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Long-term Dynamics of Economic Development of the Russian Arctic *

© Natalya A. SEROVA, Ph.D. of Economic Sciences, Senior Researcher

E-mail: serova@iep.kolasc.net.ru

Luzin Institute for Economic Studies — Subdivision of the Federal Research Centre "Kola Science Centre of the Russian Academy of Sciences" (IES KSC RAS), Apatity, Russia

Abstract. About a quarter of the world's natural gas and oil reserves are concentrated in the Arctic, which has led to increased interest of the world powers in this region in recent years. The Russian Federation has the greatest resource potential in this macro-region. This article examines the transformation of economic processes in the Russian Arctic. The relevance of the study is determined by the fact that in order to achieve the main goals and implement the tasks of the modern state Arctic policy of Russia, it is necessary to have a clear understanding of the features and patterns of economic processes taking place in this region. The author has analyzed the indicators characterizing some aspects of the economic development of the territories of the Russian Arctic in 1950–2018. According to the results of the analysis, three fundamentally different periods of the development of this region were identified: 1950–1990 — an intensive stage of economic development of the Arctic territories; 1990–1999 — the stage of market relations formation; from 2000 to the present — the stage of “redevelopment” of the Arctic. The main features of the economic development of the Arctic territories at each stage are shown. Conclusions concerning the tasks of the current stage of development are made. The assumption about the contemporary tendencies and the need to find new effective approaches to the management of the region is put forward.

Keywords: Arctic, region, economic development, investment, industry.

Introduction

The Arctic has been in the focus of attention of the world's leading countries in recent years. The reasons for such interest are obvious: about a quarter of the world's oil and natural gas reserves are concentrated in this macro-region [1, Gautier D.L. et al, p. 1175–1179; 2, Gautier D.L. et al, p. 151–161]. Russia has the greatest resource potential in the Arctic. According to recent assessments [3, Prishchepa O.M., Metkin D.M., Borovikov I.S., p. 14–28; 4, Prishchepa O.M., Nefedov Yu.V., Ayrapetyan M.G., p. 2], the volume of predicted hydrocarbon resources of the Arctic zone of the Russian Federation (AZRF) is estimated at more than 270 billion tons, including about 48.5 billion tons of oil and condensate and over 220 trillion m³ of natural gas. The land area of the Russian Arctic accounts for about 58% of the total volume (156 billion tons of conventional tons), the vast majority — gas-containing objects, the share of water areas — 42%, also predominantly gas resources.

The Arctic also contains significant reserves of other minerals (gold, diamonds, nickel, copper, coal, iron, etc.), biological resources and almost a fifth of the world's fresh water. In addition, the climatic changes taking place in the Arctic [5, Overland J. et al, p. 6–13; 6, Dianskiy N.A., p. 24–33] in the long term can contribute to a fuller realization of its economic potential, expanding the possibilities of exploration and production of minerals on the Arctic shelf, increasing

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the availability of navigation and opening new transport routes in the Arctic Ocean [7, Smith L., Stephenson S., p. 4871–4872; 8, Milaković A. et al, p. 53–60; 9, Zhang Z. et al, p. 960–973].

The strategic importance of the Arctic has actualized the need to develop a fundamentally new state policy of Russia with regard to its Arctic territories. In the late 1990s – early 2000s, attempts to form new Arctic legislation were made, in particular, a draft law “On the Arctic Zone of Russia”, draft of the Fundamentals of State Arctic Policy and the Concept of Sustainable Development of Arctic Territories were prepared. However, the new policy for the development of the Russian Arctic during this period was not clearly substantiated and detailed [10, Lukin Yu.F.], largely due to “lack of political will, proper government funding and disunity of the political elite” [11, Tamizky A. M., p. 1–8].

The state policy in relation to the Arctic territories began to be filled with real positive content with the adoption of the Fundamentals of the State Arctic Policy of Russia in 2008¹. Subsequently, the process of the Arctic legislation formation continued by consolidating the composition of the land territories of the Arctic zone of the Russian Federation (AZRF)², defining the legal status and boundaries of the NSR³, adopting regulations, program and strategic documents that somehow formed the idea of the AZRF as an independent object of state management. [12, Skuf'ina T.P., p. 424–428; 13, Sergunin A., Konyshov V., p. 75–93; 14, Lipina S.A. et al; 15, Korchak E.A., Serova N.A., p. 145–159; 16, Smirnova O.O., Lipina S.A., p. 8–12; 17, Isaev A.P., Fomina I.A., p. 96–105].

