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# Spatial development of the Russian Arctic macroregion: key political and strategic accents

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**Abstract.** Approach to the Arctic region as a place of localization of interest groups in connection with peculiarities of the potential is presented. Its implementation is carried out in the context of modern spatial development. Author's interpretation of this concept implies the allocation of separate layers-subspaces where actual elements and components are distinguished. Further, in accordance with the goal (accent), the organization and reorganization of spatial structures takes place. Between the individual layers-subspaces, connections are revealed, complex spatial structures binding “layers” together are highlighted. Spatial development of the Russian Arctic macroregion is considered from the standpoint of a multilevel approach: global (supranational), national, regional (subnational). At each level the most relevant positions are highlighted. At the global level - resource and energy support, legal framework for the use of the Arctic area for intercontinental communications, growth of tourism and recreation business, overcoming the conflict between various types of ocean management. At the national level, emphasis is placed on environmental, innovative and financial vectors in public policy. Environmental policy focuses on the elimination of accumulated environmental damage and on departure from the policy of usage the Arctic territories and waters as a deposit resource for waste. Innovative policy is associated with the need to create intellectual territories. Financial policy defines adequate tax and customs measures to support management decisions. At the regional level the need for a differentiated approach to the Arctic regions - subjects of the Russian Federation, the need for interregional interaction and multiplicative effects of economic activities cooperation is emphasized. Documents of the Russian Arctic state strategic planning of development are systematized, relevant spatial structures – basic zones are designated. Problematic components of the state Arctic policy are identified.

## 1. Introduction

The Arctic region is a place of concentration of strategic vectors of various kinds of subjects of different scale. At present —the end of the second decade of the 21st century — this region is considered as a space for building a new security system — both global and regional [1]. A number of national interests are associated with the development of the Arctic, which are linked not only with the development of the region's natural-resource potential. Perhaps the interests associated with the development of this region are the drivers of modern spatial development of the whole Russia. It should be emphasized that taking into consideration the length of the Russian Federation Arctic borders, the Arctic is a macroregion (ARRF), which consists entirely of the territories of four subjects and partially of the territories of four



more Russian Federation subjects, as well as a significant water area. The area of the Russian Arctic is 3.7 million square kilometers, with a population of 2.3 million people. According to experts, 80% of Russian gas reserves, 70% of oil and 50% of coal are concentrated in this region. The Russian Arctic is not a separate subject of state administration.

## **2. Models and Methods**

The modern approach to spatial development in the author's interpretation [2] implies the selection of many “layers” (subspaces), the analysis of their components and the selection of stable and unstable structures, the organization and reorganization of spatial structures in accordance with the goal. It should be noted that between the individual layers - subspaces, connections are formed, which are reflected in the form of complex spatial structures “bonding” the layers in the overall structure. With regard to the macroregion of the Russian Arctic, we are talking about the creation / formation of a multitude of subspaces and their corresponding structures, followed by construction complication. In fact, it is all about a multi-level process of developing the Arctic space, where a number of accents is highlighted.

Political and strategic accents of the Arctic space development are formed on three large-scale levels, which are characterized by their own conditions and factors: global (supranational), national, and regional (subnational). Each level has its own emphasis and corresponding priorities. We note some significant features.

## **3. Results and Discussion**

*3.1. The global (supranational) level* is formed by the following challenges and imperatives of economic and political nature.

*3.1.1. Mineral resources.* Depletion of mineral reserves in the continental part of the Earth transforms the structure of the world energy supply, which necessitates the development of mineral and especially energy resources of the Arctic continental shelf [3]. Prospects for economic development of the Arctic territories imply the positioning of the Russian Federation as a state and its leading companies in the global Arctic space. Of course, the prospects should be supported by competitive advantages of an innovative nature - technologies for development of natural resources, infrastructure systems in connection with extraction of mineral resources and transportation of extracted natural raw materials.

*3.1.2. Maritime law.* Development of international maritime law norms, taking into account the use of the Arctic water area, continues. Russia needs to be actively involved in this process. Globalization and regionalization of the world economy stimulates the creation of a new intercontinental route between Europe and Asia. As a result of global climate change, which experts predict in the future, commodity flows through the high-latitude transport and communication arteries of the Arctic may take leading positions in the structure of world trade.

*3.1.3. Tourism.* Tourist and recreational businesses, including those in the Arctic region, are actively developing in the post-industrial era. For the Arctic states, it becomes highly profitable, and in some countries - budget-forming. Arctic tourism is not yet a priority activity for Russia.

*3.1.4. Crossed commercial interests of the ocean use.* Demand for marine industrial fishery products, in the production of which the Arctic macroregion plays a significant role, is growing, according to forecasts of the World Food Organization of the United Nations. The harvesting of aquatic biological resources in the convention areas of the oceans (and especially beyond their limits) is already increasing everywhere, leading maritime powers, in this regard, are concentrating management efforts in order to overcome the conflicts between different types of ocean management. In these circumstances Russia should act actively in the Arctic, but not in conflict.

