

SOCIAL DEVELOPMENT OF THE ARCTIC REGION: MANAGERIAL ASPECT

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Abstract: *Against the background of increasing geopolitical and economic importance of the Arctic, the basic problem of the development of the Arctic and the Arctic region is emerging. Formation of strategic management decisions aimed at implementing the social development of the Arctic region is the main goal of research. The article examines the issues of ecology, medicine, education. It has been established that the positive socio-economic development of the Russian Arctic regions does not provide a dynamic growth in the realization of the “social potential” of the Arctic regions. It has been determined that active work is being carried out in the Arctic region in the sphere of sustainable development and the protection of the Arctic environment. The low quality of life of indigenous peoples living in the Arctic zone of the Russian Federation requires a high-quality medical level of service. In modern conditions, the Arctic is increasingly perceived as a special region of the globe, which immediately requires effective government support.*

Keywords: social potential, management decision, socio-natural ecosystem, public administration.

Against the background of increasing geopolitical and economic importance of the Arctic, the basic problem of the development of the Arctic and the Arctic region is emerging. In the modern Arctic one of the most complex geopolitical situations in the world is forming. The common space of the subarctic states, which is being formed into a single Arctic region, has enormous reserves of natural resources and a unique geographical position on the path of development of new transport routes¹. All this increases the geopolitical significance of the region and leads to a clash of interests of the leading states of the world, which is manifested in political confrontation and exacerbation of conflicts between countries.

¹ D.M. Dmitrieva, A.A. Ilinova, “Development of the Arctic zone of the Russian Federation: regulatory framework and innovation infrastructure”, in *Collection of scientific papers of the International Scientific and Practical Conference. St. Petersburg Polytechnic University of Peter the Great*, 2016, no. 9, p. 253-265. Available at: [https://sibac.info/archive/nature/5\(63\).pdf](https://sibac.info/archive/nature/5(63).pdf).

Increased interest from countries in the Arctic began to emerge due to global warming in the world. A variety of natural resources are located in the Arctic and hydrocarbons are one of the most important. Oil, natural gas, gas condensate are necessary both for the development of industry and for housing and communal, private needs. Hydrocarbon production is activated in the Arctic region as more accessible deposits are depleted. Arctic resources in the field of oil and natural gas play an increasingly significant role – more than 2/3 of hydrocarbon resources are located in the Russian segment of the Arctic².

Oil and gas fields are being developed on the shelf of the Barents Sea. These are such large oil fields as Prirazlomnoye, Varandeykskoye, Dolginskoye, Medynskoye. Natural gas is produced at the Murmansk, Severo-Kildinsky, Ludlovsky fields. In addition to hydrocarbons, the wealth of subsoil resources in the Arctic is made up of deposits of precious, rare earth and non-ferrous metals – gold, nickel, copper, tungsten, uranium, platinum, palladium, molybdenum and others. Here diamonds and other precious stones, coal, and gypsum are mined.

However, the natural resources of the Arctic are concentrated not only in its depths. For example, here is the most valuable resource – fresh water reserves, which, according to expert estimates, make up to one fifth of the world total³. There is also a huge potential for biological diversity in the Arctic. Russia's resources in the Arctic are also the territories themselves, which, with current climatic warming trends, may soon be suitable and even comfortable for human life and economic activity⁴.

The extraction of natural resources in the region is currently rather poorly developed – the infrastructure of many deposits has been used since Soviet times⁵. There are many other problems that need to be solved:

² V.I. Khasnulin, V.I. Khasnulin, M.V. Artamonova, P.V. Khasnulin, “Real health condition of residents of high latitude in adverse climatic-geographic conditions of arctic and indicators of healthcare health”, in *International Journal of Applied and Basic Research*, 2015, no. 9-1, p. 68-73; A.A. Shchegolkova, “Spatial organization of transportation of energy resources”, in *Geopolitics and Security*, 2015, vol. 2, no. 30, p. 95-99.

³ Yu.V. Yakovets, E.E. Rastvortsev, *Greater Eurasia: a strategy of partnership of civilizations and associations*, Prospect Publishing, Moscow, 2017.

⁴ T.V. Shtal, Y.O. Polyakova, E.L. Hasanov, G.S. Ukubassova, S.A. Kozhabaeva, “Formalization of the enterprise international economic activity efficiency management”, in *Utopia y Praxis Latinoamericana*, 2018, vol. 23, no. 82, p. 64-82.

