
REGIONAL
PROBLEMS

Scientific and Institutional Capacity for Complex Development of the Russian Arctic Zone in the Medium and Long Term Perspectives¹

V. N. Leksin^a and B. N. Porfiriev^b

^a *Institute for Systems Analysis, Russian Academy of Sciences, Moscow, Russia*

^b *Institute of Economic Forecasting, Russian Academy of Sciences, Moscow, Russia*

e-mail: b_porfiriev@mail.ru

Received June 2, 2015

Abstract—In this paper, the redevelopment of the Russian Arctic is conceptualised as the largest mega project and the country's new northern vector of social and economic development in the medium and long term. The related problems are analyzed. The scientific capacity required to solve this problem is evaluated. Recommendations are proposed to strengthen and further develop the research base of the Russian Arctic studies. The current state of indigenous peoples is considered to analyze the institutional problems and offer solutions involving the legal support and regulation of social and humanitarian aspects of the complex development of the Arctic in the medium- and long-term future. An assessment of the existing institutional framework underpinning the development and implementation of the Arctic mega project is provided. Recommendations to improve the organization of the mega project based on the program-oriented approach are introduced.

DOI: 10.1134/S1075700715060064

Redevelopment of the Arctic As a New Vector of Social and Economic Development in Russia

Since the early 2000s, the problems of territories that used to be considered peripheral in Russia have become more prominent of all state interests. In this context, the so-called “eastern vector” of the country's development should be particularly mentioned. This includes a set of unprecedented measures applied to stimulate economic activity in the Far East and the Transbaikal region, the establishment of a dedicated federal ministry responsible for the development of the Far East, and a significant reorientation of foreign trade activities towards China and other Asian countries in the Pacific region.

In recent years, the role of the northern vector in the state internal policy has significantly increased as the country's leadership has become aware of the need to bridge a gap between the current state of the Arctic zone, on the one hand, and its ever increasing geopolitical, social, economic, and infrastructure importance, on the other. The adoption of the “Fundamentals of State Policy of the Russian Federation in the Arctic up to 2020 and Beyond,” which was approved by the President of the Russian Federation September 18, 2008, can be considered a turning point. In 2013–2014, the provisions of this key document were recon-

ceptualized and significantly expanded. Furthermore, a series of other documents were adopted, such as “Strategy for the Development of the Arctic Zone of the Russian Federation and National Security for the Period up to 2020” (approved by the President of the Russian Federation February 8, 2013) and the state program “Socioeconomic Development of the Arctic Zone of the Russian Federation through 2020” (approved by the Russian Federation's Government Decree of April 21, 2014). In addition, Presidential Decree No. 296 “On the Land Territory of the Arctic Zone of the Russian Federation” was adopted May 2, 2014.

The implementation of these fundamental strategic documents and the entire Northern vector of the country's domestic policy is a complex process, which was previously defined by the authors as a new development, or reexploration of the Arctic, given that the Arctic had been explored in a completely different social, political, and economic context [1, p. 6]. At present, foreign policy and economic aspects of the Arctic reexploration, in particular large-scale prospects of the less risky development of new deposits on the Arctic shelf are for obvious reasons considered to be the most interesting issues to the expert community. However, problems related to the scientific justification of the Arctic mega project, including its humanitarian component and the implementation are no less important and of high priority. The solution of these problems underpins the development of strategies scenarios for the Arctic reexploration, and the implementation of economically viable and socially justifiable

¹ This paper was prepared as a part of the research study supported by the grant of the Russian Science Foundation, project No. 14-38-00009, Program-Oriented Management of the Complex Development of the Russian Federation's Arctic Zone, implemented by St. Petersburg State Polytechnic University and the Institute of Economic Forecasting of the Russian Academy of Sciences.

investment projects under these scenarios, as well as the efficient management of the mega project focused on the reexploration of the Arctic region.

