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Projects of the territorial and productive complexes in the Arctic: the soviet experiment and the modern situation



© *Timoshenko* Albina Ivanovna, Senior Research Fellow of the department of the social and economic history of the Institute of History of the SB RAS (Novosibirsk), candidate of historical sciences. Contact phone: +7 913 772 54 60. E-mail: timoshenkoai@ngs.ru.

Abstract

In the article analyzes the problems of complexity in relations to the economic development of the northern territories of the USSR, which are rich in natural and mineral resources, and explores the possibility of using historical experience in a modern innovation policy.

Keywords: *Arctic, resources, the state regional policy, territorial-production complex.*

Territorial-producing complexes (TPC), as a specific form of the organization of the productive forces, science and practice of the economic life is estimated highly enough. It is believed that their use makes it possible to create an effective territorial-industrial education, as the part of which can successfully operate and communicate the elements of different but interconnected global systems: economic, demographic, natural and social. TPC formation occurs in a particular area at a certain time and as a result is achieved the greatest social and economic benefits through integrated and sustainable development of the industrial infrastructure, the use of local natural (land, water, raw materials) and labor. In contrast to the sectoral approach to the economic development is the creation of TPC spatial form of the organization of the productive forces, which takes advantage of specialization, cooperation, combining various elements of the economic system. Thanks to this ideal can be achieved by the complexity of the interaction space, nature and man.

This approach to the organization of the production and generally living in a certain area is extremely important for Russia. It is caused by the vastness of its spaces, amazing climatic and cultural diversity of the civilization and regions as well as the specific nature and significance of the relations between the center and periphery, state and local governments. These factors have historically been present, always actively affect the regional policy of the state, which was most clearly manifest in the last century, with increased attention to the development of the productive forces in the region to address the most important strategic goals of the country.

Special attention was paid to the Russian Arctic, which at the end of XIX - early XX century in the Russian government was regarded as a region of the great economic and geopolitical importance. Witte, who is in this period, was at the key government posts, commented that, for the future health of Russia to settle in and learn the Russians not only the central and inhabited areas of the country, but also the peripheral north, are still poorly integrated into management, but with a more economic and military-strategic importance. To this end, he saw firstly the European North, especially the Murmansk coast and the Kola Peninsula, where the proposed building railways, military and commercial ports are deemed necessary to ensure sustainable geo-political situation of the state and its long-term socio-economic growth¹.

Soviet authorities from the earliest days of the Arctic region have recognized its strategic and geopolitical interests. Without it was thought the territorial integrity of a huge country that is simultaneously on two continents, and occupied much of the land in Europe and Asia. The Northern Sea Route was considered as the shortest between the western and eastern extremities of Russia. In addition, attracted the known natural resources, including minerals and raw materials. The Soviet government used as prior experience, and promotes new scientific, technical and organizational ideas. State ownership of all resources and means of production, planned management of the socio-economic and political development of a single center allowed the Soviet Union to address such major national issues as the development of the Arctic.

However, in the 20-30's main efforts were directed mainly to the transport arrangement in the region. The Northern Sea Route was necessary for the export-import operations. On the complexity of economic development of the northern territories was much talk, but mostly it's long-term development of the country concerned. In the second five-year plan (1933-1937) included a section on "Development of the Soviet Arctic," which stated that it was necessary to move from the individual actions "to a planned and integrated, calculated for several years, a broad study and the Industrial Development polar regions of the Soviet Union "². In the real version of the plans also have to upgrade a few individual sectors of the northern economy: forestry and fishing industries, partly mining. On the Kola Peninsula preparing the development of apatite-nepheline ores mined the deposits of coal in the Pechora coal basin, in the basins of the Kolyma gold, Indigirka, Aldan, Yana and others allow for greater program of geological studies to identify mineral resources. In 1935 on the construction of the North Asian Norilsk mining complex businesses.

¹ S.Y. Witte The collection of the works and documentaries. T. 1. Book 2. Part 1. p. 338-340.

² Second five-year development plan for the national economy. T. II. The Plan of the regions development. Moscow, 1934. p. 252-254.

In our opinion, the state at the time still was not ready for the large-scale development of the North, and has gone the way of so-called "hot spot" areas for the development of the individual solutions of some key tasks of the national economy of the USSR. The largest industrial complexes in the pre-war years appeared on the European North, where it was built several dozen industrial and energy companies, including mining and chemical trust "Apatite", Murmansk fish processing, pulp and paper, cardboard, plywood, furniture factories. The North Asia is still waiting for his turn³.

