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## Regionology of the Arctic and North: MANAGEMENT, ECONOMY, SOCIUM, CULTURE

UDK 338.2+316.4+681.51

### INTERDISCIPLINARY APPROACH TO THE SOLUTION OF PROBLEMS OF MANAGEMENT OF THE ARCTIC ZONE OF THE RUSSIAN FEDERATION



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**Abstract.** The article analyzes the possible ways of the decision of problems of management of the Arctic zone of Russia from the position of the interdisciplinary approach

**Keywords:** Arctic, policy, management, problem, Russia, trust, respect, and an interdisciplinary approach

Relevance to the author's treatment of the subject has led to a number of publications in the media, showing the troubles in the management of the Arctic zone of the Russian Federation. As the specific examples to K. Novikov, and A.M. Tamitskogo. K. Novikov wrote that "the current level of the development and the quality of service in the Arctic could be better". [15] He names the major pain points: the creation of fish, poor infrastructure of the North sea route, forthcoming decommissioning of the several nuclear-powered icebreakers, the rapid reduction of the Arctic populations, the absence of a special structure of the executive body that would deal with the Arctic issues. [15] A.M. Tamitsky notes that "after the signing of the Fundamentals of the state policy in the Arctic up to 2020 and beyond has not yet adopted any legal instrument aimed at achieving the objectives of support and development of the region" [20, c. 115] that the preparation of documents and projects engaged in the different departments without overall coordination of their activities due to lack of a duly authorized body of the government, and "policies do not fully meet the national security of Russia in the Arctic," "characterized by fragmentation and lack of the implementation strategies for the long term", so it needs" new approaches, which should create a special legal regime on the economic, social, environmental and other types of activities "[20, p. 117].

Thus, both authors notes the existence of a serious problem in the management of the Arctic zone of the Russian Federation (Russian Arctic), which can have a very negative impact on the future of the Arkhangelsk region and Russia as a whole. It is important to analyze the problem, to make the findings to better understand the causes of the problem and identify possible solutions.

About the defects in the control system of the Russian Arctic written long ago. For example, in an article published more than a year ago, I have already allocated the main factors that affect the creation of an effective system of the strategic management of the Russian Arctic: the lack of the state of the financial and other resources, conflict of the interest, low efficiency of the state and government; underestimation the role of the northern federal universities in the intellectual, scientific and educational protecting Russia's national interests in the Arctic [9, p. 27-28].

It should be recognized that in the intervening period much has changed. Started the "general-cleaning" of the Arctic [7, p. 6-13], was adopted by the Federal Law of July 28, 2012 № 132-FZ "On Amendments to Certain Legislative Acts of the Russian Federation regarding the state regulation of commercial navigation in the waters of the Northern Sea Route", contracts to build four diesel-electric icebreakers and one multipurpose icebreaker new generation in St. Petersburg, the restoration of the infrastructure of the Northern sea Route, significantly increased freight traffic on it. Y.F. Lukin, summarizing the first practical steps taken in 2012 to change the current situation in the Russian Arctic, the better, even introduced a new concept - "Arctic breakthrough of Putin", understanding it as the beginning of the path of the arctic system in practice, previously identified the strategic areas as an important initial step onset [15, p. 257].

The attitude to the role of federal universities in the development of the Arctic changed, as evidenced on the basis of an NArFU the variety of the scientific events on the issue of the Arctic with Russian and international representatives in the form of forums, conferences, seminars, workshops, implementation of the "Floating University", the creation of the center "Arctic partnership" the center of the space-monitoring of the Arctic, and etc.

At the same time, the company continues to bother the low efficiency of the work of the state bodies in the control system of the Russian Arctic, primarily the Ministry of Regional Development, the Strategy of the development of the Russian Arctic and the law on the southern border of the zone. Initially, inhibition due to the fact that the draft Strategy, passed in October 2010, the Ministry of Regional Development of the government, "was lost in the ice" because of a lack of finance for the actions, over a wide range of the interests and in difference bureaucracy, and therefore is not fully understood with the official status of the document, the government switched to the development of the state program of development "cap world" [13]. Then, almost a year, the former Minister of Regional Development V.F. Basargin Government Presidium meeting October 5, 2011 report by Russian Prime Minister Vladimir Putin, that within the last 1 to 3 October 2011 in Murmansk Second International Arctic economic forum was presented development strategy of the Arctic Zone, and makes the statement: "We are currently considering proposals

that came to the forum, finalizing Arctic strategy and two weeks are making it to the government". [16] It takes about six months, and we learn from the article K. Novikov, published in "Rossiyskaya Gazeta", that "The strategy of the Arctic zone of the Russian Federation until 2020 under way, but not complete" and that "the law" On the Arctic zone of the Russian Federation "to now not only accepted, but even developed "[16]. After five months, October 24, 2012, the same newspaper informs us that the law of the Arctic zone, which offers more than 10 years, not even in the project, Ministry of Regional Development of Russia has announced a competition for its design and is willing to pay for this job 5 million rubles [11]<sup>1</sup>.

The image of a federal agency has a negative impact as a number of blank pages under "Implementation of the state policy in the Arctic," the website of the Ministry of Regional Development, for example, "Key actions for the implementation of the state policy in the Arctic", "management system development of the Arctic zone of the Russian Federation" "The project of the subprogram" Development of the institutional conditions for the comprehensive economic and social development of the Arctic zone of the Russian Federation ", " Monitoring the socio-economic development of the Russian Federation and municipalities that make up the Arctic zone of the Russian Federation ", " Implementation of the state policy in the Arctic, the subjects of the Russian Federation ", " interaction with the business community, civil society, academia and other organizations, the financial sector ", " investment and social projects carried out in the Arctic zone of the Russian Federation. <sup>2</sup>. " On the "normative and legal acts of the Russian Federation" is not provided with any act adopted after Principles of State Policy of the Russian Federation in the Arctic for the period up to 2020 and beyond. Last updated at the time of this writing - October 27, 2011.

All of this suggests that the Ministry of Regional Development is currently not capable of promptly and efficiently solve all the tasks assigned to it in the Russian Arctic. One reason for this state of affairs – is the excessive overload of the Ministry and its reorientation to priorities - the preparation of the APEC Summit 2012 in Vladivostok, the other – is a shift towards specific selfish personal interests arising from excessive greed Russian officials. As evidence of the latter claim comes from the fact of detention of ex-Deputy Regional Development Ministry R.Y. Panova on charges of theft by an organized group of funds allocated for the preparation of the APEC summit in 2012 [8]. Similar examples of greed and managerial incompetence in the media found a lot.<sup>3</sup>

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<sup>1</sup> Project FZ «About the Arctic zone of RF» was published on the website of the Min region of Russia on the 23rd of January 2013 URL: [http://www.minregion.ru/documents/draft\\_documents/2701.html](http://www.minregion.ru/documents/draft_documents/2701.html) (Date of access: 29.01.2013).