Research Capacity Required for the Complex Development of the Arctic in the Medium and Long Term

Russian scientists who study the relevance of the Arctic-related research in order to scientifically justify domestic policy challenges highlight the undeniable achievements of the Russian science. At the same time, they emphasize the complex, continuously accumulating problems related to the technical, financial, and staff support of the related scientific activities that which face the entire Russian science system, specifically Arctic research [2–4].

In his presentation on June 5, 2015 at a meeting convened by the President of the Russian Federation to discuss the efficient and safe development of the Arctic, Academician N. S. Kasimov noted that Russia had accumulated a large-scale intellectual base in the Arctic research during the Soviet times. This means that Russian researchers have the best knowledge of Arctic worldwide. At the same time, he stated that the Northern territory of Russia, including parts of Siberia adjacent to the Arctic, have not yet been fully explored. Therefore, it is necessary to design a comprehensive research program that would coordinate and focus efforts on studying various geological, ecological, resource, natural, economic, demographic, and other problems of the Arctic. In fact, the study of the Arctic has only just started [5].

One can only add to this the fair conclusion drawn by N.S. Kasimov that, so far, the consolidation and development of scientific research that can help solve this large-scale *practical* problem has become relevant for the first time in many years. Specifically, this includes the problem of the Arctic redevelopment in line with the fundamentally new priorities of the economy, settlement, military presence, transport infrastructure, environment, and living conditions of indigenous peoples. For the first time, the Arctic-related fundamental and applied research will serve as a *single practical purpose*, i.e., the comprehensive scientific support of the most ambitious mega project in the modern Russia.

The possibilities of solving this problem were demonstrated in November 2014 during discussions organized by the Federal Agency for Scientific Organizations (FASO) on the following topic: “The Arctic as a Systemic Project of Russia’s Socio-Economic and Innovative development.” Based on their vision of the program and institutional support of the Arctic research, researchers from Arkhangel’sk Scientific Center of the Ural Branch of the Russian Academy of Sciences noted that the issues raised by FASO remain largely unanswered and that the debating club has exposed an acute lack of coordination in the field of

domestic Arctic research. Basically, only the Russian Academy of Sciences Presidium is pursuing a relevant specialized Arctic program of basic scientific research developed in line with the action plan that implements the “Strategy for Developing the Arctic Zone of the Russian Federation and National Security up to 2020” [6, p. 5–6].²

However, FASO formulates tasks for public research organizations in line with the “Basic Research Program for the State Academies of Sciences for 2013–2018,” which does not identify the Arctic as a separate subject area. This makes it difficult to concentrate the efforts of scientific organizations on solving complex problems and priorities in the Arctic; on the contrary, it creates conditions for formulating shallow themes, imitating Arctic research under the guise of subarctic issues, etc. The governance of the Arctic theme is also scattered between the Russian Foundation for Basic Research, the Russian Foundation for the Humanities, and the Russian Science Foundation. Thus, it is formulated “primarily based on the winning proposals of individual researchers, research teams, and organizations, which often focus on attracting additional financial resources in order to support their own research staff and existing areas of research” [6, p. 6].

The above estimates are justified and relevant. The authors of the cited paper provide examples of how the Arctic research is organized in Canada and other countries of the Arctic Council. They emphasize that all of these countries have adopted Arctic strategies that define the macro region as a promising area of national development. In this context, the “corresponding doctrines position scientific presence as a *key instrument for implementing national interests in the Arctic*” (italics of *V.L.* and *B.P.*) [6].

However, the scientific capacity of post-Soviet Russia has never focused on solving common practical problems. The last time works of this scale were performed (brilliantly!) was during the days of the Soviet Union in order to create and implement atomic and, later, space mega projects under fundamentally different conditions where the efforts of hundreds of scientific teams were consolidated in a targeted way. Over the next 25 years, similar problems that required the coordination of efforts within the entire Russian research system and their *long-term* provision with resources have never been formulated on the national scale.