In 2020, a new edition of the Fundamentals of State Policy of Russia in the Arctic for the period up to 2035 was adopted⁴, which defined the main goals of the national Arctic policy: improving the quality of life of the population; accelerating the economic development of the territories of the Russian Arctic and increasing their contribution to the economic growth of the country; environmental protection, protection of the traditional habitat and way of life of indigenous peoples; the international cooperation; protection of Russia's national interests in the Arctic, including in the economic sphere. To achieve these goals, it is necessary to have a clear understanding of the features and patterns of economic processes occurring in this region in the long term.

¹ Osnovy gosudarstvennoy politiki Rossiyskoy Federatsii v Arktike na period do 2020 goda i dal'neyshuyu perspektivu (utv. prikazom Prezidenta RF ot 18.09. 2008 g. № 1969) [Fundamentals of the State Policy of the Russian Federation in the Arctic for the Period up to 2020 and Beyond (Approved by Order of the President of the Russian Federation of September 18, 2008, No. 1969)].

² Ukaz Prezidenta RF ot 02.05.2014 g. № 296 «O sukhoputnykh territoriyakh Arkticheskoy zony Rossiyskoy Federatsii» [Decree of the President of the Russian Federation of May 02, 2014, No. 296 "On the Land Territories of the Arctic Zone of the Russian Federation"].

³ Federal'nyy zakon ot 28.07.2012 g. №132 «O vnesenii izmeneniy v otdel'nye zakonodatel'nye akty Rossiyskoy Federatsii v chasti gosudarstvennogo regulirovaniya torgovogo moreplavaniya v akvatorii Severnogo morskogo puti» [Federal Law No. 132 of July 28, 2012 “On Amendments to Certain Legislative Acts of the Russian Federation in Part of State Regulation of Merchant Shipping in the Water Area of the Northern Sea Route”].

⁴ Osnovy gosudarstvennoy politiki Rossiyskoy Federatsii v Arktike na period do 2035 goda (utv. Ukazom Prezidenta RF ot 05.03.2020 № 164) [Fundamentals of the State Policy of the Russian Federation in the Arctic for the Period up to 2035 (Approved by the Decree of the President of the Russian Federation dated March 05, 2020, No. 164)].

The aim of the study was to analyze the main indicators of the economic development of the Russian Arctic in 1950–2018 within the administrative-territorial boundaries of those constituent entities of the Russian Federation, the territories of which, in accordance with Russian legislation, are fully or partially part of the AZRF: Murmansk and Arkhangelsk regions, Nenets, Yamalo-Nenets and Chukotka Autonomous Okrugs, the Republic of Komi, Karelia and Sakha (Yakutia), Krasnoyarsk Krai.

The information base was the materials of the Federal State Statistics Service, characterizing the socio-economic situation of the regions of the Russian Arctic in 1950–2018, as well as data from the “Historical Materials” project⁵. Due to the absence of a number of statistical indicators until 1990, the study included indicators characterizing only industrial production (1950–2018) and investment activity (1970–2018).

Dynamics of the economic development of the Russian Arctic in 1950–2018

The second half of the 20th century was characterized by intensive economic development of the Far North and the Arctic and a significant increase in the scale of economic activity in this macroregion. Thus, owing to the discovery of the world's largest oil and gas province in Western Siberia in the 1950–1960s, the main fuel base of the country was created in the Arctic, which supplied about a third of natural gas and almost half of the oil produced in the USSR by 1980 [18, Timoshenko A.I., p. 73–95]. The most intensive development of the fuel industry was in 1965–1980, when the average annual growth rate was about 8.8% [19, Peshev N.G., p. 6–16]. Of no less importance was the mining and industrial complex, represented by enterprises of the black, non-ferrous and mining and chemical industries, which developed at a rapid pace. For example, in the Murmansk region, the volume of rock mass production for the period 1950–1990 increased 67 times, and extraction of iron ore — 32 times [Ibid]. In general, industrial production in the Arctic increased by more than 30 times between 1950 and 1990 and developed at a much faster pace than the national average (Fig. 1).

⁵ Historical data. URL: <http://istmat.info> (accessed 04 September 2020).