<sup>2</sup> URL: <http://www.minregion.ru/Arctic/549,550,551,553,554,555,556,548/560/> (Date of access: 3.12.2012).

<sup>3</sup> Road to Skolkovo in 6 billion became inoperable in a year // Website of the Interregional public organization for the civil rights, "Justice." 30.03.2011. URL: <http://www.s-pravdoy.ru/protiv-korruptcii/8543-2011-03-30-124920.html> (date

Similar problems can be found in other ministries, federal agencies, regional authorities and other management structures. Thus, the unreasoned policy of priorities in the Ministry of Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters led to the positioning of the ministry in the media only as "MOE" and not as "MDGOChSiLPSB" collapse of public notification, developed and successfully serving in the Soviet Union and, as a consequence, a large number of flood victims in Krymsk that occurred on the night of 6 to 7 July 2012 with due regard to the broadcasting system by MDGOChSiLPSB these victims could be much smaller.

The same situation with the Federal Space Agency. A series of failures in spacecraft launches have occurred in recent years indicates that the built in Soviet times, the space industry is given today in a deplorable state. One of the main reasons for this - the exorbitant greed officials. Confirm this assertion of the police is to detect the theft of 6.5 billion rubles allocated from the budget for development of the GLONASS navigation system. [5]

But apparently, the worst situation in the Defense Ministry, as evidenced by the fact that in early 2012, the chief military prosecutor S. Fridinsky called scale theft and abuse by military officials' exorbitant and even space<sup>4</sup>, "and that at the end of 2012 due to the alleged damage from only one of the "women's Battalion" Serdyukov, according to preliminary figures, more than 3 billion<sup>5</sup>.

There are serious management problems at the level of subjects of the Russian Federation. A striking example – is a fact revealed by the police of theft by an organized group of about 3 billion rubles from the budget of St. Petersburg. [4]

There are management problems in the Arkhangelsk region. In March 2012, then-Minister of Economic Development of the Arkhangelsk area E.A. Michaelovskiy was forced to admit that in the Arkhangelsk region "does not actually work strategy of social and economic development of the Arkhangelsk region by 2030" [14]. This can be explained by the fact that "to provide professional support for the development of the Strategy was to attract a strategic consultant for the" Pro-Invest-Special Project "together with" Strategy Partners "[20, p. 7], and to develop a strategy that is true, in my opinion, the criticized in the regional media. But will be more honest recognition that the government at the time of the development and adoption of this document, no qualified,

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of access: 12/08/2012) route to Vladivostok for the APEC summit in 29 billion washed away by rain . 14/06/2012 //

<sup>4</sup> The military prosecutor called the scale of corruption in the Ministry of Defense "space" // portal of "Russian newspaper". 11.01.2012. URL: <http://www.rg.ru/2012/01/11/vor-anons.html> (Date of Access:: 29.06.2012).

<sup>5</sup> Evgeniya Vasilieva was named guilty in the deal of the Defence Service // portal of "Russian newspaper". 23.11.2012. URL: <http://www.rg.ru/2012/11/23/vasilieva-anons.html> (Date of Access: 29.11.2012).

capable on their own, at the appropriate level to manage the strategic development of the region.<sup>6</sup>

From the text of this strategy is not clear for what reasons the Russian businessmen and foreign investors would rightly be considered the Arkhangelsk region, as one of the best places to do business [20, p. 42]. After all, even in the optimistic scenario, by 2030 the number of the economically active population in the Arkhangelsk region decreased by 15% [20, p. 62]. And the fact that among the critical conditions for the implementation of the strategy of its developers in the first place put "attraction in the region's economy needed investment," in the face of continuing global economic crisis significantly reduces the likelihood of its success. Although the demands of the economy and the labor force is in the text of the Strategy as one of the critical conditions for its implementation, the authors suggest ways to solve this problem. It is not clear that it can make business change, for example, in Thailand with an average temperature +25 ° C in the Arkhangelsk region, where the heating season is from September to May?

Negative conditions of the affairs in the shipbuilding cluster of the Arkhangelsk region. During the tests conducted the future flagship of the Indian Navy "Vikmaditya" (the former Soviet aircraft carrier "Admiral Gorshkov"), repair and modernization of which made Sevmash "was found in the lining of the marriage (ceramic coating. - " Proceedings ") of three boilers, steam turbines ship" so that "Russia will lose one billion rubles, and India - one year". [10] The reasons are not only in the fact that, according to "Izvestia", "options contract to repair and refurbish the" Admiral Gorshkov "changed several times," but that was broken synchronous operation with subcontractors, in this case - Baltic factory - manufacturer of boilers.

Depressing and what is now the "legal framework that defines the complexity of the strategic planning documents in Russia are absent. The development and the approval of the individual strategic planning documents are irrelevant now without development and legislative recognition of the full range of documents, tools, and the strategic planning process of the organization "[19]. Even after the flush on the website of the President of the Russian Federation from the public view of the decree of May 12, 2009<sup>7</sup> № 536 "On the basis of the strategic planning in the Russian Federation", many issues remain unclear, even for the regional governors. Therefore held on November 11, 2011 in Khabarovsk State Council Presidium meeting on improving the role of the regions in the economic modernization Sverdlovsk Governor A. Misharin had to pay attention to

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<sup>6</sup> Inflated strategy of the Arkhangelsk region in 2030. Site information and analytical agency "Echo North." URL: <http://www.echosevera.ru/economy/2010/08/31/184.html> (date of access: 03/05/2012).

<sup>7</sup> The search system on the web site of the president RF (<http://graph.document.kremlin.ru/>) URL: [http://slon.ru/russia/sovbez\\_sekretnyy\\_ukaz\\_i\\_strategicheskoe\\_planirovan-171961.xhtml](http://slon.ru/russia/sovbez_sekretnyy_ukaz_i_strategicheskoe_planirovan-171961.xhtml).

the need to address the issue of harmonization of policies on different levels: federal, regional, municipal, both among themselves and the interests of society and business through the development and the approval of the state strategic planning. According to A. Misharin, the Act "must clearly outline the relationship: the federal strategy - Regional Strategy - Strategy city or metropolitan area - the general plan of the city and the program development projects. This approach could serve as a mechanism for the harmonization of the federal and regional authorities and municipalities for long-term economic policy<sup>8</sup>.

Based on the considered material, there are two main sources of management problems of the Russian Arctic: unlimited desire for wealth officials and lack-designed regulatory framework for the formation of a unified planning system and harmonize the federal and regional aspects.