For this purpose, it is first necessary to develop a long-term basic and applied research program, which should clearly formulate quantitative indicators

² We are referring to the program “Exploratory Fundamental Research for the Development of the Arctic Zone of the Russian Federation,” approved by Decree no. 22 of the Presidium of the Russian Academy of Sciences of February 11, 2014. Under this program, more than 70 scientific organizations implemented 100 projects with the total funding of 200 million rubles.

directly linked to specific objectives of the mega-project, rather than improve or perfect the existing research areas. Second, a dedicated institutional framework should be elaborated to select and fund proposals for focused research studies (thus complementing the existing system of Russian Academy of Sciences financing), as well as analyze and assess (review) their results. Finally, it is important to create a community of extra- and interagency governmental research groups that specialize in scientific support for the Arctic mega project. An independent element of the scientific support for developing and implementing the Arctic mega project should be research activities pursued by the scientific divisions of large corporations and companies active in the Arctic region, as well as relevant studies, performed at the request of these corporations and enterprises in Russia and abroad.

Legal Framework and Regulation of the Social and Humanitarian Aspects of Complex Development in the Arctic in the Medium and Long Term Perspectives

The most important and most challenging problems of Arctic redevelopment are as follows: the qualitative improvement of the level and way of life of the local population and shift workers, the development of the social infrastructure in line with specific Arctic settlement needs, overcoming forced cultural and social isolation of Northern people, and the harmonious combination of principles of a traditional way of life among indigenous peoples and modern social and economic life, as well as other social and humanitarian problems. Dismantling the state system and the political, economic, and social fundamentals of the country's old socioeconomic system, which took place in the 1990s, has affected primarily the Arctic as the market's vulnerable subsystem. Since the start of the reforms, the highest bodies of state power in Russia have opted for complete denationalization, the reduction of state ownership, the reign of the private ownership, and the transition to a competitive open market economy, as well as the redundancy (given the end of the Cold War) of the Soviet defense capabilities. All of this has contradicted the fundamentals of Soviet Arctic heritage. Therefore, the manufacturing capacity of the North that was built during the Soviet era has been lost particularly quickly. The unemployment and outflow of the population has intensified. The Northern Sea Route has not been operational for many years; the icebreaker fleet has almost ceased to exist, whereas air traffic communication has dramatically decreased.

In this context, it is appropriate to consider the redevelopment of the Russian Arctic to be a radical reconstruction of its humanitarian component in the medium and long term. To support this fundamental thesis, the specific implementation of the Arctic mega

project on the territory inhabited by the indigenous population is analyzed. This area covers more than 70% of the Arctic area. The status (and rights) of indigenous peoples is unique in Russia. These are the *only peoples referred to in Article 69 of the Constitution of the Russian Federation*, which stipulates that "The Russian Federation guarantees the rights of indigenous peoples in accordance with universally recognized principles and norms of international law and international treaties of the Russian Federation."

Over the past century, the indigenous peoples of the North had to go through two radical changes in all spheres of their lives. During Soviet times, their traditional way of life underwent dramatic changes in both positive (primarily thanks to advances in healthcare and education) and negative terms (unjustified attempts made by the authorities to unify lives of indigenous peoples). Changes over the past 25 years are due to the rejection of many attributes of the Soviet era and the traditional forms of the economy and lifestyle, as well as the integration of the indigenous peoples in a fundamentally new system of economic and social relations.³

It is often assumed that the indigenous peoples of the Arctic enjoy a variety of benefits that are not available to other peoples, as underpinned by the federal legislation.⁴ However, the so-called "special rights" of the indigenous minorities in the North are most often reflected in the legal support of their natural living conditions, the use of natural resources for vital activity, and the suppression of claims by other people and economic subjects, as well as the removal of some restrictions (taxes, quotas, and fees for the use of resources, etc.) that are imposed on other entities that use natural resources. Benefits and tax breaks *compensate* for the bulk of problems facing the indigenous minorities of the North where the living conditions measured by most parameters are among the lowest in the Russian Federation. This is primarily the case of the life expectancy and the aggregate human development index characterized by the level of income, edu-

³ For more details on this topic, see almost all publications by O. A. Murashko, the editor of *Living Arctic. The World's Indigenous Peoples*, one of the best domestic experts on a wide range of issues related to indigenous peoples; as well as articles and monographs [7–11].