Theoretically presented and argued the need for an integrated infrastructure development of the northern sector, but in practice, the implementation of the specific projects is largely influenced by both objective and subjective factors. Played an active role and the specific structure of the authoritarian state power in the Soviet Union, which often determines the most important decision, not only in politics but also in the economy. Some of them can be considered as voluntarist, which brought considerable damage to community development, which is not made up to the present. One of the clearest examples of the Arctic include the construction of railway Chum - Salekhard - Igarka known as Polaris, which began in 1947, but was not completed for unclear definitely still reasons. However, the need for this road was very high for the social and economic development of the northern territories of the USSR. Particularly acute, it is indicated in the 60-70s in the formation of the West Siberian oil and gas complex. In 1979, Academician A.G. Aganbegyan noted that stopping the construction of the road turned to the North of the country, at least a billion loss.⁴

In the Soviet times, a lot has been done in the direction of the social and economic development of the North. In the second half of the twentieth century, scientific and technological advances made it possible to more effectively than before, learn hard and extreme in nature and climatically areas. Increasing importance in the economic development of the Asian part of the Soviet Union took on the Arctic. It is actively developed the most valuable deposits of minerals, gold, diamonds, tin, and others in the Arctic Circle rapidly growing center of mining developments and non-ferrous metallurgy - Norilsk. In the 80 years of the North Yenisei Territorial industry included the world's largest Norilsk Mining and Metallurgical Combine, Nadezhda Metallurgical Plant, Talnakh copper-nickel mine, Khantaika hydropower, ports Igarka and Dudinka, a number of other infrastructure companies and transport communications.

³Tymoshenko A.I. The Russian regional policy in the Arctic in the XX-XXI centuries.: Issues of the strategic continuity // Arctic and the North. 2011. Number 4. p. 15-27.

⁴ Pravda. 1979. 7 December.

The outstanding event of the 60-70's was the formation in the north of Western Siberia, the world's largest oil and gas industry, which in 1980 supplied about half of the oil production in the Soviet Union and the third natural gas, which is highly effective impact on the development of the economy, changes in fuel and energy balance in favor of oil and gas. In 1960, their share was 38%, in 1985 - to 76%. All in the years 1964-1985 in the northern oil and gas fields in Western Siberia was produced over 5 billion tons of oil, which replaced the 11 billion tons of coal for the production of which would take more than 15 years and the enormous logistical resources⁵.

The development of the northern regions of the USSR has received the increasing attention in the public policy with an increase in the needs of the country in the national economy of the raw materials and energy resources. In addition, the products obtained in the North, was the basis for the country's exports. If during the period up to 1960, in the economy of the North has invested a little more than 14 billion rubles, in the period 1960-1980 - more than 100 billion rubles. Industry, and the first branch of specialization of the economy of the North, has developed more rapidly than the federal and republican. As a result of the growing share and the importance of the northern regions in the industrial production of the country. The growth of gross industrial output is visual on the most northern national republics and districts. So, in Yakutia during the twenty years it has increased by 4.1 times, in the Komi Republic - 2.7, in the Karelian ASSR - 1.8, Khanty-Mansi Autonomous District - in 36.8, in the Yamal-Nenets - in 27, 4, in the Evenki - 9.7 times⁶.

The greatest development of the primary sector received the northern economy, complexity, at best, was achieved in the production development. However, in the north of the Soviet policy of the Government to determine the most important organizing principles appreciated by the international community. The soviet experience in the development of the regional integrated programs with the active participation of the state was used to develop the overseas North in Canada, Alaska (USA), which recognized the usefulness of the planning and forecasting methods, economic models and combination, which, as it turned out, did not contradict the principles of the market economy⁷.

The great contribution Siberian Branch of the Academy of Sciences, research institutes which since the late 50's actively involved in the development of regional problems of the Asian part of the USSR, including the Arctic. Special attention was paid to the development of new in-

⁵ Tymoshenko A.I. The strategic ideas of the industrialization of Siberia in the twentieth century: Concepts and solutions // Ural Historical Journal. Number 16. 2007. p. 24.

⁶ The chronicle of the North. V. 11. M., 1985. P. 103.