After realizing the fact that the trouble in the control system of the Russian Arctic is a local manifestation of the all-Russian management problems, we can, using an interdisciplinary approach, go to the search for causes and solutions to these problems. This approach, in our opinion, should be based on the theory of change management I. Adizes, T. Parsons developed a model of the society proposed by R.F. Abdeeva evolution model management mechanism and the proposed A.G. Fonotovym concept of mobilization type of transition from the development to .innovative.

Parsons in his "concept of the society's components and their relationships," regarded society as a particular "type of the social system (the whole universe of social systems) the highest level of self-sufficiency," [17, p. 100]. Society is seen as a separate system, with respect to which other separate subsystems of action (body, identity, and culture) form one of the environments, which are located outside of the environments of the system itself, which are located above and below the overall hierarchy of the factors controlling the action in the world of life . Above the action system in this hierarchy is the so-called "higher reality" symbolic representations which are seen as cultural objects. Below are physical-organic phenomena of nature, which is known through the human body and, when he was perceived and psychologically meaningful, become part of the action.

From the point of view of I. Adizes, the ultimate goal of the process of management – is to make the organization effective and efficient in the short and long term - no more and no less [2, p. 37]. These objectives are pursued through the development of organizations at different stages of the life cycle of the four main roles (functions): the production of the result (R), administration (A), entrepreneurship (E) and integration (I). The role of R enables the production of "proper"

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<sup>8</sup> State Council Presidium meeting on improving the role of the regions in the modernization. 11-11-2011, 12:00. Khabarovsk / / Site of the President of the Russian Federation. URL: <http://www.kremlin.ru/transcripts/13477/work> (date of access: 08/29/2012).

product, that is a short-term impact. A role provides the production of the product "right", that is, short-term effectiveness. The role of E provides long-term effectiveness, and the role I - long-term effectiveness.

Problems of any organization linked to the assimilation of these alternate functions (roles) as you progress through different stages of growth (Courtship, Infancy, come on, youth, flowering) and the loss as you progress through the stages of aging (Aristocracy, Salem City, Bureaucracy) its life cycle.

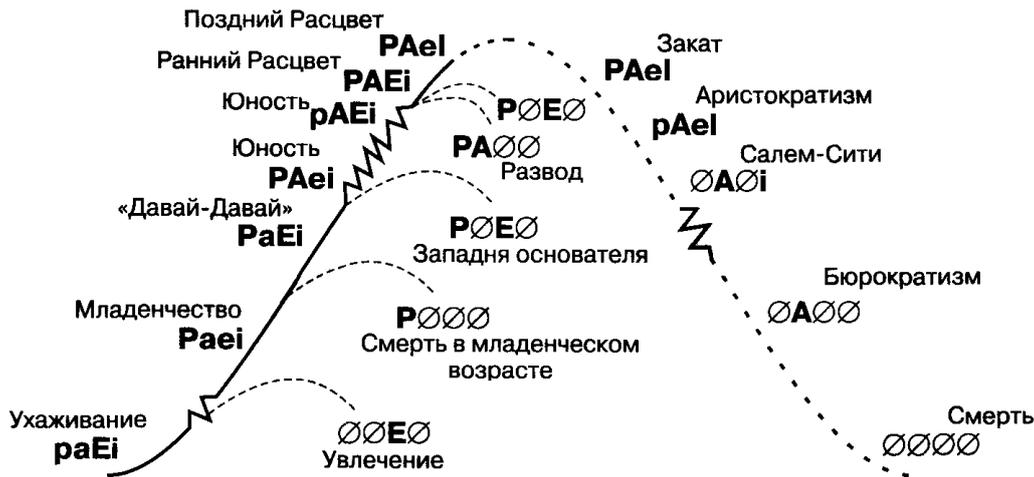


Fig. 1. The sequence of the development roles of PAEI on a typical life-cycle I. Adizes

At the stage of courtship organization develops the function of entrepreneurship during infancy - production function results (business function to temporarily step aside), and on stage come on the learning to implement these functions simultaneously. In step Youth mastered administration function, and then the organization learns to implement functions of administration, production and business results simultaneously. The function of business is transferred from the founder of the organization, that is institutionalized. In step Blossom mastered all four functions, which allows the organization to be effective and efficient in the long term and short term [3, p. 214-115].

In relation to the social system, in our opinion, the role of E must provide a link to a "higher reality" referred to in the Model T. Parsons. This "ultimate reality" is reflected in religion or ideology, defining the meaning of life.

Analyzing the current state of Russia through the prism of the life-cycle of the corporation of I. Adizes. Russia, born in the liberal project under President Boris Yeltsin, passed the stage of infancy and moved to come on stage, accompanied by a rise of the decentralization of power. Begins the process of the developing a role, but as a result of the financial crisis in 1998 weakened the role of P, and since there is frustration in the liberal project, and weakens the role of E. There

is a need to launch a new project with a conservative color that starts successfully implement President B. . Putin. During his first two terms successfully restored the role of P and begin to develop the role of A. It seems that the transition to the stage in front of Youth. However the result of the Conservative-Liberal E role of the president Vladimir Putin replaced by liberal colored part of Dmitry Medvedev. The global economic crisis of 2008, the events in the village of Kushchevskaya and others have led to a sense of dynamism to the losses of the first half of zero, increased anti-liberal sentiments in society and the process deligitimitation power. As a result, 54% of respondents were of the view that the changes are for the worse with the increasing backlog of Russia's leading countries, the case studies show in 2011. [6]

This is largely due to the global crisis of values associated with the need to change the paradigm of the deep human development [5, 12]. This fact is beginning to realize more and more people. It is no accident, that F. Fukuyama argues that a new ideology in which "we should talk about the correction of capitalism and of the extent to which the state must help society adapt to change" [23]. As rightly pointed Vladimir Putin, the root of the economic problems in the fact that "at an impasse model based on unrestrained borrowing capacity, to life in debt and wasting of the future, the virtual, not real values and assets". [18]

In view of this appeals, Dmitry Medvedev, based on the democratic values of liberalism, are perceived by the society is extremely cool, and in accordance with the concept of I. Adizes, rolled back toward death in infancy (RA00). The weakening of E leads to a weakening of P and A, and so begins to decompose the system administration. Even the return of Vladimir Putin and his conservative-liberal project has not yet been able to improve the situation in the Russian society, because most of the population after the criminal privatization disappointed in the ideas of liberalism.

The solution is to find a project based on a new paradigm of the development of the society, on the best of the "Red" project and Russian traditions. The crucial role of the traditions explains the concept of R.F. Abdeeva. According to his opinion, in the long evolution of management established a mechanism of self-organizing systems, which feature is the presence of two feedback loops (OS) of memory. The first circuit operating system provides homeostasis, and the second loop is the selection (filtering) useful information from the primary circuit through the memory. As a result, useful information "accumulated to form the experience, knowledge, is synthesized in a particular structure, raising the level of organization, activity and vitality of the system" [1, p. 34-40].