⁴ Federal laws [12–14] and the legal acts regulating specific issues of support to the life of the indigenous peoples, reflected in the Land, Water and Tax Codes, as well as federal laws [15–19], etc. Special Resolution no. 227 of the Government of the Russian Federation "On the approval of rules that regulate the distribution and allocation of federal budget subsidies to the subjects of the Russian Federation in order to support economic and social development of indigenous minorities of the North, Siberia, and the Far East of the Russian Federation" as of February 4, 2009 stipulates the financing rules to co-fund the maintenance and expansion of the number of healthcare, education, culture, and infrastructure facilities on territories inhabited by these peoples.

cation, and health.⁵ The notorious optimization of housing facilities and healthcare functions reduce the possibility of regular treatment provided by these institutions given the fact that intraregional air services are not subsidized (a ticket for travel from distant ulus to Yakutsk is considerably more expensive than a ticket than from Yakutsk to Moscow).

Under these circumstances, the socioeconomic and infrastructural organization of life of the indigenous peoples, which has been radically restructured during the last decade, is one of the most important tasks for the Arctic reexploration, which should be coordinated with the implementation of all areas in the process. The need to develop and implement the Arctic law is growing. This law should strictly codify the necessary rules and establish the legal basis for the life of minorities based on the common Russian norms. The current legislation cannot respond to the aforementioned requirements. In this context, the initiative of Acad. T. Ya. Habrieva aimed at developing the conceptual foundations of the Arctic law should be highly appreciated.

According to G.P. Ledkov, member of the Committee for Nationalities of the Russian Federation's State Duma, and President of the Association of Indigenous People of the North, Siberia, and the Far East, "the law concerning the legal status of indigenous people currently has a contradictory character and contains many gaps that hamper its implementation." New amendments introduce the possibility of unlimited economic intervention by monetarily compensating the authorities of the Russian Federation's subjects and local authorities by business. However, this is a dead-end pathway that supports dependency. "When the money runs out, no doubt the land will be lost forever, along with the unique way of life inherent to indigenous peoples" [21, p. 6, 10].

One of the leading Russian experts in this field, Prof. V. A. Kryazhkov, analyzed a variety of legal conflicts that emerge between the indigenous peoples of the Arctic and users of natural resources. Given the practice of their solutions in a number of regions in Russia, he has made a number of valuable constructive suggestions aimed at solving the most pressing problems in this respect [22].

⁵ According to the doctor Larissa Abryutina, who has been dealing with the health problems of indigenous peoples for many years, the life expectancy of aborigines in the North is ten to eleven years shorter than across the country (for nonnative northerners, it is 3–4 years shorter). Unprecedentedly, the life expectancy of aboriginal men is 14 years shorter than that of women. The incidence of tuberculosis and chronic suppurative otitis among the aboriginals is almost three and 15–16 times higher than the Russian average, respectively. The death rate from malignant neoplasms of the lung is from three to ten times higher than the average. In some regions, the death rate from nonspecific pulmonary diseases is 34 times higher than in the nonindigenous population. The incidence of Aboriginal alcoholism exceeds the nationwide level by 12–20 times. At the turn of the 21st century, the number of suicides per 100000 inhabitants was 2.5 times higher than the country's average [20].