*3.2. The national level*

The national level is generally associated with building a new system of global, national, regional security, as well as the priorities of the socio-economic development of the macroregion of the Russian Arctic. The national Arctic policy is enshrined in a number of documents, including the “Fundamentals of state policy in the Arctic for the period up to 2020 and beyond” (2008), “Strategy for the development of the Arctic zone of the Russian Federation and ensuring national security until 2020” (2013).

The mechanism for implementing the Arctic Strategy includes development of a settlement scheme and the development of productive forces in the Russian Arctic, creation of a strategic plan for development of the Arctic zone of the Russian Federation. The key priorities for development of the Russian Arctic are the following: integrated development of the region, creation of a modern infrastructure, environmental safety, protection of the state border. The updated state program (2017) of the socio-economic development of the Arctic zone presents its principles based on the formation of basic zones.

The main modern mechanism for the implementation of the Arctic Strategy is the state program "Social and economic development of the Arctic zone of the Russian Federation for the period up to 2020" (2014), which replaced the subprogram "Economic and social development of the Russian Arctic for 2012-2020." in the framework of the state program "Regional Policy and Federal Relations" (2014). The State Policy Framework for the Arctic declared a goal - to create institutional conditions for implementing the state policy of the Russian Federation in the Arctic in order to improve quality of life standards of the population, fully disclose human capital, move to an innovative trajectory of sustainable growth, improve the competitiveness of the macroregion in the global division of labor, and effective integration of the Arctic territories in the Russian and global social and economic spaces. To date, the whole system of the state strategic planning documents of the Russian Arctic has been formed. According to experts [4], at the beginning of 2018, over 500 presidential decrees and federal laws, as well as more than 100 government decrees and orders, about 1000 laws and regulations adopted in eight regions of the Russian Federation, were fully or partly included in the Russian Arctic. Thus, the selection of goals and targets that determine the desired future of the macroregion, the development directions that will ensure its competitiveness, is completed.

*3.2.1. Environmental policy.* Due to the obvious climatic changes of the current decade, environmental policy in the Arctic region becomes relevant. The issue of elimination of accumulated environmental damage, which is understood as harming the environment, public health, and natural resources through economic activities in previous years, concerns radioactive waste and nuclear facilities, including nuclear submarine reactors, flooded during the Soviet times in the Arctic seas (for example, in the area of Novaya Zemlya). In addition, radioactive waste was flooded in containers and barges in areas of the USSR military bases. Government commission created by a special presidential decree generalized data on these objects in 1993. The document prepared formed the basis of the report submitted to the international community.

In the Arctic zone of the Russian Federation the largest pilot projects on cleaning and reclamation of territories were carried out. In particular, in the Franz Josef Land archipelago for 2 years more than 17 thousand tons of waste were collected and more than 80 hectares of disturbed land were reclaimed. On the Northern Island of the Novaya Zemlya archipelago 4 thousand tons of waste were removed and 74 hectares of land were reclaimed. As a result of cleaning the territory of the municipality “Amderma village” in the Nenets Autonomous District, works on utilization of five ships flooded in the water area with a total weight of 100 tons were carried out, as well as works on collection of scrap metal and reclamation of the territory. The total amount of eliminated pollution made about 6 thousand tons, technical reclamation of disturbed lands was carried out. A pilot project was implemented to eliminate past environmental damage in the Russian territories of the Shpitsbergen archipelago (in the villages of Kolsbey, Barentsburg, Pyramid and on the west coast of the Grenfjord Bay). The volume of recycled waste amounted to 2.3 thousand tons, 1.9 thousand tons of oil-contaminated soil were cleaned [5].

*3.2.2. Innovation policy.* Modernization of the Northern Sea Route (NSR) is considered as a necessary condition for strengthening Russia's international position as a maritime state. In addition, for the Russian Arctic, there is an obvious need for creation of intellectual territories - experimental pilot sites, technoparks, and technology development zones. The transition to innovative scenario of the Russian Arctic development implies close cooperation [6] of the polar countries in a wide range of areas, including the joint development of large offshore fields. Solving the challenges of the Russian Arctic development on an innovation basis actualizes the use of the potential of promising forms of spatial organization of the economy - special economic zones, regional clusters, advanced development zones, technology transfer centers, technoparks, energy efficiency promotion centers, business incubators, industrial parks. The purpose of creating "basic zones" is the development of real sectors of the Russian Arctic economy, the creation of conditions for improving the quality of life and security of the population in this area and the creation of an integrated system of information support of national interests.