In the social system, this memory is implemented by the tradition. A.G. Fonotov noted that "the need for the survival of the society and the state in an emergency forces them to address to emergency funds, and the reproduction of the process in a systematic way is the cause of the mobilization type of the development. This characteristic feature of Russian history was repeatedly noted by various authors "[24, p. 104]. Therefore, the national tradition in today's complex international environment encourages Russian society reuse proven mobilization type of development that places the public interest above the interests of the individual.

There are other conceptual and theoretical models that require a deep understanding of the prospects, opportunities and threats to the development of Russia as a whole, and the strategic management of the Russian Arctic. The draft Federal Law "On the Arctic zone of the Russian Federation" (01.23.2013) is not accidental notes that public policy in the development of the Arctic Zone is an integral part of the domestic and foreign policy, and should be based on the strategic planning, comprehensive, coordinated solutions geopolitical, social economic and environmental problems in the Russian Arctic. [25] Sustainable development of the regions of the Russian Arctic is important for the formation of a common economic space of Russia. Thus management of the Russian Arctic must be built not only on the basis of continuity of solutions with the previously adopted state programs and initiatives, but also with the use of a conceptual and theoretical wealth management as a whole, and other sciences, as well as the best practices of existing practices of state, regional and local management in Arctic countries.

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UDK 504:502(470+571)

### THEORETICAL APPROACHES TO STUDY OF RATE PROPORTIONS FOR TWO REGIONS



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**Abstract.** This article is dedicated to long-term forecasting of growth rates on base of development of problems of the North and Arctic. Information is presented in this work about condition and particularities of operations of region, correlative features of prospects are determined

**Keywords:** *Arctic, north economy, North, Russia, long-term strategic landmarks, Far East, sustainable development*

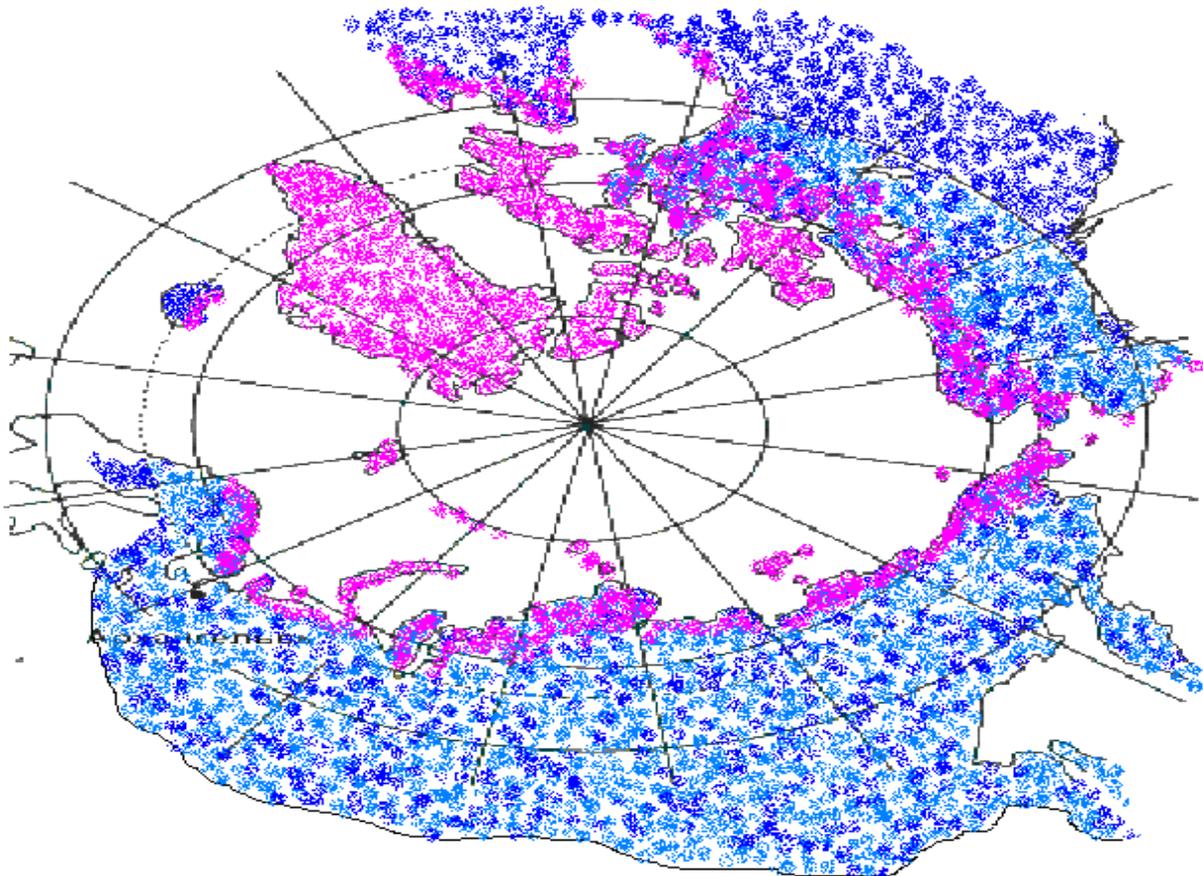
The development of the two northern regions, as of August 2009 can be described with the words: "The North and The Arctic occupy key in the new paradigm of the economic, energy, environmental and the regional development of the leading countries in Europe, North America, Russia and the Far East."

A special place in the development of long-term strategic orientation for sustainable development given to the regional economy, lies at the junction of the North and the Arctic. With this approach are significant compliance and / or mainstreaming tempo proportions of these two regions of the planet.

In the short term, up to 2014, the rate of the growth and the economic development of the two regions will be affected by the crisis. Formation predominantly resource-intensive economies in those regions will be in a very difficult time for many of the leading countries in the period of the economic development.

It is believed that this is largely due to the global changes associated with overcoming the global financial and the economic crisis. However, the financial changes have national and / or regional color, so their impact on the economy of the two regions appear to be different.

Pic 1. The North and The arctic in its boundaries<sup>1</sup>



More important is the impact of a common energy strategy. Place under the pressure of its economic, social and ecological processes can significantly affect the value of the resource and transport capacities of the North and the Arctic, the course of the spatial development of Russia, as well as a few other northern and Arctic countries. This, of course, can affect the rate of growth, which, in turn, affect the processes of regional differentiation within the two regions and social integration among the major economic powers.

For discussion and effective theoretical and practical solutions under these conditions is necessary, first of all, to recognize the importance of having a number of major development challenges of the northern and the arctic regions, the distinctive features of their economies.