These proposals first involve the mandatory participation of minorities' representatives in the environmental review of all business projects implemented on the territory for the traditional use of nature and the adoption of dedicated federal legislation similar to the Federal Law no. 174 [18]. Secondly, it is required to include compensation for obligations in the texts of agreements and licenses issued by external users of natural resources (primarily, users of subsurface resources) that emanate from institutions of indigenous minorities and submitted by regional authorities as trustees of these institutions. It is recommended to stipulate in the federal and regional legislation mandatory three-level (regional, municipal, community or individual) agreements and contracts with users of subsurface that fix the type and amount of compensation, as well as the objectives, timing, and scope of remediation, and measures to protect the environment, and support the social and cultural sphere. It is also recommended to differentiate between compensation payments with mandatory account for lost benefits and other limitations to the traditional way of life, moral damage, and the cost of new land development incurred by the traditional economy. Third, it is important to encourage domestic companies to adopt acts (social codes, rules of behavior, etc.) that promote the *ultimate* respect for the culture, the way of life and customs of indigenous peoples, and the pursuit of cooperation in social and other fields of life.

Indigenous minorities of the North are key active participants of the Arctic reexploration. They are particularly interested in the long-term mega project, which supports the long-overdue modernization of the existing facilities, and the construction of new objects of modern social, commercial, residential, and transport infrastructure, as well as a constructive relationship with public and private companies. The institutions of these peoples, state and municipal authorities, and civil and military structures play an important role in this context. However, at present, it is not only the private and public interests in hydrocarbon and other resources of the Arctic threaten the native habitat and traditional way of life of the indigenous peoples in the North. This is also corrected by the actively spreading market prosperity values and new way of life in a consumer society, which are widely propagated by media that reach to all groups of the aboriginal population. All of this should be taken into account in the process of developing and implementing state governmental and other programs aimed at redeveloping the Arctic.

Organization of Development and Implementation of the Arctic Mega Project: Problems and Solutions

The redevelopment of the Russian Arctic is a complex public administration task that involves coordinating activities on the level of federal, regional, and municipal authorities, corporations, entrepreneurs, and civil society institutions, which should be united by one mission and dedicated economic, social, and infrastructural bonds. This task can only be solved

based on a system principle, as well as the rational combination of centralization and decentralization of management and the continuity of subject specific management (including the delegation of separate powers).

From this perspective, the state program “Socio-economic Development of the Arctic Zone of the Russian Federation until 2020,” approved by the Government of the Russian Federation April 21, 2014, does not correspond to the systemic nature of the Arctic mega project. Specifically, this program consists of *separate, incoherent tasks covered by previously approved* federal and state programs and projects of the federal targeted investment program. These projects were, to some extent, supposed to be implemented in the territory of the Arctic given the fact that “some state programs pay special attention to the Arctic zone of the Russian Federation and contain government policy measures specific for this territory.”

It seems that the logic and coherence (program) of actions focused on the development and implementation of the Arctic mega project must differ from the government program. Specifically, the action program should avoid juxtaposing fragments borrowed from previously adopted programs and projects. On the contrary, these programs and projects have to be developed or radically revised and coordinated in line with the target goals and objectives of a specially designed, independent long-term program for the development of the Arctic.

For this purpose, the following tasks are necessary:

(1) map the entire array of previous decisions to check their conformity with the main goal of the Arctic mega project and consistency with the selection of the most efficient decisions;

(2) complement this array with new system solutions;

(3) assess system-wide and specific risks of the mega project;

(4) develop scenarios for implementing the mega project depending on the projected impact of external and internal factors, and determine priority decisions in the given circumstances;

(5) develop and establish a system of program-oriented management, which would be adequate to the purpose and the scope of work for the implementation of mega project;

(6) establish permanent mechanisms to use system-wide diagnostic decisions and monitor the implementation of the Arctic mega project;

(7) elaborate and use mechanisms to integrate development programs for territorial units of the Arctic mega project in order to achieve its main objective;

(8) evaluate the effectiveness and efficiency of the tasks and decisions while preparing program tasks, conducting the system-wide analysis of decisions, and monitoring the implementation of the Arctic mega project;

(9) organize a unified information system for the development and implementation of the Arctic mega project;

(10) establish a system of scientific support to the Arctic mega project.