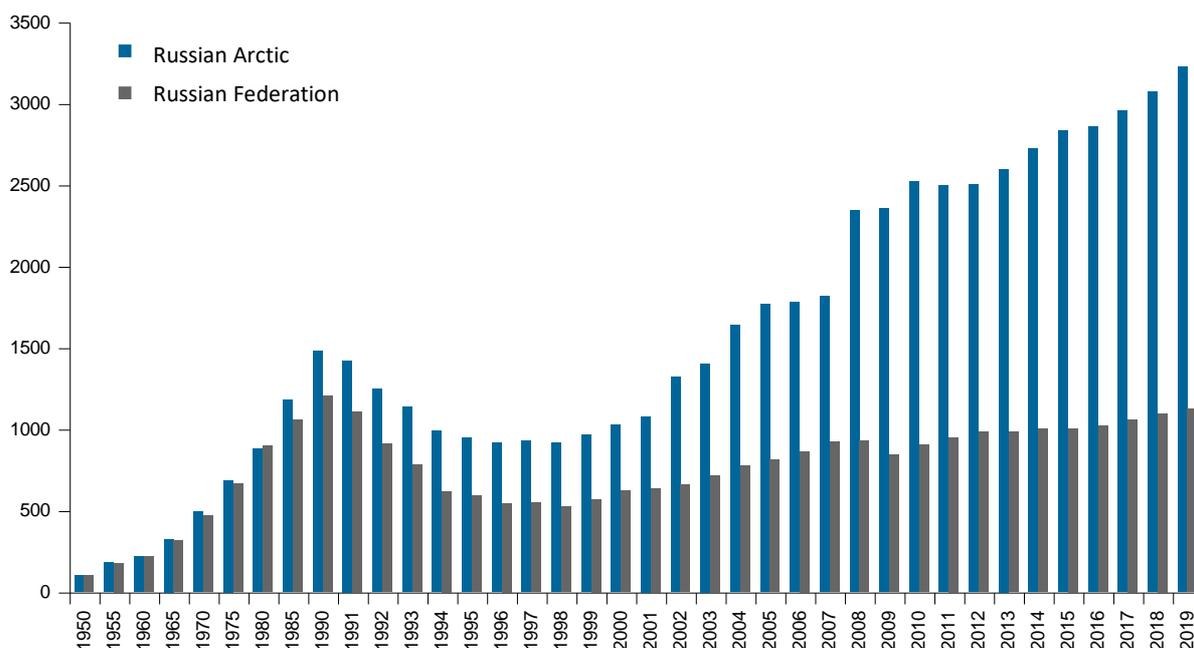


Fig. 1. Dynamics of industrial production in % by 1950, in comparable prices⁶.

Intensive development of the Arctic territories was largely facilitated by the development of navigation along the Northern Sea Route (NSR), since with almost complete absence of land transport infrastructure, this waterway connected the mining industries of the European and Asian parts of the Arctic. Throughout the Soviet period, the volume of cargo transportation along the NSR grew annually, reaching a maximum (6.58 million tons) in 1987. Then, due to a decrease in state investment in the sea fleet, port facilities and technical reconstruction of the main production facilities, transportation along the NSR began to decline, and with the transition to a market model of the economy, navigation on it actually ceased. Only in 2016, the volume of cargo transported along the NSR surpassed the indicators of the 1980s, amounting to 7.3 million tons, and in 2019 it reached 30.1 million tons.

After the collapse of the USSR, the decrease in the scale of economic activity in the Arctic has become colossal. The average annual rate of decline in industrial production in 1990–1999 was -4.6% (and in some regions it exceeded 7%), resulting in a decline of almost a quarter of all industrial production in the AZRF in just a decade. The greatest negative dynamics during this period was demonstrated by the Chukotka Autonomous Okrug, where the volume of industrial production decreased by 2 times. As Kumo K. and Litvinenko T.V. note, the recession in key gold and tin mining industries for the district, which became unprofitable with the advent of market relations, led to the closure of the largest mining and processing plants in Chukotka and the liquidation of most single-industry workers' settlements and urban-type settlements [20, Kumo K., Litvinenko T.V., p. 50–66].

At the same time, the decline in production in the Arctic regions occurred at a much less significant rate than the national average, since, due to their production specialization, they were

⁶ Source: author's calculations.

less affected by the breakdown of economic relations after the change of state system. In addition, most of the Arctic regions have maintained and even strengthened their export orientation. For example, in the Murmansk region, the share of exports of apatite concentrate in the total volume of production increased from 7.9% in 1991 to 37.1% in 1995.

