenets Autonomous Okrug"
X.10.3.	Facilitating guided system transformation resettlement and development of the local	"Promoting employment population Nenets Autonomous Okrug "



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		housing "
		Program "Dwelling " (housing building)
		Co-financing complexprograms socio-economic development of municipalities
		"Subsidizing the interest rate on mortgage loans for the purchase of housing in the Nenets Autonomous Okrug" (increasing the mobility of the population and improving the quality of life)
		"Assisting the voluntary resettlement of compatriots living abroad in the Nenets Autonomous Okrug for 2016-2020"
		The comprehensive program "Development of small and municipal energy in the Nenets Autonomous Okrug" (the use of associated petroleum gas, study of the territory of the Nenets Autonomous Okrug for the feasibility of using alternative energy sources
X.10.4.	Optimization, modernization and development of the energy sector of the Nenets Autonomous Okrug	Co-financing of the CSP of the Arkhangelsk region "Gasification of the Arkhangelsk region" in the part concerning Zapolyarny District (construction of branches and gas distribution networks) Comprehensive program "Development of energy using renewable energy sources in the Nenets Autonomous Okrug" (pilot projects and design of a generation system based on renewable sources - wind, hydropower, bioresources)
X.10.5.	Transport infrastructure Nenets Autonomous Okrug	
X.10.5.3.	Provide connection Naryan Mara with the rest of Russia paved roads	Co-financing of municipal programs for the modernization and development of the road network of the Nenets Autonomous Okrug (road construction Naryan-Mar - Usinsk and Nes - Mezen)
X.10.6.	Sector modernization and efficiency improvement budget services	The comprehensive program "Optimization and development of the social infrastructure of the Nenets Autonomous Okrug" (strengthening the backbone function of Naryan-Mar to provide comprehensive services to the population, improving the quality and efficiency of services in rural areas)
		"Creation of a unified communication and data transmission network in the Nenets Autonomous Okrug" (formation modern telecommunications infrastructure)
X.10.7.	Inclusion in the global information field and development culture as the foundation of society	"Development culture and tourism in Nenets Autonomous Okrug "
X.10.8.	Development of the public administration system Nenets Autonomous Okrug	



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	Completion of the administrative reform.	
	Optimization of the structure of fishing	
	collective farms, the system of interaction	"Administrative reform in the Nenets Autonomous
	with local government bodies, correlation	Okrug" (improvement of the organizational chart of
	of goals and objectives with the powers of	fishing collective farms,
X.10.8.1.	government bodies and their subdivisions.	improving the performance of service functions,
	Development of service functions of fishing	improving the quality and intensity of interaction
	collective farms and bodies	between fishing collective farms and local
	local government	governments)
	Development of human resources for	"Administrative reform in the Nenets Autonomous
X.10.8.3.	fishing collective farms and	Okrug"
	local government	
	Electronic document management and	"Electronic Nenets Autonomous
X.10.8.4.	conference system in teleconference mode	district "
		"Creation of a unified communication and
		transmission network
		data in the Nenets Autonomous Okrug "

4. Regional marketing includes the image of the region and the promotion of large projects and unique features of the Nenets Autonomous Okrug. There are several options for working with investors - in the ad hoc mode, the Corporation or the Development Agency of the Nenets Autonomous Okrug, a separate department within the administration:

Tab. 3. Variants of institutions for managing the investment potential of the territory

	Ad hoc work with	Development	Development Agency	Strategic Projects
	potential investors	Corporation of the	of the Nenets	Department
		Nenets Autonomous	Autonomous Okrug	administration of the
		Okrug		Nenets Autonomous
				Okrug
Institutional	Within the framework of	Specially	Special	Special
cash and	specially	created by	organizational	structural
administrative	established	company,	unit out	subdivision
peculiarities	working groups in	representing	structures	administration
	the framework	Administration	administration	Nenetsky
	administration	Nenetsky		autonomous
	Nenetsky	autonomous		constituencies
	autonomous	constituencies within		
	districts in relation to	1 1		
	a specific project	partnership projects and		
		when attracting strategicinvestors		
Main functions	Working with	Complex work with	Investor recruiting	Recruiting and
	individual	investmentprojects and	and territory	support of strategic
	specificprojects	performanceinterests of	0.	investment projects
		the Nenets Autonomous	a "one window"	
		Okrug	regime for potential	
		(including co- investment)	investors	
Property powers	Absent	Can enter into property relationship	Limited	Absent

In addition, to create a public-private partnership mechanism, there is an opportunity to use the

sequence of steps used by Vnesheconombank. We are talking about the formation of the regional center of



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public-private partnership, consisting of:

- 1) the Council for Public-Private Partnership (PPP) under the Governor of the Nenets Autonomous Okrug (a collegial body with the participation of employees of the PPP Center of Vnesheconombank State Corporation. The Council may include representatives of other government bodies, business structures, public associations, scientists, etc.);
- 2) PPP management in the structure of the executive power of the region, endowed with the authority to organize PPP projects.
- 5. Special mechanisms to support new sectors of the economy and renewing traditional types of business at the level of the Nenets Autonomous Okrug, including: tax holidays for property and land tax; subsidizing the interest rate on loans for development; provision of guarantees; support of strategic investment projects and "one window" regime for investors.
- 6. The mechanism of direct budgetary investments in objects. In accordance with the budget code, regional funds can be used to co-finance infrastructural and social facilities that receive support from the federal budget, to develop engineering infrastructures (for example, intermunicipal roads) and social facilities, or through municipal development funds can be used as co-financing for infrastructure projects of municipalities.
- 7. Strategic agreements with large corporations, the subject of which depends on the capabilities, readiness and specialization of the partner company. Agreements with mining companies may cover not only planning and coordination of production and processing development projects, but also cofinancing of infrastructure development projects for settlements and grants for the development of culture

and social sphere.

The target scenario is associated with a gradual increase in oil and gas production to the level of 20-22 million tons of oil equivalent by 2035 and stabilization and gradual reduction in production in the future. Other sectors of the economy such as

- 1) the food industry, which is developing thanks to the renewal of traditional types of farming;
- 2) transport, the development of which is associated with the transit potential of the Barentskomur highway and the port in Indiga, as well as with passenger and freight traffic within the framework of projects for the development of the Arctic;
 - 3) tourism;
- 4) mining of solid minerals will ensure the diversification of the economy of the Nenets Autonomous Okrug and the stability of local labor markets.

As a result, the GRP of the Nenets Autonomous Okrug will significantly increase - from 183.7 billion rubles. in 2014 to 341.1 billion in 2035, that is, 1.8 times.

The average monthly nominal accrued wages of one employee of the organizations of the Nenets Autonomous Okrug in constant prices in 2014 will increase from 65.8 thousand rubles. up to 134.5 thousand rubles, that is, 2.0 times. The population of the Okrug will gradually increase both due to a powerful migration inflow associated with the implementation of economic projects, and due to a significant and stable natural increase, which reflects the overall favorable situation with the perceived quality of life. By 2035, the population of the Nenets Autonomous Okrug may grow to 48.0 thousand inhabitants.

Table 4. Targets and indicators for the implementation of the Strategy

Targets and indicators	2014	2015	2016	2020	2030
	report	report	grade	fo	recast
Average annual population, thousand people	43.2	43.6	44.0	45.4	48.1
Life expectancy at birth, years	70.7	71.0	71.2	71.7	72.9
Average annual number of employed in the economy, thousand people	33.3	33.4	33.3	33.6	34.1
Unemployment rate (according to the ILO methodology), as a percentage of the economically active population	5.3	7.9	7,7	7,7	6.9
Gross regional product, billion rubles	183.7	197.8	206.9	246.8	341.1
Gross regional product by type of economic activity "Extraction of minerals", billion rubles.	139.6	152.7	155.9	166.7	233.4
The total area of residential premises per inhabitant on average (at the end of the year), sq.	23.0	23.5	24.1	25.2	26.0
Investment in the main	79.0	113.2	119.9	142.2	187.4



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Capital from all sources of financing, billion rubles					
Investment volume as a percentage of GRP	43.0	57.2	58.0	57.6	54.9
Number of small and medium-sized businesses, thousand units	1.0	1.0	1.0	1.0	1.0
The share of turnover of small and medium-sized businesses in the total GRP, percent	6.2	6.0	6.1	6.1	5.6
Average monthly nominal accrued wages of one employee of organizations, rubles	65816	70,984	75172	93,549	134,495
Share of population with incomes below the subsistence level, %	9.0	9.8	10.0	7.3	5.7
Natural increase (decrease) of the population per 1000 population, people	7,7	8.3	8.2	5.5	4.8

Tab.5. Target indicators for the implementation of the Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security for the period up to 2035

N/a	Index	Base value	Target value		
2024 year	2030 year	2035 year	2024year	2030year	2035year
1.	Life expectancy at birth in the Arctic zone (years)	72.39 (2018)	78	80	82
2.	Migration growth rate of the population of the Arctic zone	-5.1 (2018)	-2.5	0	2
3.	Unemployment rate in the Arctic zone, calculated in accordance with the methodology of the International Labor Organization (in percent)	4.6 (2019)	4.6	4.5	4.4
4.	Number of jobs at new enterprises located in the Arctic zone (thousand)	-	13	110	200
5.	Average salary of employees of organizations operating in the Arctic zone (thousand rubles)	83.5 (2019)	111.7	158.5	212.1
6.	Share of households with broadband access to the Internet information and telecommunications network in the total number of households in the Arctic zone (percentage)	81.3 (2019)	90	100	100
7.	The share of the gross regional product produced in the Arctic zone in the total gross regional product of the constituent entities of the Russian Federation (percentage)	6.2 (2018)	7.2	8.4	9.6
8.	The share of the added value of high-tech and knowledge-intensive sectors of the economy in the gross regional product produced in the Arctic zone (percentage)	6.1 (2018)	7.9	9,7	11.2
9.	Share of investments in fixed assets carried out in the territory of the Arctic zone in total investments in fixed assets in the Russian Federation (in percentages)	9.3 (2019)	11	12	14