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<sup>1</sup> The boundaries of the Russian Arctic are identified without the draft Federal Law "On the Arctic zone of the Russian Federation", published January 23, 2013 on the website of Regional Development. URL: [http://www.minregion.ru/documents/draft\\_documents/2701.html](http://www.minregion.ru/documents/draft_documents/2701.html) (editorial board). see the map of AZRF. URL: [http://narfu.ru/aan/Russian\\_Arctic\\_Lukin/index.php](http://narfu.ru/aan/Russian_Arctic_Lukin/index.php) (Date of access: 12.02.2013).

Apply existing of the regional development experience to be adapted, but with the accumulated knowledge and information, in the context of environmental, resource, climate and social changes. Without this adaptation process and the problem of the regional development of the North and Arctic regions in terms of the growth of their economies only lead to greater economic instability.

Should take into account that a significant impact on the development has a degree of the environmental management and the environmental protection in the North and the Arctic. Movement and / or a shift to the north of resource increase the levels of contamination in areas where the natural environment is a modest self-cleaning, which leads to storage of pollutants and additional burden on the economy due to environmental costs, a decrease in quality of life.

For the new macroeconomic conditions for the regions of the North and the Arctic should be developed programs to resolve their specific problems and the strategic priorities. Economy of the northern and the Arctic regions account for the modern processes and generally accept the strategy of the sustainable development. However, the summary comparisons show that the economy of northern countries and regions is offset relative to the market and / or the planned economy. As a result of the country's northern and the arctic regions represent, may not have developed the market, and not the plan, but something else, still not fully analyzed. In such circumstances developed economic programs and the social prescriptions, standard approaches to the observed trends of state, corporate and financial policies must take a distinct northern coloring.

In the modern economic conditions of the northern economy and the Arctic policy must take into account the forced growth of the construction, the spatial distribution of the economic growth rate of the two regions and their orientation with respect to the axis of "North - South" (for example, from Norway to Pakistan), geographical and transport conditions, the contradiction between their spatial dimensions and area, and the extent of favorable climatic conditions for the populations of the two regions.

*Reviewer— Zalivskiy Nikolay Pavlovich,  
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UDK 314.174

## THE DEMOGRAPHIC POTENTIAL OF RUSSIA'S NORTHERN REGIONS AS A FACTOR OF THE ECONOMIC DEVELOPMENT OF THE ARCTIC<sup>1</sup>



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**Abstract.** The demographic potential of Russia's northern regions on the basis of population dynamics, fertility and mortality is considered; the reasons for the migration of population movement are given; the affect of demographic potential of the northern regions on the economic development of the Arctic is shown

**Keywords:** *demographic potential, migration, the northern regions, the economic development of the Arctic*

Arctic for Russia - is our future, predestined fate, the heroic efforts of our ancestors and the Soviet people, the geopolitical status of our country. Awareness of this should be the impetus to construct our future [ 1, p. 13 ].

### **Introduction**

Arctic – is the northern region of the earth, including the deep Arctic Basin, shallow marginal seas with islands and continental land adjacent parts of Europe, Asia and North America. Within the Arctic, there are five Arctic states (Russia, Canada, U.S., Norway, Denmark), which have the exclusive economic zone and continental shelf in the Arctic Ocean. To the Arctic zone of the Russian Federation (Russian Arctic) is about a third of the total area in the Arctic.<sup>2</sup>

In the principles of State Policy of the Russian Federation in the Arctic, says that the main objective of the economic policy in the Arctic is to create favorable conditions for the life of the population and the development of production, taking into account the long-term development

<sup>1</sup> The work was supported by the basic research program of UB RAS. Project № 12-7-5-001-Arctic "Theoretical and methodological approaches to the assessment of the demographic and migration capacity of the northern territories, taking into account the elements of environmental safety for the needs of the economic development in the Arctic" (2012-2014).

<sup>2</sup> The composition of the Russian Arctic is indicated here without draft Federal Law "On the Arctic zone of the Russian Federation", published January 23, 2013 on the website of Regional Development of Russia. URL: [http://www.minregion.ru/documents/draft\\_documents/2701.html](http://www.minregion.ru/documents/draft_documents/2701.html). (note edition). See also a map of the Russian Arctic. URL: [http://narfu.ru/aan/Russian\\_Arctic\\_Lukin/index.php](http://narfu.ru/aan/Russian_Arctic_Lukin/index.php) (date accessed: 02/12/2013).

plans for the country's economy. In the immediate task is proposed to rationalize the amount of natural resources and ensure the effective operation of extracting enterprises, especially fuel and energy, mining, industrial and fishery complexes. Improvement of the structure of production in the Arctic should be in accordance with the needs of the economy in general and the environmental conditions of each particular area with state support in the first place, businesses whose activities are related to the provision of public use. Traditional economic activities of the industry should focus on full employment and livelihoods of indigenous peoples. Priority and feasibility mineral development should be based on their quantitative and qualitative characteristics and integrated assessment of economic, social, environmental, and defense factors [ 3 ].

Russian's economic interests in the Arctic is that it is viewed as a source of the resources for the socio-economic development. Thus, the proven gas reserves of the commercial categories there are 80% of all Russian. The Arctic holds 90% of the recoverable hydrocarbon resources of the continental shelf of the Russian Federation, including the 70%-in the Barents and Kara Seas. Predicted the presence of hydrocarbons in the deep part of the Arctic Ocean. In the Arctic, concentrated natural gas, apatite, many strategically important base and precious metals (nickel, copper, cobalt, etc.). Now in the Arctic is about 20% of Russia's GDP and 22% of Russia's exports, produces about 90% of nickel and cobalt, 60% copper, 96% platinum, 100% barite and apatite. Thus, the Arctic is able to provide a solution for social and economic development in the XXI century. and largely meet the needs of Russia's hydrocarbon, water, biological resources and other forms of strategic raw [ 4, p. 20 ].

For the development of natural resources in the Arctic needs appropriate demographic and labor potential. Currently in the Arctic population of about 2 million people, including indigenous people<sup>3</sup>. To maintain this number (or sufficient numbers based on the needs of the economy), requires constant external support. We believe that the best suppliers of human resources are adjacent to the northern Arctic regions of Russia. How much they are willing to perform this function - to be discussed below.