⁵ D.M. Dmitrieva, A.A. Ilinova, “Development of the Arctic zone of the Russian Federation: regulatory framework and innovation infrastructure”, in *Collection of scientific papers of the International Scientific and Practical Conference. St. Petersburg Polytechnic University of Peter the Great*, 2016, no. 9, p. 253-265. Available at: [https://sibac.info/archive/nature/5\(63\).pdf](https://sibac.info/archive/nature/5(63).pdf).

this is transport, and the preservation of the region's fragile ecology, and the complexity of the organization of life and activities in difficult climatic conditions. But the course towards the development of Arctic reserves, lost with the collapse of the USSR, has been resumed.

Therefore, the support of the region at the state level plays an important role.

Actual problems of arctic territory jets

Questions relating to the relationship to the socio-economic situation in the studied settlements and regions, permeated through all methods of the project⁶. Despite certain differences, the general vector of answers on this topic for representatives of various social groups coincided. Most of the experts we interviewed rated the economic situation in their region as tense. Therefore, the main problems of the Arctic region are presented in Fig. 1.

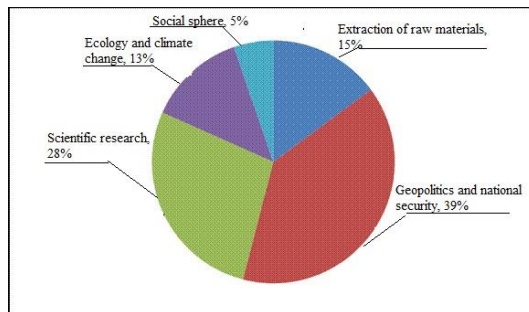


Figure 1: Problems of the Arctic regions

The paper deals with social aspects. At the same time, a little more turned out to be those who consider it closer to stable and good than to critical. Opinions of experts from different regions in this matter differed markedly. Experts of the Arkhangelsk region responded most critically about the situation in their region⁷. Representatives of the Murmansk region and especially the Nenets Autonomous District were noticeably more optimistic. Similar estimates are given and the standard of living in these regions. The highest standard of living is recognized in the NAO (Nenets Autonomous District), and the lowest in the Arkhangelsk Region.

⁶ V.N. Konyshov, A.A. Sergunin, *The Arctic in international politics: cooperation or rivalry?* RISS, Moscow, 2011

⁷ "Fundamentals of the state policy of the Russian Federation in the Arctic for the period up to 2020 and beyond". Available at: <http://www.scrf.gov.ru/documents/98.html>

At the same time, experts from neighboring regions gave a more positive assessment of the situation than representatives of the district. Most likely, this is due to the high standards of quality of life that have been formed in the district over the past 10 years. Similarly, ordinary respondents gave a comparative assessment of the standard of living and its dynamics. Thus, almost 60% of respondents in the NAO believe that life in the district is better than in neighboring regions. Among the Murmansk people, the share of those is 26%, and among the respondents of the Arkhangelsk region does not exceed 10%. In general, the northerners have noted an improvement in the standard of living in their settlement in recent years. Over 40% of respondents noted the predominance of positive and only about 20% dominance of negative changes. Approximately every third respondent believes that there are no special changes or that they were multidirectional (Table 1).

Table 1: Actual problems of residents of the Arctic territories

Problem	Arkhangelsk region	Murmansk region	Nenets Autonomous Okrug
Bad roads, do not drive up to the house, solid pits	46.5	29.3	55.1
Unemployment, hard to find a good job	17.8	19.6	10.6
Expensive rent, high tariffs for housing and communal services, water, electricity	12.2	22.4	10.6
Poor beautification of the city, dirt on the streets, in the yard	15.8	14.0	8.3
No own housing, expensive to rent, no. social housing, construction	15.8	7.5	18.5
Low wages, pensions, lack of money, poor financial situation, lack of money	13.6	10.5	10.9
Leisure of children, youth, no. sites, clubs, sections	6.1	11.8	9.4
High prices for goods, products	6.9	9.1	14.7
Queues in the clinic, the lack of doctors, do not get a ticket	5.4	10.0	3.0
Poor quality of care	4.5	7.2	4.2
Poor transportation, no. public transport	7.6	3.0	4.5
Shortage of places in kindergartens	5.0	3.1	7.9
Poor ecology, polluted air and water, soil	6.4	3.9	0.8
Home repair is not carried out, the management company is not working	3.1	4.8	2.3