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10.	The share of internal costs for research and development, as well as the costs of organizations for technological innovations carried out in the Arctic zone, in the total internal costs of research and development, as well as costs of organizations for technological innovation in the Russian Federation (in percent)	1	2.5	3.5	4.5
11.	Share of investments in fixed assets carried out in order to protect and rational use of natural resources in total investments in fixed assets carried out in the Arctic zone (in percent)	2.6 (2019)	4.5	6	10
12.	The share of crude oil (including gas condensate) and combustible natural gas produced in the Arctic zone in the total volume of crude oil (including gas condensate) and combustible natural gas produced in the Russian Federation (in percent):				
	crude oil (including gas condensate)	17.3 (2018)	20	23	26
	combustible natural gas	82.7 (2018)	82	81	79
13.	LNG production in the Arctic zone (million tons)	8.6 (2018)	43	64	91
14.	The volume of cargo transportation in the water area of the Northern Sea Route (million			90	130
	tons) * including transit traffic				

Conclusion

In accordance with the Fundamentals of State Policy of the Russian Federation in the Arctic for the period up to 2035, the main tasks in the field of social development of the Arctic zone of the Russian Federation are:

- a) ensuring the availability of primary health care, high-quality preschool, primary general and basic general education, secondary vocational and higher education, services in the field of culture, physical culture and sports in settlements located in remote areas, including in places of traditional residence and traditional economic activities of small peoples;
- b) providing citizens with affordable, modern and high-quality housing, improving the quality of housing and communal services, improving the living conditions of people leading a nomadic and seminomadic lifestyle, belonging to small peoples;
- c) the accelerated development of the social infrastructure of settlements where bodies and organizations are located that perform functions in the field of ensuring national security and (or) the functions of a base for the development of mineral

resource centers, the implementation of economic and (or) infrastructure projects in the Arctic;

- d) creation of a system of state support for the delivery of fuel, food and other vital goods to settlements located in remote areas in order to ensure affordable prices for such goods for citizens and business entities;
- e) provision of year-round main, interregional and local (regional) air transportation at affordable prices;
- f) ensuring that the state fulfills its obligations to provide housing subsidies to citizens leaving the regions of the Far North and equivalent areas;
- g) promotion of a healthy lifestyle, including the introduction of corporate health promotion programs in the workplace. The level of development of social infrastructure significantly affects the potential of any territory and the prospects for its socio-economic development. In the regions of the North and the Arctic of the Russian Federation, "a highly developed social infrastructure is designed to be one of the forms of compensation for work and living in extremely uncomfortable conditions." However, "the current development practice is predominantly of a sectoral nature, when priority is given to individual investment



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projects, and does not ensure the implementation of an integrated approach that involves the development of not only production, but also the social sphere in combination with solving demographic and environmental problems." The "Fundamentals" gives a principled assessment of the processes, occurring in the Arctic territories, including in the social sphere. This is, first of all, a decrease in the population of the Arctic zone of the Russian Federation, a low level of development of social, transport, information and communication infrastructure of the land territories of the Russian Arctic, including in places of traditional residence of small peoples.

The transition to a market economy, the closure of thousands of enterprises, a reduction in military infrastructure, an increase in unemployment, a sharp reduction in funding for Arctic projects, low wages excluding regional payments adversely affected the quality of life of the population, led to a reduction in its life expectancy, which together led to an increase in the outflow of the population from most of the Arctic territories, which led them to desolation. For 1990–2020 the social infrastructure of the North and the Arctic of Russia has undergone a number of

serious changes. In the 1990s. government spending on its development was reduced and actually came down to the payment of wages. In the 2000s. funding has increased, but still a significant part of the regional and federal budget funds is directed to the development of social infrastructure facilities, located in administrative centers, although small settlements need it most urgently. The problem of the availability of quality services is currently exacerbated by the ongoing modernization (optimization) of social infrastructure, within which small institutions are merged (some of them are liquidated).

The implementation of the Strategy is designed to respond to the main demographic challenge of the republic's long-term development. In conditions of sufficiently high mobility of the population, people choose for life those regions where they can realize their potential. The answer to this should be an appeal to the needs and capabilities of every resident of the NAO and positioning the state as an assistant, the role of civil society in governance should be radically changed, and mechanisms for effective feedback from residents should be established. Therefore, people are at the center of the Strategy.

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