⁷ Management of the regional programs in the USA and Canada. Moscow, 1983; Agranat G.A. the possibility and the reality of the Northern development: global lessons. Moscow, 1992.

dustrial areas, where the development of the effective mineral deposits unfolding energy and industrial engineering, and later production. At the same time was very limited logistical and especially labor. In these circumstances required different methods and ways of organizing production and management as compared, for example, with the European part of the USSR or Siberia. The scientists acknowledged that the North, sparsely populated and little exploration in economic terms, a more significant scale pre-planning research, in-depth scientific and technical justification for any industrial or social construction.

Proposed to adopt the principle of the integrated development of the area, already used in the Soviet economy. First results were presented at the conference on the development of the productive forces of Siberia in May 1969 in Novosibirsk, in the preparation and conduct of a Siberian Branch of the USSR took an active and direct participation. By this time in the decade after its creation, a lot has changed, there was a kind of soul-searching. With the opening of the north of the Western Siberia significant reserves of oil and gas here moved the center of gravity of the regional economic and social policy, for the benefit of national economy of the country in a short time it was necessary to create in the climatic conditions of northern, sparsely populated and underdeveloped in terms of the production and the transport infrastructure, a new major oil and gas producing.

The conference concluded that the strategy development of the northern territories of the USSR to change the already existing stereotypes of the economic management, active use of the new methods of the organization of industry and construction, technical and technological solutions that will minimize the cost of living labor, will lead to a massive commercializing the natural resources in an integrated way to use them.

In 70 years at the highest levels of the Soviet government recognized that in areas of the new industrial development of the most efficient formation of the WPK, primarily in the areas of development of the largest deposits of mineral resources, large-scale power construction. With the discovery of oil and gas fields in the Western Siberia has been considered the question of the formation of the West Siberian oil and gas industry (ZSNGK). It is very difficult to scale the development of the entire national economy. To solve it required the huge material and human resources, capital investments, is doubling almost every five years. Expected the economic life of the radical transformation of Tyumen and Tomsk regions in the part, where the establishment ZSNGK planned the large-scale economic construction over a wide area, heterogeneous in the socio-economic and climatic characteristics. Formation of ZSNGK covered in four the geographic areas: the Arctic and Middle North, Far North and the South of Western Siberia. And once estimated the

approximate cost of the construction work and the life in the Arctic, which differed by 3-4 times from the same level in the Arctic.

The solution of the problem is divided into several stages, which are determined by the evolution of the production structure of the complex, from the geological preparation of the hydrocarbon fields for the development, then to its production, transportation and processing capabilities. In the years 1966-1980 formed the first two production zones ZSNGK: Middle Ob and the North Tyumen. In their territory during this period was mastered to 70% of the investments in ZSNGK spent. Here, in 1980, was produced 92% of oil and gas of the total production in the complex. Then the planned development of a northern oil fields, located in Yamal⁸.

Creating TPC fit perfectly in a nation-wide strategy to strengthen the single national economic complex of the USSR, and in the policy of the regional development, which is in the public political declarations of the time directed at leveling of the socio-economic differences between the two. These are important issues to improve the planning and management of the national economy were discussed at the largest party and government forums that determined the economic outlook of the country for the next five years. TPC recognized as a progressive form of the spatial organization of the productive forces of the country, which is one of the most effective ways for further development of its national economy. In his speech, Chairman of the USSR Council of Ministers Alexei Kosygin at the XXV Congress of the CPSU stated that in the regional issues of the important strategic direction of the public policy in the next five years will be associated with the development of the WPK, which ultimately will determine the "face certain areas of the country"⁹.

In 1980, under the leadership of A.G. Aganbegyan was made a special economic expedition to the Arctic, which concluded that there is need to review the organizational principles of the development of productive forces. The strategy of "hot spot" of development characteristic of the previous period of history, to be replaced a different approach, which can provide more extensive and comprehensive development of the northern territories, covering not only the production and development of some specific natural resources, and human life in general in the North. The scientific, technical and economic capacity of the state in 80 years, according to the members of the expedition, is presumed to ensure full life northerners like constantly living in the Arctic Circle, and arriving on temporary work contracts. With proper organization of the activity of numerous gov-

⁸ Territorial –produced complexes: Experience and problems of formation. L., 1990. p. 71.

⁹ Kosygin A.N. The main directions of the development of the national economy of the USSR in 1976-1980. Moscow, 1976. p. 56.

ernment agencies involved in economic development of the Arctic, it is possible to solve the social and environmental issues, without prejudice to scale up production.