The collapse of the industry, the problems of enterprises	4.6	2.7	0.0
Poor water supply, lack of water, poor sewage	2.5	0.5	2.6
Poor heat and power supply, hot water supply, poor heating, lack of a bath	1.0	2.1	1.9
Poor education, difficult to enroll, paid education	1.1	1.7	1.1
Expensive train tickets, plane	0.3	0.2	7.5
Alcoholism, drunkenness	1.5	0.6	0.8
Power outages, frequent outages	0.5	0.5	1.1
Other	29.4	27.2	30.2
No problems	3.1	5.4	4.9
Difficult to answer	2.2	4.8	3.4

The residents of Naryan-Mar, Murmansk, Severomorsk are noticeably more optimistic than others in this issue, the residents of Arkhangelsk and the small urban settlements of the Arkhangelsk and Murmansk regions are more pessimistic than the others. The actual territorial issues are less significantly different in the neighboring regions. More often than other northerners called the most painful problems associated with the state of the road and street infrastructure. Material problems take the second place. Housing-communal and labor issues worry in the third place the respondents of the Arkhangelsk region. Problems in the labor market are also relevant enough for Murmansk residents, and housing and public utilities for residents of the NAO. Medico-environmental issues are more often voiced by respondents from the Murmansk region, and transport issues by residents of the NAO. In this regard, it is extremely important to study the state and possibilities of domestic health care institutions in the provision of medical care. The high incidence and rapid progression of chronic non-communicable diseases already at a young age, the acceleration of aging processes and a significant reduction in the life expectancy of indigenous and migrant people of Siberia and the Far North, caused by extreme or uncomfortable climatic and geographical factors, is one of the most important problems of protecting the health and working capacity of the population providing active the development of the Siberian and Arctic territories, oil, gas, non-ferrous metals. In this regard, the creation of new medical technologies that prevent the emergence and progression of chronic diseases, especially at working age, inhibiting premature human aging in Siberia and the

Arctic, is becoming one of the most urgent tasks of biomedical research at the present stage of Russia's development. This requires obtaining accurate and comparable statistical data on the long-term trends in the development of chronic non-communicable diseases in the context of global climate change, combined with the complex action of adverse cosmo-geophysical, meteorological, chronobiological and psychosocial factors at high latitudes in the Russian Arctic region.

Analysis of the level of education in the Arctic regions

Currently, the country is moving to a "green" development. Therefore, an important role is played by environmental education among the population⁸. The expert of the League of Nation Health on family issues, the expert of Business Russia, Irina Nesivkina, notes the importance of creating a special course that will be developed taking into account the ecological uniqueness of the Arctic and the traditions of its indigenous people.

The authors noted that it is necessary to use a modern approach to environmental education. For example, there are projects that not only contribute to environmental education, but also contribute to enhancing the image of institutions, universities and professions related to the environment (EcoClass, IESE "ECA", "Environmental lessons for each school")⁹.

A survey was also conducted among faculty members who presented their thoughts on environmental education and the general conclusions were as follows:

- education of schoolchildren should be based on the traditions of the northern regions, not forgetting about the population arriving and working in the Arctic;
- learning ecology needs to start in kindergarten, when schoolchildren are most susceptible to information;

⁸ A.E. Zhatkanbayeva, N.S. Tuyakbayeva, A.K. Jangabulova, S.T. Alibekov, E.V. Kasatkina, E.A. Masliхова, "International regulation of environmental auditing in the countries of the European Union", in *Journal of Environmental Management and Tourism*, 2018, vol. 9, no. 5, 1030-1043; N. Poshanov, Z. Kosanov, S.T. Alibekov, M. Dossymbekova, A. Begzhan, "Comparative analysis of existing environmental control in the Republic of Kazakhstan and foreign countries", in *Journal of Legal, Ethical and Regulatory Issues*, 2018, vol. 21, no. 1, p. 1-7.

⁹ G.M. Fedorov, "Educational programs forming ethnocultural and regional identity in children of indigenous peoples of the North and the Arctic", in *Astra Salvensis*, vol. 6, p. 403-410.

- in schools, ecology needs to be introduced not as a separate discipline, but as an interdisciplinary course with a mandatory applied part;
- The method of conveying environmental information must be changed to a modern, interesting generation;
- it is necessary to develop a course of ecology taking into account regional peculiarities of the Arctic;
- based on the "Atlas of new professions" to formulate a list of professions necessary for the Arctic;
- create a single center in the Arctic zone of the Russian Federation, coordinating all environmental activities.
- in educational institutions it is necessary to properly cover environmental issues.
- it is necessary to introduce the processes of "green" ecology in schools, universities, which will contribute to sustainable development.
- the creation of departments for the regulation of the protection of natural territories will strengthen the environmental component in the work of the ministry as a whole.