### ***Potentials of the population — content and measurement***

In the research of the systems with a complex structure fruitfully explore the hidden possibilities inherent in their internal structure of the potential (from the Greek. Pure potentiality, a hidden power). A striking example is the potential energy of the mechanical system, hidden in its

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<sup>3</sup> With geopolitical situation in the Arctic is home to over half a billion people - 517 million, or almost 7.4% of the world's population. However, given the southern boundary of the inner eight Arctic countries using regionologicheskogo method of Arctic regions, provinces, municipalities of 4.6 million people, including in the Russian Arctic - 2.5 million people, and in all the other seven Arctic countries - 2 , 1 million (approx. edition).

spatial structure. This approach turns out to be fruitful in the study of biological, social and economic systems that are complex in structure. Not accidentally, the term "potential" in the different treatments was widespread in models of biological, social and economic sciences. Since the middle of XIX - early XX century. into scientific introduced various "potentials", reflecting different aspects of the demographic system. Despite many works, the concept of potential demography (the capitalized value of W. Farr, the reproductive potential of Fisher, growth potential, P. Vincent, N. Keyfittsa population inertia, vital capacity and employment potential L. Hersh and others) have not been extended to the case time-varying fertility and mortality. The attempts to generalize the reproductive potential (Samuelson, J. Kim, S. Tuldzhapurkar, etc.) were based on a model of a special kind, were not adequate to the classical interpretation of the concept or contained errors. Synthesis of growth potential (population inertia) to the general case has been proposed, and the known bounds for the special case of asymptotically stationary population were wrong in changing the average age of childbearing. Has not been well solved the problem of developing a common approach to the concepts of potential demography, launched a long time. Solving these problems is partly reflected in the thesis of J. Ediev "Theory and Application of demographic potentials." The aim of this work was to develop a theory of demographic potentials, reflecting the contribution of human demographic, economic, environmental, and other processes, with the aftereffects, realized through his descendants, for the dynamic population models of general form and applications to problems in theoretical and applied mathematical demography, closely related with the problems of potential demography [ 5, p. 4 ].

A major factor limiting the application of the above theoretical development was the fact that the approaches developed only in models with a constant mode of reproduction. This calls for further development of population estimates for potentials. Relevance of the work is also due to the large interests of catfish to the development of new methods of demographic analysis and modeling. This interest is particularly high due to the unfavorable demographic situation in the country and especially in the northern regions.

### ***Demographic potentials***

If we turn to the special encyclopedic demographic literature [ 6, 7, 8 ], and there we find a "universal" or settled definition of "demographic potential" in these works a definition is simply absent. At the same time in the literature use the categories of the demographic and labor potential. Most local authors give a collective assessment of the demographic and labor potential, not dividing them into two separate definitions. In our view, this is not justified, despite the fact that at the heart of the labor potential is demographic.

The identification of the demographic potential of the human capital or human potential, which, in our opinion, is not quite true. In our opinion, the closest to the definition of the demographic potential approached Wisniewski, Vasin and Zayonchkovskaya. They note that the demographic potential of the country as a first approximation - is the number of its inhabitants. Describing the demographic potential, the authors use the following indicators: population size and reproduction (fertility, mortality), age structure, life expectancy, net migration, population growth projections, the life potential of the population, population aging and pension [ 10 ]. Thus, estimating demographic potential of the region, just use the indicators proposed by Vishnevsky, Vasin and Zaionchkovskaia.

In the last decade again showed interest in the study of the category of the "demographic potential." As the result was a substantial contribution to the theoretical position of the demographic potential of the region and the demographic potential of human reproduction. The study of the demographic potential is reflected in the monographic study S.A. Suknevoy. The paper notes that the demographic potential characterizes the total population of the region's ability to reproduce, that is constantly renewed as a result of generations of birth, death and migration. The main components of the demographic potential in a close relationship, are the total population of the region, the existing structure of the population (age and sex, marriage, ethnicity, migration), and particularly its demographic behavior (for a family, having children, health and the preservation of life, migration mobility). Socio-economic conditionality demographic processes have a significant impact on the components of the demographic potential, leading to a change in the quantitative and qualitative characteristics of the population [ 11, p. 6 ]. This definition of the demographic potential is characterized not by its components, as noted in the previous definition, and the ability to determine the total population of the region to reproduce.

In the next paper clarifies S.A. Sukneva as demographic potential is realized through taking place in the region demographics, structural and behavioral factors of its formation are indirectly (by affecting the intensity of future demographic processes) character. In other words, the intensity of the demographic processes in the coming period of time (and, therefore, the demographic potential) are determined, in particular, formed to date, the structure of the population and behavioral attitudes.

Analyzing the demographic trends in the region, in addition to birth and death should highlight the irrevocable migration plays an important role in changing the population of the northern regions. Therefore, considering the reproduction of the population, we will assume that the renewal of generations is a result of births, deaths and migrations irrecoverable. In areas with heavy

migration exchange, which includes the northern territories of Russia, the role of migration in the formation of people in different periods of time is decisive than natural increase. In addition to direct effects on the population in permanent migration alters the demographic structure of the population. Therefore in permanent migration is seen by us as an important demographic processes affecting reproduction and change the demographic structure of the population of the northern region.

Thus, the demographic potential of reproduction of the region - is inherent in the structure and determined the demographic behavior of the population total reproductive capacity (possible contribution to the reproduction of the population). These capabilities are due to regional demographic processes dependent on the characteristics of the age and sex, marriage and migration of population structure and demographic behavior, and implemented in the area of social and economic policy [ 12, p. 16 ].

#### ***Evaluation of the demographic potential of the Northern Regions of Russia***

The disintegration of the Union, the change of the role of the state in the development of the northern regions and the Arctic have led to a significant reduction in the population and labor force of the Russian North. The old economic and social mechanisms to attract people to adapt, and eventually moving to place the outcome no longer work. At the same time, Russia's economy is dependent for the foreseeable future will depend on the economic potential of the North, their contribution to total GDP. Consequently, in the northern regions of the country should have sufficient and effective demographic and labor potential to provide the necessary level of economic development of the North to meet the needs of the country in hydrocarbons, gold, diamonds and other strategic resources.

Russian North for many years been an attractive and material terms and conditions of the residence for all citizens of the former USSR. Public appeals, organized sets, union Komsomol construction, distribution of graduates of the educational institutions provide extensive development of the North and acquisition of industrial enterprises by production personnel. The situation changed dramatically in the late 1980's - early 1990's., When almost all the northern territories began migration outflow of the population.

From 1990 to 2011, the population of the North of Russia decreased from 9807 to 7967 thousand people, which is the combined losses of the northern territories were 1 million 840 thousand people. In this case, the European part of the Russian North has 67.6% of the losses on Asian - 32.4%. As a result, the ratio of change in population between the Asian and European parts. If in the early 1980s. the share of the European North of more than 50% of the total popula-

tion, by 2011 - 44.7%. Thus, since the mid-1980s. Asian North began to dominate the European part and the absolute number of the population. This trend is likely to continue in the coming decades (Table 1).