The expedition based on the complex calculations as a result of the case studies, it was suggested that, in the economic terms, the extraction of the natural resources in the North every year can become more profitable. This is due to the fact that the depletion is located in more southern areas, developing the technical equipment production. Large reserves pose a transport service in the Far North, which accounts for 60-80% of total costs. Reducing these costs can provide a solution to the issue year-round navigation along the Northern Sea Route through the creation of a powerful icebreaker fleet, as well as construction of rail, road and pipeline routes.¹⁰

The expedition made proposals to the State Planning Commission of the development in the Arctic in the future of a number of the WPK and industrial centers, large regional integrated program of the national significance. It was noted that the basis of the comprehensive development in the Arctic has already been laid. For example, in the European part of the country consists of Murmansk TPK, a draft of the Timan-Pechora. Large territorial industrial education Arctic area is North Ob TPK - the main gas production base of the country. The boundaries of his time will be expanded from the Urals to the Yenisei. The largest of clusters is the North Yenisei TPC centered in Norilsk. Over time, the definition of the expedition, it can merge with the north of Yakutia, where the year 2000 is expected to further the development of gold-and diamond-mining industry, tin mining and processing plant¹¹.

The major stronghold in the north-east coast of the USSR, the expedition offered to Tiksi port at the mouth of the Lena, the value of which may rise after coming to Yakutsk railway. A shift to a year-round navigation on the Northern Sea Route and the presence of a deep way to Dudinka building factories in these areas may be organized by mounting large-block structures produced cheaply in the inhabited areas of the country and delivered to the court. It was assumed that the North Yenisei TPK by 2000 should reach its business activities vast territory stretching from Turukhansk in the south to Cape Chelyuskin and Severnaya Zemlya archipelago in the north, from the west to Messoyakha Khatanga the east.

The plan of the development of the Soviet Arctic developed under the leadership of A.G. Aganbegyan involving the simultaneous solution to the problems of the proportional development of the industrial and social infrastructure, security, human interference in the environment, etc. In theory, it was rated very highly, but in practice it was not implemented. The state policy in the Arc-

¹⁰ Aganbegyan A.G. The development of the natural resources of the Arctic zone of the USSR / / Proceedings of the Academy of Sciences of the USSR. Series history, philology and philosophy. No. 2. 1984. Number 9. p. 9-10.

¹¹ The same place. p. 12-13.

tic continues to be based on the predominance of production priorities. The main attention of the business activities to focus on the growth of performance, which is not always accompanied by a rational and profitable export of raw foods. At the expense of hydrocarbons extracted in the Arctic, in the 80 years solved questions to elementary Soviet population with food, clothing, footwear and other consumer goods, which in principle could be produced in the country. Apparently, the project economics at a time slightly ahead of its time.

In a few decades the idea of the integrated development of the Arctic regions of Russia was once again in demand. From June to August 2000 was updated the Arctic expedition of the academician G. Granberg - one of the members of the first expedition of SB RAS. After 20 years, he reiterated the need for social and economic feasibility of integrated development in the Arctic, the value of which for the present and future state of the disintegration of the USSR has increased even more.

The historical experience and the strategic ideas from the past life may be useful in the present management practices must be continuity in the further development of the scientific hypotheses and programs put forward in the earlier period. Practice shows that in Russia and in the market economy is still advisable to use methods of the centralized planning and the prediction of the regional interest in the economic development of the territories. Requires only standard-setting and controlling the activities of the government, which is to organize the interaction of the private and public companies, central and local government in the public interest, rather than individual dealers and shady businessmen. The state of his activities, the growing role of the regional government in the planning and actual development of the territory may well create the conditions for the investment and sustainable economic, social and cultural development in the Arctic.

This is recognized by our scientists involved in the development of the modern regional socio-economic development of Russia. They are modeling the economic processes in the Arctic over the next decade (2030), indicate that in a market only the state can take over the organization of major infrastructure projects, transport, energy, social, which in turn will be able to establish a factual basis for a truly integrated Arctic development. For Russia, the Nordic countries, it is one of the most important conditions for its future development.

Siberian scientists is considered the Arctic zone of the country as the largest natural and the economic zone of the state, including both the continental shelf, which in the XXI century will really provide a significant increase in the production of hydrocarbons and other mineral resources and the coastal zone, directly connected with the resource potential seas of the Arctic Ocean. Giv-

en the increasing importance of the Northern Sea Route, they are modeling the positions of economic organization in the Arctic region is considered a border zone "of intense interaction and territorial akvaterrial-production structures of land and ocean", on which the future development of the whole of Russia¹².