Sociologist A.M. Konov, focusing on the ineffectiveness of the strategic management of the Russian Arctic (AZRF), identifies the main factors that, in his opinion, adversely affect the creation of an effective management system. Separately, he noted the underestimation of the role of the northern federal universities in scientific and educational support of the protection of the national interests of Russia in the Arctic. The systemic essence of education obliges us to divide this thesis of a scientist and, moreover, to see this as one of the main reasons for the long-term lag in the development of the Arkhangelsk region and the Arctic macroregion – a space where science has so little participated in managing public life. Local economists, engineers and managers of various industries, obviously, firmly focused on the technocratic consciousness. The created Northern (Arctic) Federal University (NArFU) is still in the process of establishing scientific schools. Of particular note is the lack of social order in some branches of scientific knowledge with state.

In Russia, social ecology is understood as the study of noospherogenesis, in which the ideas of V.I. Vernadsky. By the end of the twentieth century, natural science knowledge allowed people to realize the whole infinity of the range of problems that require their disclosure. The integrative approach (noosphere) to natural science and humanitarian knowledge based on ecology allows researchers to reach a philosophical understanding of the globalization of the Arctic. But, on the other hand, obviously, the opinion of Academician N.N. Moiseyev, who noted that

the social sciences as a whole were not able to comprehend and accept the deepening processes of globalization and the environmental crisis.

The meaning of the notion “sustainable development” (SD) should be considered in detail: scientific and political content (RIA-92); “Sustainable development” and powerful market and globalization drivers. The green and red critics of the global environmental crisis will be associated with this topic; the custom of distributing the cost of negative goods to the whole of society; pathogenesis (development mechanism) of “diseases of civilization” and factors of “new ecological environment”.

Social ecology should be taught in the module, which should also include the social and environmental problems of the Arctic (North), social security, social medicine (hygiene), etc.

In Fig. 2 presents an analysis of the development of elements of social potential.

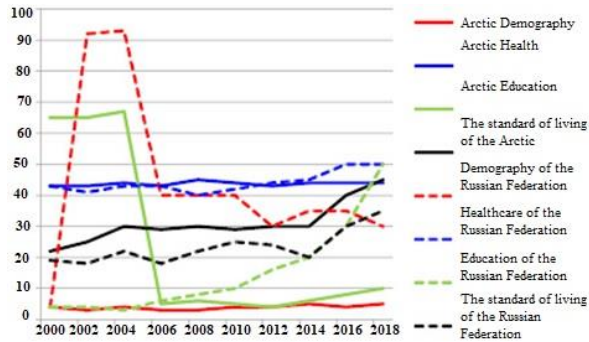


Figure 2: Analysis of the dynamics of development of “elements of social potential” (on the Y axis – the percentage of use of the “potential” over the years, the X axis)

Based on the results of studies of statistical and informational materials, it can be stated that the concept of human development is an alternative to such a measure of human well-being or quality of life, as GDP per capita.

Depending on the proportion of indigenous and non-indigenous population in each circumpolar region, the age factor significantly affects the socio-economic conditions of the territory.

Positive socio-economic development of the Russian Arctic regions does not provide a dynamic growth in the implementation of the “social potential” of the Arctic regions.

It is necessary to identify and implement measures to create conditions that could contribute to maximizing the potential of the

Russian Arctic, to achieve a high level and quality of life based on an entirely new social policy in the region.

Features of the state policy priorities in the field of socio-economic development of the Arctic

The conceptual provisions of the Strategy are based on the fundamental interrelation of the processes of ensuring environmental safety, sustainable socio-economic development of the Russian Federation and the transition to the principles of a green economy and green growth, including with the involvement of the latest energy and resource saving technologies, based on Russia's special role in ensuring global environmental security, protecting national interests in the foreign policy sphere¹⁰. This document also takes into account the recommendations of the United Nations Conference on Environment and Development (Rio de Janeiro, 1992), the United Nations Conference on Sustainable Development RIO + 20, 2012 and other international forums on the environment and sustainable development.