It should be noted that in the recent years, the population dynamics of the northern territories have undergone remarkable changes. The current population of the Russian North decreases more slowly than the population of Russia as a whole. If during the period from 1990 to 2000, Russia lost 775 thousand people, over the past 11 years (2000-2011) has 3 million 976 thousand people. In the Russian North for 1990-1999. population decreased by 1 million 298 thousand people, and from 2000 to 2011 - only 542 thousand people. In other words, before the XXI century. Russian North annually lose an average of 130 thousand people a year, and for the past 11 years - a total of 49.3 thousand people, or was losing 2.6 times less. This happened as a result of the increase in population began Asian North and due to reduced rate of decline in the European North. If the whole of 1990-2010 years. with almost equal population of Asia North lost 596 thousand people, and European - 1 million 244 thousand people, over the past 11 years, the population of the North Asia increased by 18 thousand people, and the European North has lost only 560 thousand of population.

Table 1

*The population of the Northern Regions, territories, which are fully refer to the Far North and to the similar areas, in 1990–2011, thousand of people*

Regions	Years				
	1990	1995	2000	2005	2011*
Russian Federation	147 665	148 460	146 890	143 474	142 914
North of Russia	9 807	9 111	8 509	8 295	7 967
European North	4808	4 493	4 124	3 877	3 564
Karelia Republic	792	771	735	703	644
Komi Republic	1 249	1 157	1 058	996	900
Arkhangelsk Region	1 576	1 498	1 390	1 305	1 225
Murmansk Region	1 191	1 067	941	873	795
Asian North	4 999	4 618	4 385	4 418	4 403
Republic Saha(Tiva)	1 111	1 037	963	951	958
Tiva Republic	313	303	306	308	308
Taimirskiy AO	52	43	38	39	34
Evenkiyskiy AO	24	20	18	18	16
Kamchatskiy region	477	422	372	352	321
Magadanskaya region	390	267	202	175	157
Сахалинская область	714	659	569	532	497
Hanti-Mansiiskiy AO-UGRA	1 267	1 293	1 360	1 469	1 537
Yamalo-Nenetskiy AO	489	478	496	523	525
Chukotskiya AO	162	96	61	51	50

The European North of the biggest losses in the population suffered Murmansk region - 396 people (33.2% of the population in 1990). Followed by the Republic of Komi - 349 thousand (27.9%), Arkhangelsk region - 351 people (22.3%), the Republic of Karelia - 148 thousand (18.7%).

On the Asian north of 10 subjects lost eight people, and two of the region had an absolute increase. The leader in population decline is Chukotka - 112 thousand (69.1% of the 1990). If you continue this pace of population decline, the Chukotka in 7-10 years there will be only in the memory of people.

Rapid decline of concern Magadan population-233 million people(59.7%), the Sakhalin Region-217 people(30.4%), Kamchatka -156 thousand (32.7%). In the Republic of Sakha (Yakutia), the loss amounted to 13.8% of the population in 1990, but they are absolutely 153 thousand people. In addition to Chukotka in the Asian north are another four autonomous districts. In two of them there is a decline in population in the Taimyr (Dolgan-Nenets) - for 18 million people (34.6%) and Evenki - 8 million people (33.3%), while two others - the growth of the population: Khanty-Mansiysk (Yugra) - 270 thousand (121.3%) and the Yamal-Nenets - 36 thousand (107.4%). In the Republic of Tuva observed a small decline in the population of 5 million people (1.6%).

The rate of the growth/decline in the population of all subjects of the Russian North, that can be grouped into six groups. In 1986-1990. North of 14 subjects, only one - the Taimyr (Dolgan-Nenets) Autonomous Area - had a decline in the population - 5.6%. Population growth ranged from 1.6% in the Republic of Komi and the Magadan region to 24.7% in the Yamal-Nenets Autonomous District. In 1991-1995. only in two subjects was minimal population growth, in the Republic of Tuva - 0.2% and the Khanty-Mansi Autonomous Area - 1.8%. In 12 subjects observed population decline of 0.3% in the Yamal-Nenets Autonomous District to 37.5% in the Magadan region and 46.6% in Chukotka (Table 2).

In 1996-2000 for three subjects had positive growth, the Republic of Tuva and the Khanty-Mansi Autonomous added the Yamal-Nenets Autonomous District - 2.3%. Decline in the population ranged from 4.5% in the Republic of Karelia to 31.9% in Chukotka, Magadan was losing less of the population - 19.3%. In 2001-2005 positive trend was recorded in the Taimyr (Dolgan-Nenets) Autonomous Area - 1.9%. In Chukotka and Magadan region decreased loss of population: 12.2 and 11.5%, respectively. In the next five years (2006-2010) Taimyr Autonomous again began to lose population - 11.7% of the Yamal-Nenets Autonomous District, which has 10 years of population growth, also had a decline in the population - 1.1%, and the Republic of Tuva, which has growth - decrease (0.1%). In areas where there was a marked decline in the population, the size of the losses ranged from 0.1% in the Republic of Tuva to 8.8% in the Magadan region and 11.7% in the Taimyr (Dolgan-Nenets) Autonomous District.

In population dynamics for 1990-2010 years. and a decrease in the urban and rural population. According to the Russian North, as in Russia as a whole, the urban population has decreased less than rural (18.2 and 20.9%). The same dynamics in the European and North Asia (Table 2).

Table 2  
*The number of the Northern Subjects, territories, which are fully refer to the Far North and in its resettlement in 1990—2011, thousands of people*

Resettlement	Years				
	1990	1995	2000	2005	2011*
Russian Federation	147 665	148 460	146 890	143 474	142 914
city	108 736	108 322	107 419	104 719	105 425
village	38 929	40 138	39 471	38 755	37 489
North of Russia	9 807	9 111	8 509	8 295	7 967
city	7 759	7 169	6 719	6 530	6 347
village	2 048	1 942	1 790	1 765	1 620
European North	4 808	4 493	4 124	3 877	3 564
city	3 840	3 533	3 251	3 056	2 862
village	968	960	873	821	702
Asian North	4 999	4 618	4 385	4 418	4 403
city	3 919	3 636	3 468	3 474	3 485
village	1 080	982	917	944	918

If the decrease in urban areas due to the social and economic factors, the decline of the rural population-based on objective reasons, other things being equal. First, in most of the northern regions the natural conditions are not conducive to the development of agricultural production. Second, the destruction of the traditional (nomadic and commercial) way of life of indigenous peoples of the North, its translation into the life in the townships reduced the rural population. Third and finally, during the XX century arrived people usually join the ranks of the townspeople.