The fall in industrial production in the Russian Arctic was accompanied by a rather sharp reduction in the volume of investment injections, since the state policy was aimed only at reducing costs in this region. The calculations show that the investment decline in the Arctic regions during this period was deeper than the national average (Fig. 2), and it was not compensated by the relatively more favorable situation in the oil and gas regions, for example, in Yamal. In general, during 1990–1999, capital investments in the Russian Arctic decreased fivefold. The largest decline occurred in the Chukotka Autonomous Okrug: in 1999, the volume of investments in the region amounted to only 3.7% of the 1990 level.

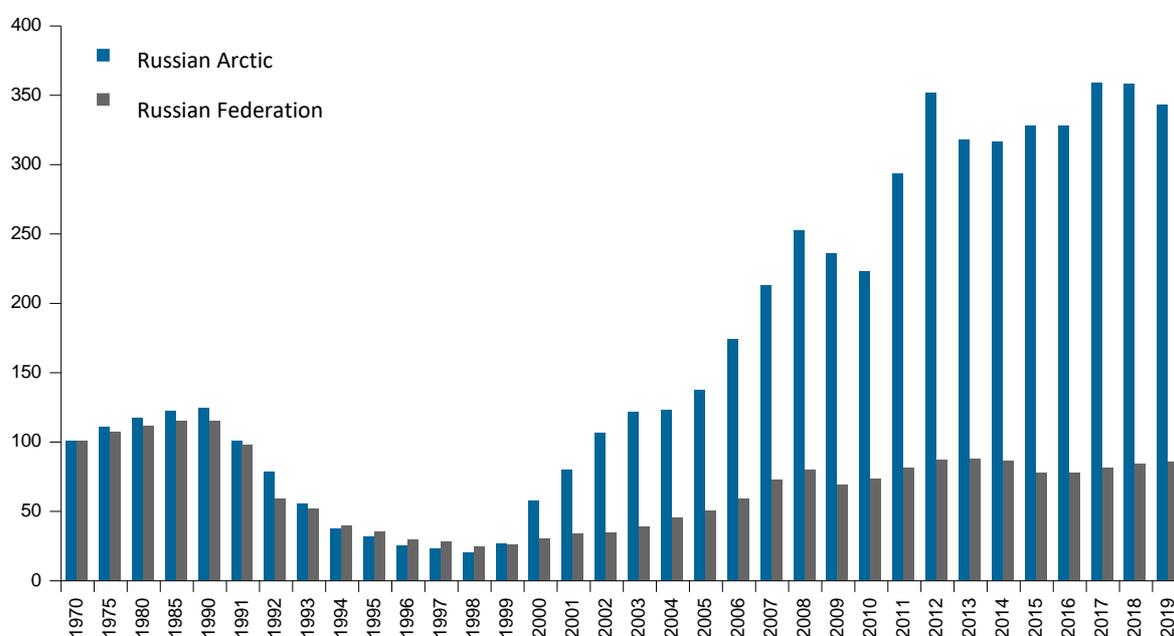


Fig. 2. Dynamics of the investments volume in fixed assets in % by 1970, in comparable prices⁷.

During this difficult transition period, the Arctic transport system, which had always been supported by the state, also began to collapse. With the destruction of the centralized Soviet system, the state management structures of the Far North and the Arctic were abolished, the previously established management of these territories was disrupted, and their material and technical supply was eliminated. As a result, the majority of the Arctic ports became unprofitable, polar stations were reduced, most of the transport ships of the ice categories were taken out of service [21, Ul'chenko M.V., Bashmakova E.P., p. 45–52], many civil aviation airfields were closed (by 1993, only parts of the former united detachments remained from the unified Arctic aviation

⁷ Source: author's calculations.

system, more than 70% of which later ceased to exist) [22, Oleynikov V.A., p. 10–13], a reduction in the rate of renewal of the fleet of mobile vehicles and other equipment in all types of transport took place, as well as a decrease in the volume of repair work of existing infrastructure facilities, and the construction of new ones was suspended.