Of course, every region of the Russian Federation today must think about planning activities in the field of environmental safety¹¹. The crisis phenomena of recent years and the formation of a new economic model in post-industrial countries have led many international organizations and institutions to intensify research on the very quality of modern economic growth to search for innovative models that ensure the harmonious development of nature and man. In works on problems of sustainable development, it is becoming increasingly common to use such a systematic approach, which considers a complex structure of indicators, including social and ecological systems, social, economic and natural interaction¹²¹³.

¹⁰ E. Kryukova, M. Vinichenko, S. Makushkin, A. Melnichuk, V. Bondaletov, E. Potekhina, "On sustainable economic development of the mono town of Baikalsk", in *International Journal of Economic Research*, 2016, vol. 13, no. 6, p. 2409-2424.

¹¹ V. Yuzhakov, E. Dobrolyubova, O. Alexandrov, "How to evaluate the effectiveness of government programs: methodology issues", in *Economic Polic*, 2015, no. 6, p. 79-98.

¹² D.A. Kaldiyarov, A.K. Sharipov, A.E. Bedelbayeva, "Development of the concept of the optimum mechanism of government administration by economy of agroindustrial complex of the Republic of Kazakhstan", in *Life Science Journal*, 2014, vol. 11, no. 84, 394-400.

¹³ D.A. Kaldiyarov, E.O. Kydyrbayeva, B.K. Shomshekova, M. Toregozhina, G.R. Baytaeva, "Cooperation of small forms of managing in agro-industrial sector in the Republic of Kazakhstan", in *Espacios*, 2017, vol. 38, no. 62, p. 13.

Particularly relevant is the formulation of this task for the Arctic region, where the solution of environmental problems should be carried out through strict restrictions on economic, scientific and tourist activities, active reservation of new territories in the Arctic, such as national parks, reserves, the use of national strategic reserves and the use of high technologies in basic, resource industries and services sector. Large investment projects in the Arctic must be subject to comprehensive state expertise, which allows to take into account economic, social, environmental, defense and political factors for decision-making¹⁴. Finding a balance between the development of Arctic resources and the preservation of the unique features of this unique ecosystem in the world is truly a global challenge. The Arctic is one of the most sensitive regions to pollution.

In order to preserve ecological stability in the regions of the Far North, the Russian government has adopted a strategic action program for the protection of the environment of the Arctic zone. The State Program for the Socio-Economic Development of the Russian Arctic for the Period up to 2020 was developed and approved, which also provides for the establishment of special environmental management regimes.

The Russian Federation is actively working to promote cooperation between the states of the Arctic region in the field of sustainable development and the protection of the Arctic environment. Taking an active position, taking a direct part in all its events, Russia initiates holding international meetings of high representatives of the AU member states, AU observer countries and foreign scientific community under the auspices of the Russian Security Council's office. It is important to note that the development of the Arctic territory of Russia today is the most important factor in stabilizing the country's economy, it is crucial in ensuring national economic security¹⁵. The total area of the Arctic possessions of Russia is about 3.7 million square meters. km, ie, 18% of the entire territory of our country¹⁶. A total of about 2.5 million people live here. In the same region, according to experts, 80% of Russian gas reserves, 70% of oil and 50% of coal are concentrated.

¹⁴ M.P. Afanasyev, N.N. Shash, "Toolkit for assessing the effectiveness of budget programs", in *Issues of State and Municipal Management*. 2013, no. 3, p. 48-69.

¹⁵ E.M. Akhmetshin, V.L. Vasilev, "Control as an instrument of management and institution of economic security", in *Academy of Strategic Management Journal*, 2016, vol. 15, Special Issue 1, p. 1-7.

¹⁶ E.E. Plisetskiy, "Priorities for the development of the Northern Sea Route in strategic management and planning", in *Arctic and North*, 2016, no. 22, p. 101-111.

The preservation of unique Arctic ecosystems and the elimination of accumulated pollution in areas of the Arctic is a key task of state policy and the fulfillment of the international obligations of the Russian Federation. The priority of studying and ecological rehabilitation of polluted (disturbed) natural objects and ecosystems is consistent with the task of saving the unique ecological systems of this region, defined in the Principles of State Policy of the Russian Federation in the Arctic until 2020 and beyond, approved by the President of the Russian Federation on September 18, 2008.