By the developing of the ideas of the integrated development of the northern territories, put forward in the Soviet period, they continued to believe that throughout the Arctic coast is advisable to create the economic systems based on the resources that are on the coast or in the interior of the continent at a distance of 300 km. However, we are on a continuous development and settlement of the Far North is still not talking. The Russian Arctic is a territory with extreme and uncomfortable conditions of the human life, with poorly developed transport and communications, social and cultural infrastructure, etc. However, it is necessary to identify strategic areas for future exploration and the development of this harsh region, rich in natural resources, taking into account the real needs and opportunities.

The process of the industrial development of the Arctic zone of the Russian Federation to start from recovery and subsequent formation of the local port and industrial hubs or centers, which gradually developed into the Arctic akvaterrial clusters. Currently, within the Russian Arctic in Gentle can accommodate existing and previously formed or proposed to create the new TPC: Kola, Archangel, Nenets, Yamal, Norilsk-Turukhansk, Taimyr, Northern Yakutia, Chukotka. They are focused on the main transport polar ports and industrial centers of Russia: Murmansk, Arkhangelsk, Dixon, Dudinka, Tiksi Pevek and promising - Indigo, economic specialization which will be directly linked to both industries, historically, and with promising.

In the last decade to develop regulatory database of the intentions. March 30, 2009 in a special issue of "Rossiyskaya Gazeta" published one of the founding documents - Principles of the State Policy of the Russian Federation in the Arctic for the period up to 2020 and beyond, approved by Russian President Dmitry Medvedev September 18, 2008. It was clearly indicated the status of the Arctic as a strategic resource base of the country, providing the solution of the social and the economic development, and evaluated the role of the Northern Sea Route as a national transport communications. In the list of the main purposes of the state policy in the Arctic includes the use of the Northern Sea Route for international shipping, but within the jurisdiction of the Russian Federation¹³.

¹² Trajectory of the projects in high latitudes. Collective monograph. Nauka, Novosibirsk, 2011. p. 264.

¹³ The study and the development of the Arctic zone of Russia in the XVIII - beginning of XXI century. Collection of the documents and the materials. Novosibirsk, 2011. p. 291-299.

As for the overall socio-economic development of the Russian Arctic, in addition to ensuring that the resource problems in the document focuses on the formation of a single information space in the Arctic zone of the natural features, the modernization of the social infrastructure, including education, health, and housing development.

Special attention is given to the social well-being of the indigenous peoples of the Arctic, and their adaptation to the modern society with the traditional residence and the economic activity in the extreme environmental conditions. Supposed to sound environmental management and the development of environmentally friendly tourism in areas where traditional farming and indigenous people, the preservation of their cultural heritage and language, folk art and crafts.

The implementation in the Arctic of all industrial and commercial and other projects in the direction of the study and management of the natural resources, especially oil and gas, provides environmentally careful maintenance work, which should be accompanied by a comprehensive system of safety of the territory and of the population of the various threats of natural and manmade. An important role to play using new technology and solutions for the development of marine mineral deposits, water and continental biological resources, including the eternal ice-covered areas. Provides for the formation of this special equipment and aircraft, vessels of the fishing fleet and the need for the entire infrastructure.

The document stresses that the successful implementation of the plans on the social and the economic development of the Arctic zone of Russia is a necessary condition of all government support of the economic and the social actors involved in the field of the development of the mineral deposits and other natural resources, and in the development of transport and energy infrastructure and livelihoods.

In order to encourage the implementation of the new projects of the economic development in the Arctic territories specifically addresses the need to develop a mechanism for public-private partnership funding from the budgets of various levels and extra-budgetary resources, and improving fiscal management. It is assumed that the activity should be brought to the organizational activities of the domestic science, which is to offer options in the Arctic national strategy for the long term, which will be implemented under state control through focused and coordinated as a federal executive bodies and bodies of subjects of the Federation and local self-government. Allow the participation of not only government agencies but also of various institutions of civil society and economic structures, if they do not contradict the Russian law and national security.

Thus, the historical continuity at least in the general terms will be preserved, and Russia will remain the world's largest Arctic Power. I would like to hope so. At least the historical experience makes this desirable.

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Revirewer – Zalivskiy Nikolay Pavlovich,
Doctor of Economy, Professor.