The lack of government support has led to extremely negative trends in the social sphere: degradation of the social security sphere, the loss of the comparative advantages of the Arctic regions in real incomes of the population, a decrease in living standards, a reduction in employment, etc. [23, Bradshaw M., p. 195–203; 24, Heleniak T., p. 55–205; 25, Fauser V.V. et al, p. 75–89; 26, Volgin N.A. et al, p. 117–133]. All this led to the massive migration of the population from the Arctic regions of the country: in 1990–1999 the population of the Russian Arctic decreased by 9.7% (945 thousand people), and in general over the past thirty years — by 20.8% (more than 2 million people).

The rise in prices on the world raw material market at the beginning of the 21st century (oil, gas, non-ferrous metal ores, diamonds) contributed to the general socio-economic recovery in the country. The economy of the AZRF during this period entered a phase of economic recovery, accompanied by growth in industrial production and increase in investment activity [27, Serova N.A., p. 311–314; 28, Gadzhiev Yu.A. et al, p. 86–100]. Thus, as early as 2000, the volume of investments in the Russian Arctic doubled in comparison with 1999, and the production of industrial products increased by 6.1%. In general, for 2000–2018, investments in the Arctic increased 6.3 times (the average annual growth rate was +10.7% against +5.9% on average in the country), and the volume of industrial production increased 3.1 times (the average annual growth rate was +6.4% versus +3.1% on average in the country). In terms of regional investment activity and industrial growth rates, the leader in 2000–2018 was the Chukotka Autonomous Okrug, where the development of several new gold deposits began (industrial output in the region increased 8 times over the period under review, and investments — 4.2 times). Thanks to large investments in oil and gas production, high rates of industrial production growth were also characteristic of the Nenets Autonomous Okrug (the volume of industry increased 5 times, investment inflows — 6.4 times).

In addition, since the early 2000s, the inflow of investments from abroad also increased significantly (Fig. 3). Despite the negative influence of external factors of this period, the inflow of foreign investment showed an unstable, but growth, and the share of the AZRF in the total Russian volume of foreign investment increased almost three times (from 4.4% in 2000 to 12.2% in 2018).

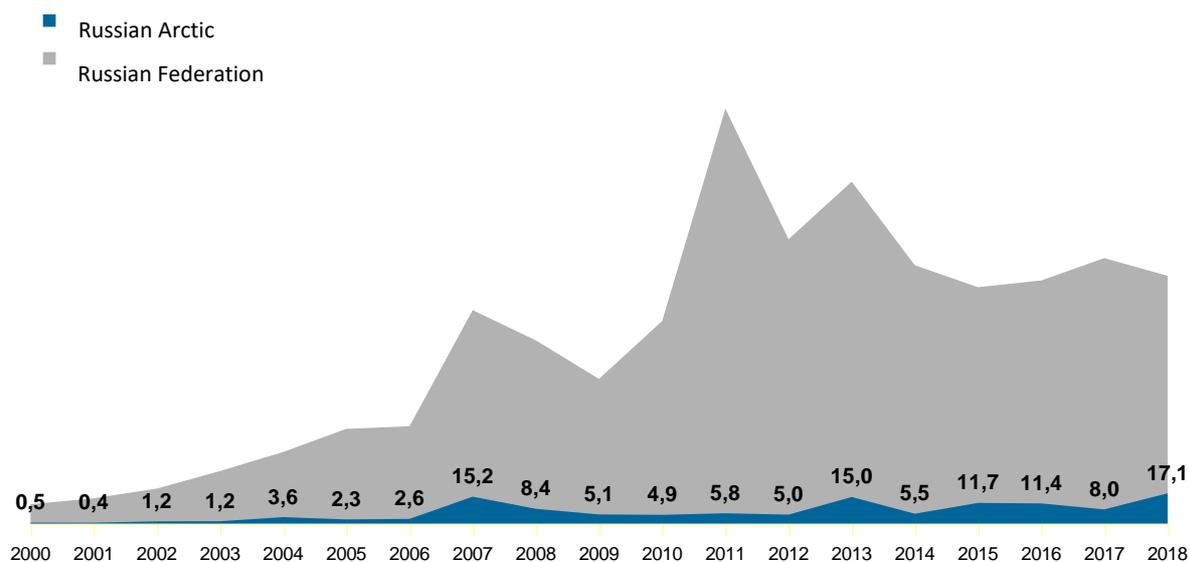


Fig. 3. Volume of foreign investments, USD billion ⁸.