In the Arctic zone of the Russian Federation (AZRF) and in the adjacent territories, the work on identifying and identifying environmental “hot spots” began in the late 1990s. (as part of the preparatory phase of the project) and continued in 2008 during the implementation of the UNEP / GEF project “Russian Federation – Support for the National Action Plan for the Protection of the Arctic Marine Environment” (the NPA-Arctic project). This work was the initial stage of identifying and analyzing the problem of NEU in the Russian Arctic.

Peculiarities of the strategy of state administration in the field of social security in the Arctic

The development strategy of the Arctic zone has been approved at the international level until 2020. The priority areas of development of the Arctic zone include: integrated socio-economic development of the region, the development of science and technology, the creation of modern information and telecommunications infrastructure, environmental security, international cooperation in the Arctic, military security, protection and protection of the state border of the Russian Federation in the Arctic¹⁷. The strategy for the development of the Arctic zone of the Russian Federation and national security for the period up to 2020 (hereinafter referred to as the Strategy) was developed in pursuance of the Fundamental Principles of the State Policy of the Russian Federation in the Arctic until 2020 and beyond, approved by the President of Russia on September 18, 2008 (hereinafter – the Basics).

The strategy defines the main mechanisms, methods and means of achieving the strategic goals and priorities for the sustainable development of the Arctic zone of Russia and ensuring national security.

¹⁷ “Arctic Council. Official information”. Available at: <http://www.arctic-council.org/index.php/en/>.

Priority directions for the development of the Arctic zone and ensuring national security:

- complex socio-economic development of the Arctic zone of Russia;
- development of science and technology;
- creation of a modern information and telecommunication infrastructure;
- ensuring environmental safety;
- international cooperation in the Arctic;
- ensuring military security, protection and protection of the state border of the Russian Federation in the Arctic.

The socio-economic development of the Arctic zone, in accordance with the Basics, provides for the improvement of the public administration system for the socio-economic development of the Arctic zone, improvement of the quality of life of the indigenous population and social conditions of economic activities in the Arctic, development of the resource base through the use of promising technologies, modernization and development of the Arctic transport infrastructure systems, modern information and telecommunication infrastructure and fisheries of the complex.

The main mechanisms for the implementation of the Strategy:

- the state program of socio-economic development of the Arctic zone of the Russian Federation for the period up to 2020;
- other state programs of the Russian Federation, federal and departmental target programs, sectoral strategies, regional and municipal programs¹⁸, programs of large companies, providing measures for the integrated development of the territory of the Arctic zone

The implementation of the Strategy envisages the creation of a system for monitoring and analyzing the state of national security and the level of socio-economic development of the Arctic zone, highlighting it as an independent object of state statistical observation. The main risks and threats of public administration in the social sphere:

- negative demographic processes in most subarctic subjects of the Russian Federation, the outflow of labor resources (especially highly qualified ones) to the southern regions of Russia and abroad;

¹⁸ M.N. Lukiyanova, I.A. Zayarnaya, M.A. Kadyrov, "Introduction of the "3-p" model in the concept of strategic management of municipal entities", in *Public Policy and Administration*, 2018, vol. 17, no. 4, p. 586-599.

- the incompatibility of social service networks with the nature and dynamics of resettlement, including in education, health care, culture, physical culture and sports;

- critical condition of housing and communal services, insufficient provision of the population with clean drinking water; the lack of an effective system of personnel training, the imbalance between the demand and supply of labor resources in the territorial and professional terms (shortage of workers and engineering professions and an overabundance of unclaimed specialists, as well as people without professional education);

- low quality of life of indigenous peoples of the North, Siberia and the Far East of the Russian Federation living in the Arctic zone of the Russian Federation;

Features of management decisions in the implementation of national interests in the Arctic zone of the Russian Federation

Formation of strategic management decisions aimed at the implementation of:

- national interests in the Arctic zone of the Russian Federation, and its divisions (industries, simple and complex economic units) is a complex multidimensional task that can be successfully solved only through the use of systemic methodology. The main principle of the methodology is, on the one hand, consideration of any object as a system with all its inherent laws, on the other – consideration of an object as an integral part of a higher order system. These features of the interaction of the internal elements of the object (its structure) and the interaction of the object itself with the external environment (its structure) constitute the main problem¹⁹.

- a strategically important management decision, which should ensure the successful operation of this object in one or another phase of the economic cycle.

The need to solve this problem is particularly acute when moving not only from one phase of the economic cycle to another, but also between different phases of this phase²⁰. The ongoing economic crisis has

¹⁹ A. Yessekeyeva, I. Kuderin, K. Altayeva, S. Yergobek, K. Bekmuhametova, “Compare the rules as to passage of risk in international sales transactions under the Vienna Convention and the English common law”, in *Life Science Journal*, 2013, vol. 10, no. 4, p. 2924-2929.