In this respect, the issue of a supreme body that could govern the targeted program for the complex development of the Russian Arctic requires special attention and a conceptual response. The Commission for the Arctic Development has been created in line with the Presidential Decree of February 3, 2015 and the implementing Decree no. 228 of the Government of the Russian Federation of March 14, 2015 and Regulation no. 431-r of the Russian Federation of March 14, 2015. This is undoubtedly an important step forward compared with the situation in previous years, where complex intersector problems of the Arctic region of key importance for the entire country had no common organizational basis. At the same time, the coordination status of the Commission, and the functional overloading of its members, the participation of which in this specific body is part of multiple duties makes it only partially compliant with the criteria and requirements of the program-oriented management of the Arctic mega project, and limit its implementation capacity and efficiency.

In order to ensure the effective and efficient program-oriented management focused on the complex development of the Russian Arctic zone, in addition to the aforementioned Commission, it is necessary to create a supreme body with the status of a federal ministry, staff of which would operate on a regular basis and exclusively address the challenges facing the Arctic mega project (the precedent is the latest program for the Far East and Transbaikalia area). The proposed ministry for the Arctic affairs should administratively be included in the mandate of the Deputy Chairman of the Russian Federation’s Government. As a model of interaction between the Commission and the Arctic ministry, it is appropriate to use the successful experience gained in the management of natural and man-made emergencies (specifically, the experience of cooperation between the Government Commission for Emergency Management and Fire Safety (formerly the Interagency Commission) and the Ministry of Emergency Situations of Russia).

The exceptionally high territorial heterogeneity of the Russian Arctic zone requires the inclusion of highly different programs addressing specific problems of different regions and municipalities in the mega project of the Arctic redevelopment. In this context, it is relevant to use the following methodological requirements and integral elements of the development projects designed for the territorial units in order to achieve the objectives of the Arctic mega project. First, it is necessary to elaborate a comprehensive list of objectives and the expected performance indicators defined for each territorial units in order to achieve the objectives of the mega project with the defined volume and sources of the necessary resources. Second, it is required to per-

form qualitative and quantitative assessments of the development possibilities facing the territorial units while implementing manufacturing, transport, infrastructure, and other projects of the Arctic redevelopment. Third, all previously developed strategies and programs of territorial units need to be reviewed and amended accordingly. The aforementioned documents need to be enriched either with separate sections that reflect actions required from federal, regional, and municipal authorities in order to transform the territories in line with the tasks of the Arctic mega project or separate programs that support such a transformation. One of the prerequisites for the implementation of the systematic approach to the program-oriented management of the Arctic mega project is the inclusion of its territorial section in the summary program of the project's design and implementation.

Methodologically, it will be challenging to harmonize most of the Arctic development projects with the military objectives detailed in the "Strategy for Developing the Arctic zone of the Russian Federation and the National Security through 2020," approved by the President of the Russian Federation February 20, 2013. One methodologically appropriate and cost-effective solution is to expand the country's military presence in the Russian Arctic and to solve the development problems, e.g., the restructuring of the settlement system in the coastal zone of the Arctic. It is appropriate to deploy small contingents that are provided with necessary equipment and modern transport vehicles on a regular basis in proximity to existing settlements to the extent possible, rather than in an open field. This would allow the local population to be engaged in productive labor to offer civil services to the military facilities, provide army units with local food, offer health care services for the local population in particularly complicated cases, and use military transport infrastructure for local needs within permissible limits, etc. This is just a small list of public-policy problems facing the Russian Arctic in general and the Arctic mega project in particular that need to be resolved in the future.

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Leksin, Vladimir Nikolaevich, Dr. Sci. (Econ.), professor, chief researcher

Porfiryev, Boris Nikolaevich, Cand. Sci. (Econ.), professor, RAS corresponding-member, deputy director

Translated by V. Kupriyanova-Ashina