*3.2.3. Financial policy.* In the group of problems that limit the economic development of the Russian Arctic, the financial block is obvious: insufficient financial support for state programs, as well as a lack of systematic financial measures to support management decisions. As a result, according to experts, the real needs of the Russian Arctic are not met by budget financing, despite the fact that the planned expenditures on the development of the Russian Arctic constitute 3% of the total federal budget revenues from the “Arctic” regions [7]. In this regard, Russian researchers [8] believe that the Russian Arctic should apply special regimes and mechanisms of state financial regulation, including tax preferences, non-tax incentives (lower insurance premiums), measures of customs tariff and non-tariff regulation. To enhance research activities, Russian scientists recommend a special procedure for taxation and customs regulation.

### *3.3. The regional (subnational) level*

The regional (subnational) level reflects the attributes of regional policy, including the construction of trajectories for development of Arctic regions - subjects of the Russian Federation. Among their common tasks: attracting investment; creating a favorable investment climate for the development of offshore fields; ensuring the safety and sustainability of local communities in extreme environmental conditions; formation of legislative support for investment activities to create a preferential regional investment regime; formation and reformation of investment infrastructure and system of structural and organizational forms of regional development institutions.

The use of standard state economic policy instruments in the Arctic macroregion indicates the need for a differentiated approach to the regions of the Russian Arctic [9]. For example, the Murmansk region is recognized as having a decisive role in the implementation of Russia's national interests in the Arctic and the achievement of the main objectives of the state Arctic policy of the Russian Federation.

Comprehensive strategies and programs of socio-economic development of the Arctic regions of the Russian Federation and municipalities with seaside position include the development of programs for the integrated development of coastal areas and coastal waters as an independent component. This is aimed at implementing the principle of a single natural-economic complex and increasing the efficiency of state management of Russia's maritime activities by smoothing out conflict interests between types of maritime activities and between business entities. In particular, we are talking about the conflict between the development of the maritime tourism and recreational business and the maritime industry. The analysis of the long-term development priorities of the fishing, fuel and energy complexes in Russia allows us to predict the emerging conflict between industrial fishing and development.

The most significant among the shortcomings of regional strategies are: underestimation of interregional cooperation prospects [10] and ignoring (neglecting) external effects (complex and multiplicative effects due to cooperation between economic activities, in particular, in the joint development and use of ocean space and resources).

#### 4. Conclusion

In conclusion the following should be emphasized. The formation of institutional component of the state Arctic policy remains a problem area. In particular, we are talking about development institutions needed to resolve conflict situations that are formed due to presence of different interests of the parties and entities involved in the process of developing the Arctic and its socio-economic development projects.

The Russian North and the Arctic are an integral part of the global North and the Arctic, and all processes in this macroregion need to be investigated, taking into account international trends and regulations, as well as the balance of forces operating here. Also, the Russian North and the Russian Arctic are an essential part of the national socio-economic system, and all regulatory measures should be aimed at protecting national interests and sovereignty of the Russian Federation.

The choice of spatial development accents of the Arctic macro-region is determined by the formation and organization of priority spatial layers, spatial structures and spatial relationships; obviously, this process requires an integrated approach and interdisciplinary knowledge.

From the theoretical positions of the modern economy, the spatial development of the Arctic is based on a new economic theory - endogenous economic growth; “models of endogenous growth and their political support clearly demonstrate a new nature of government intervention, where knowledge plays a key role” [11].

According to experts, [12] when developing the North-Arctic space, it is important to base on two fundamental principles: globality and sovereignty; It is advisable, in our opinion, to include in consideration the third principle - sustainability. It will allow developing the Arctic space of the country from integral positions; this approach is laid down in the National Security Strategy of the Russian Federation until 2020. In order to ensure sustainable development of the macroregion, it is obvious there is a need to allocate integral natural-economic systems, ensure environmental safety of residents in arctic cities [13]. The creation of smart cities in the Russian Arctic will attract the attention of migrant workers and tourists to the Arctic regions [14,15].

The use of the cluster approach [16] in economic policy is highly expedient from the standpoint of smoothing out a conflict of interest on the territory of the Russian Arctic, where such actors as the state (represented by federal and regional bodies, as well as local governments), civil society organizational structures, business and scientific circles, indigenous peoples of the European North, the North of Siberia and the Far East of the Russian Federation act. The content of economic clusters is determined as a whole by the natural resource focus (development of the continental shelf).

The common tools for implementing strategic decisions in the regions of the Russian Arctic are the latest technologies, production and infrastructure modernization, the use of new technical solutions. Within the framework of federal legislation, the arctic regions of Russia can develop their “pilot projects” on new technologies, alternative energy sources, and ecological tourism. It should be emphasized that in the Arctic regions, at the stage of territorial planning, the choice of economic activity requires careful justification and maintaining a balance between the development of industry, communications, transport, on the one hand, and environmental management, on the other.

It is necessary to monitor and periodically adjust the outlined strategies and development programs for both the entire Arctic macroregion and regions that are members of the Russian Arctic based on foreign and domestic economic experience in the North, climate change, world natural raw materials markets, and scientific achievements; as leading world experts note [10], in the light of formation of the third industrial revolution paradigm, it is about shifting the emphasis of development from efficiency to sustainability.

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