²⁰ D. Yedilkhan, G.U. Bektemyssova, “Identifying similar business process models”, in *Journal of Theoretical and Applied Information Technology*, 2016, vol. 91, no. 1, p. 152-157; G.U. Bektemyssova, D. Yedilkhan, “Applying of process management in the 'e-license' project”, in *ICCAS 2015 - 2015 15th International Conference on Control, Automation and Systems, Proceedings*, 2015, p. 2076-2079; R.K. Uskenbayeva, B.K. Kurmangaliyeva, D.

shown that these transitions take place extremely quickly, with very significant, as a rule, negative consequences for economic agents of different levels. The instability and the volatility of the financial markets, goods and services markets, material resources markets, labor markets, etc., are increasing at high rates. Therefore, management decisions designed to change the behavior strategy of simple and complex economic units must adapt to the conditions of external instability²¹. Moreover, the evolving situation in the real economy of the Russian Federation, the global geopolitical situation indicates a high likelihood of aggravating conflicts of interest in the Arctic.

Despite the widespread use of the concept of “management decision” in the scientific literature, a unified approach to its definition has not been formed. Therefore, we will use the definition that, in our opinion, most fully reflects the content of this concept: “The managerial decision is the result of analysis, forecasting, optimization, economic justification and choice of alternative from a variety of options to achieve a specific goal of the management system. The impulse to develop a managerial solution is the need to eliminate, reduce the urgency of the problem by solving it, that is, bringing the actual parameters of the object (phenomenon) to the desired, predictable ones in the future. ” Used definitions are specified, taking into account the goals or features of the decision-making process. For example, defines a decision as “the result of economic actions, actions taken by the leaders of the state, regions, regions, organizations as a result of analyzing several options²². At the

Yedilkhan, “Situational management for process implementation of working operations of the business process”, in *2015 54th Annual Conference of the Society of Instrument and Control Engineers of Japan, SICE 2015*, 2015, p. 292-297; R.K. Uskenbayeva, B.K. Kurmangaliyeva, D. Yedilkhan, A.B. Kassymova, “Principles for achieving the optimal performance of the input tasks flow of a business process and optimal performance of the business process”, in *2015 54th Annual Conference of the Society of Instrument and Control Engineers of Japan, SICE 2015*, 2015, p. 728-733; R.K. Uskenbayeva, G.B. Bektemysova, B.K. Kurmangaliyeva, D. Yedilkhan, “Development of the business process for national companies of Kazakhstan with the integration of the project 'E-Government'”, in *2015 54th Annual Conference of the Society of Instrument and Control Engineers of Japan, SICE 2015*, 2015, p. 724-727.

²¹ N.I. Khludneva, “Prospects for the development of legal protection of Arctic ecosystems”, in *Journal of Russian Law*, 2015, no. 11, p. 114–122; V.P. Karpov, “New industrialization of Tyumen’s North: possibilities and risks”, in *Humanities in Siberia*, 2015, no.1, p.83-88.

²² A.N. Silin, N.A. Tkacheva, “Formation of Human Resources in the Process of Circumpolar Region Development”, in *International Journal of Economics and Financial Issues*, 2015, no. 5, p. 121-127.

same time, these persons are guided by considerations of expediency and take into account the available resources and factors”.

Decisions in the process of developing the Arctic zone of the Russian Federation are made in the planning, organization of activities, motivation, control, both by state and commercial organizations²³. However, the goals of such organizations differ sharply, and the decisions taken have their own specifics in prioritizing the problems. In state organizations, the first place should be decisions related to the performance of organizational functions, including the implementation of national interests in the Arctic zone. In corporations – with maximizing profits, increasing company value or achieving a different commercial goal.

The most important functions of the decision maker are: the definition of the concept and types of strategic management decisions; the choice of the theoretical basis on which the decision is based; formation of the information base necessary for the development and implementation of a solution; identification of key external and internal factors that determine the conditions for using the developed solution; the choice of methods for assessing the utility of the decision; determination of the level and structure of tangible and intangible assets for the development and implementation of strategic management decisions²⁴. However, in the context of the implementation of national interests in the Arctic zone, one of the tasks in developing a management decision, a method for its implementation, and the formation of conditions of use is to harmonize the interests of the main stakeholders (government agencies, corporations that develop resources in the Arctic, the indigenous population).