To date, the upward trend in capital investment in the Arctic continues. So, in the first half of 2020, the increase in the volume of investments in the Russian Arctic against the same period in 2019 amounted to +1.6%, while the average investment decline was observed in the country (–4%). The Chukotka Autonomous Okrug showed the greatest investment activity (investment growth was +23.7%), and industrial production also grew (+1.4%) during the indicated period. However, in the rest of the regions (with the exception of the Republic of Karelia and the Arkhangelsk Region) in the first half of 2020, the growth rates of industrial production were negative.

In conclusion, it should be noted that more than 55% of all investment in the Arctic falls on the extraction of minerals, primarily hydrocarbons (this figure in the Nenets Autonomous Okrug exceeds 93%). There is every reason to believe that these investments will only increase in the future, since in July this year, a law was passed on tax and administrative preferences for Arctic projects ⁹, primarily oil and gas. In particular, the new law provides for a transition to additional income taxation (AIT) ¹⁰ from the extraction of hydrocarbons in the Taimyr Peninsula, northern Yakutia and Chukotka, as well as exemption for 12 years from the payment of mineral extraction tax (MET) for LNG and gas chemistry projects (three NOVATEK projects — Arctic LNG-1, Arctic LNG-2 and Obskiy LNG — fall under these benefits) and the provision of a tax deduction for MET for oil production for the Vankor cluster (Krasnoyarsk Krai), which is being developed by Rosneft. In addition, the law includes benefits for entrepreneurs and companies planning to implement investment projects not related to the extraction of hydrocarbons (for example, the construction of ports, industrial enterprises, etc.), which will certainly serve as an incentive for the development of

⁸ Source: Federal State Statistics Service.

⁹ Federal'nyy zakon ot 07.07.2020 g. №193 «O gosudarstvennoy podderzhke predprinimatel'skoy deyatel'nosti v Arkticheskoy zone Rossiyskoy Federatsii» [Federal Law of July 07, 2020, No. 193 "On State Support of Entrepreneurial Activity in the Arctic Zone of the Russian Federation"].

¹⁰ The essence of the AIT regime: the tax burden on companies increases as the project reaches recoupment.

entrepreneurial activity in the Russian Arctic.

Conclusion

The analysis showed that the economic development of the Russian Arctic took place in three fundamentally different stages. The first stage (1950–1990) was characterized by intensive development of the Arctic territories: high rates of development of fuel and mineral resources, the expansion of specialization industries through the formation of the oil and gas industry, an increase in the share of processing industries in the mining, timber and fishing industries, the development of territorial production complexes (West Siberian, Timan-Pecherskiy, Kola, etc.), the Northern Sea Route, air traffic, etc. Capital investments made in 1971–1980 only for the creation of a fuel, energy and raw material province in the north of Western Siberia exceeded the cost of building such large facilities as VAZ, KamAZ and BAM combined [30, Timoshenko A.I., Elert A.Kh., p. 8]. As emphasized by Leksin V.N. and Leksin V.N., Porfiryev B.N., “more than 90% of the currently used economic and infrastructural potential of the Arctic macroregion was created during the period of its Soviet (socialist) development” [31, Leksin V.N., Porfiryev B.N., p. 4–21].

The second stage (1990–1999) was associated with the country's transition to market relations and was characterized for the AZRF by a sharp decline in investment activity, a decrease in industrial production and a recession in other sectors of the economy. It should be noted that a more rapid than the national average, the investment decline took place in the AZRF against the background of a less significant drop in industrial production. Thus, the Arctic regions “became a kind of buffer, softening the negative consequences of the decline in production in the country, but at the same time found themselves in a much worse position in terms of the reproduction of fixed capital” [32, Didyk V.V., Serova N.A., p. 90–101]. During this period, the standard of living of the population was also rapidly declining in the Arctic regions, unemployment was growing, which ultimately led to a massive outflow of the population to other regions of the country.

The current stage (from 2000 to the present) is characterized for the AZRF, on the one hand, by investment revival, which was facilitated by revenues from large-scale export of raw materials and state funding for the implementation of large infrastructure projects, on the other hand, by continuing negative phenomena in the social sphere (population outflow, the growth of poverty, unemployment, etc.). In other words, the objectives of the latest stage of Russian state policy in the Arctic, related to the achievement of the interests of the industrial development of the Arctic territories, have a pronounced priority over the task of improving the quality of life of the local population. The current trends determine the need to search for new effective approaches to managing this region.

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