One of the problems associated with the choice of managerial decisions is their classification, which is based on the objectives that are aimed at achieving the decisions, features of the methods and information support for the decision-making process, predictable consequences and other parameters. Let us highlight the main features of management decisions taken in the implementation of national interests in the Arctic zone:

- complexity and breadth of problems solved;

²³ E.E. Plisetskiy, “Priorities for the development of the Northern Sea Route in strategic management and planning”, in *Arctic and North*, 2016, no. 22, p. 101–111.

²⁴ V.K. Levashov, *Society's steady development: paradigms, models, strategies*, Academy, Moscow, 2001.

- a wide range of persons involved in the execution of the decision, as well as those affected this decision);
- responsibility to the public for the results of the decisions taken (financial, socio-political, moral and ethical, environmental).

Having determined the initial version of the strategic goal, the task of the manager is to identify the factors of external and internal order that affect the ability to achieve the goal, which can be represented by a set of necessary tangible and intangible assets. It should be noted that factors can be both quantifiable and non-quantifiable. Factors fall into different categories: economic, technical, organizational, psychological; key, meaningful and minor; long-term, short-term, disposable; rationally sound, random, etc.

A large-scale implementation of the concept of environmental management in the Arctic territories, including during the development of offshore fields, will make it possible to achieve significant effects in the economic, technological and environmental areas (Figure 3).

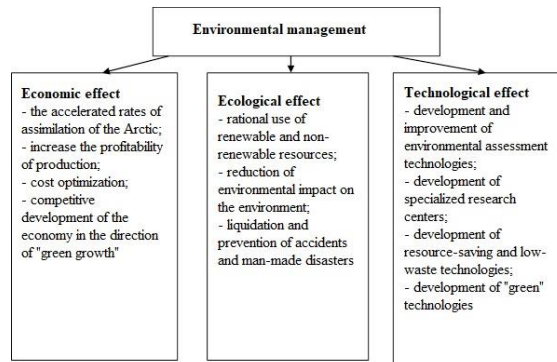


Figure 3: Estimated effects from the implementation of the concept of environmental management in the Arctic

In the regions of the Arctic carried out state support. The social, political, environmental, economic and military consequences of changes in the environmental situation in the Arctic cannot be fully explored due to incomplete processes. The question of how to respond to environmental changes in the Arctic is likely to remain on the agenda in the academic and political circles, so the presence of the Arctic Council as a platform for scientific discussions, conferences and discussion seems to be relevant. However, the ideas underlying the functioning of the AU and the desire to contribute to solving environmental problems by

coordinating the interests of all stakeholders, which was the purpose of creating the organization, initially assumed a more global role of the AU in international relations.

The intensification of economic development in the new changing socio-economic conditions has increased the role and importance of the transfer to the younger generation of basic education, i.e. we are talking about the qualitative human factor. In other words, ensuring sustainable economic growth, improving the level and quality of life of the population, improving the socio-economic situation of the northern regions of the Russian Federation is a pressing issue related to the development of human resources and, above all, the implementation of primary general education²⁵²⁶. The observed transformation of social and labor relations necessitated the formation of internal conditions for the economic development of the territories of individual regions of Yakutia. That is why today the study of regional problems of the development of education and the improvement of the effectiveness of the use of the productive power of people is put on the list of priorities in the structure of socio-economic research.

The processes of institutionalization of the Arctic strategies as an independent direction of the policy of socio-economic and regional development of circumpolar states in 2006–2014. characterized by the approval of research as a key tool for the implementation of geopolitical interests in the Arctic. State programming of national scientific activities and the targeted concentration of funding are effective factors for successful competition and cooperation of foreign countries in the macroregion. The scope and methods of interdepartmental involvement and coordination in the planning and provision of research activities are also noteworthy. At the same time, a comparison of normative, structural and programmatic instruments of the Arctic activities of states, including in the field of research, reveals the reproduction of the fundamental elements of the Soviet organizational experience in solving breakthrough national tasks.

²⁵ M.V. Vinichenko, "Time management – technology to improve the effectiveness of human resources management", in *Materials of the Afanasiev Readings*, 2015, vol. 1, no. 13, p. 121-131.

²⁶ S.A. Makushkin, "Features of the formation of the human resources of the organization (team) in modern conditions", in *Materials of the Afanasiev Readings*, no. 1, p. 46-51.