The population of the North of Russia was originally formed as a town. According to Rosstat, on January 1, 2011 with the preliminary results of the 2010 Census, the proportion of the urban population in the Far North and areas equivalent to them, was 79.7%. A total of 119 cities in the North of Russia (53 - in the European North and 66 - at the Asian), 187 towns (72 - in the European North and 115 - for Asian). In Russia, the share of the urban population accounts for 73.8%. However, despite the high proportion of the urban population, the average population size of urban settlements in the north is low and amounts to 20.7 thousand people against 44.1 thousand people in Russia. It should also be noted that more than 20 years (Census 1989), the average population size of settlements in the Russian North was smaller and was 16.6 thousand people against 33.4 thousand people in Russia. Small population size of urban settlements of the North due, first, to the very small size of the population, and secondly, with a predominantly mining nature of the economy of the North, which causes the dispersion of the population employed in these industries, in extreme close to the place of fishing. And the majority of extracted minerals is

usually a non-renewable, which also affects the nature of the settlement and resettlement of the population in the North.

Demographic development of the northern regions of organically linked with the processes occurring in Russia as a whole. This is the case of rising fertility, mortality and gains in life expectancy from 2006 to the present. Flowing in the general trends in the European and North Asian population dynamics has the specificity and difference. The most important and the main difference is that in the whole Asian North births exceeds the number of deaths (Table3).

Table 3

*The number of Birth, the death, and natural increase of the population of the Northern subjects, territories, which are fully refer to the Far North and to the similar areas, in 1995–2010, thousands of people*

Regions	Year	Number of Birth	Number of Death	Natural increase
North of Russia	1995	96 047	109 767	-13 720
	2000	87 835	99 867	-12 032
	2005	100 429	106 157	-5 728
	2010	115 296	90 849	24 447
European North	1995	39 705	62 178	-22 473
	2000	36 450	59 022	-22 572
	2005	40 341	61 422	-21 081
	2010	44 226	49 758	-5 532
Asian North	1995	56 342	47 589	8 753
	2000	51 385	40 845	10 540
	2005	60 088	44 735	15 353
	2010	71 070	41 091	29 979

Positive natural increase of the Asian North provide: Republic of Sakha (Yakutia), Tuva, autonomous regions Taimyr (Dolgan-Nenets), Khanty-Mansiysk - Yugra, Chukchi, Evenk and Yamal-Nenets (2010). Should also be noted that over the past 10 years there has been a positive growth trend in fertility. This applies to both increase the number of births and the crude birth rates. With regard to mortality, it is since 2006 tends to decrease.

It is known that all the northern territories (with the exception of the Khanty-Mansi and Yamal-Nenets Autonomous District), life expectancy (SPM) for both men and women is lower than the Russian average. However, the potential for growth in the Russian North ALS is huge even compared to that calculated by other territories of Russia, to say nothing of a similar nature-climatic regions of the U.S. (78 years for both sexes in 2011) and Canada (81 years for both sexes, 2011). Compared with the average performance, potential for increasing average life expectancy in the northern territories of the Russian Federation up to 9 years for males and 10 years for women. Compared to the maximum levels of SPM reached at some Russian territories, reserves increased life expectancy of the population in the North can be assessed in more than 21 years for men and more than 17 years for women. In support, I will present some examples. Thus, the aver-

age life expectancy for men is 53.75 years, Chukotka, and for men of Tuva - 54.39 years (occupying the last and next to last place in the Russian Federation). Worse results in women Chukotka - 64.62 years, and the Republic of Tuva - 65.98 years (2009). For comparison, the average life expectancy in Sweden in men is 80.0 years and 84.0 years for women (2011). As you can see, this is a gap in the whole historical epoch, which means a completely new quality of life. Levels of life, typical now for the population of the northern territories of Russia, match those of the least developed countries.

Table 4

*The population growth of the Northern Subjects, territories  
which are fully refer to the Far North and to the similar areas, in 1991—2010\*, thousands of people*

Regions	Periods	Increase (Decrease)			The average annual increase (Decrease)	
		Common	Natural	Mechanical	Natural	Mechanical
Russian Federation	1991—1995	1 7892	-2 599 396	2 617 288	-519 879	523 458
	1996—2000	-1 988 027	-4 127 058	2 139 031	-825 412	427 806
	2001—2005	-3 550 060	-4 406 566	856 506	-881 313	171 301
	2006—2010	160 585	-2 007 821	2 168 406	-401 564	433 681
North of Russia	1991—1995	-844 654	5 8171	-902 825	11 634	-180 565
	1996—2000	-505 299	-23 549	-481 750	-4 710	-96 350
	2001—2005	-183 181	-32 707	-150 474	-6 542	-30 094
	2006—2010	-292 208	84 423	-376 631	16 884	-75 326
European North	1991—1995	-379 853	-51 645	-328 208	-10 329	-65 642
	1996—2000	-345 550	-86 151	-259 399	-17 230	-51 880
	2001—2005	-225 159	-110 443	-114 716	-22 089	-22 943
	2006—2010	-274 525	-46 013	-228 512	-9 203	-45 702
Asian North	1991—1995	-464 801	109 816	-574 617	21 963	-114 923
	1996—2000	-159 749	6 2602	-222 351	12 520	-4 4470
	2001—2005	41 978	77 736	-35 758	15 547	-7 151
	2006—2010	-17 683	130 436	-148 119	26 087	-29 624

In the formation of the northern territories crucial role always played migration. Today, their role is also high. But if during the period of extensive development of the North and the Arctic migration contributed to the growth of the population, they now, on the contrary, "eat" a significant part of the northern areas (Table 5). As shown in Table. 5, the dynamics of the population of the Russian North past 20 years has largely been a migration population loss. Negative migration dynamics characteristic of both the European and Asian to the North. However, the North Asia, unlike Europe, during the period under consideration is stable positive natural increase.

Table 5

*The growth of the population of the Northern Subjects, territories  
which are fully refer to the Far North and to the similar areas, on the components of the changes of the population  
in  
1991—2010., thousands of people*

Regions	Years					
	Total growth	1991—1995		Total growth	1996—2000	
		Natural	Mechanical		Natural	Mechanical

<u>European North</u>	-379 853	-51 645	-328 208	-345 550	-86 151	-259 399
Republic Karelia	-28 099	-18 643	-9 456	-34 547	-23 977	-10 570
Republic Komi	-107 235	-2 297	-104 938	-89 770	-11 643	-78 127
Arkhangelsk region	-92 896	-26 074	-66 822	-106 946	-41 473	-65 473
Murmansk region	-151 623	-4 631	-146 992	-114 287	-9 058	-105 229
<u>Asian North</u>	-464 801	109 816	-574 617	-159 749	62 602	-222 351
Republic Sahaa (Yakutia)	-98 663	40 393	-139 056	-62 842	21 611	-84 453
Republic Tiva	583	14 739	-14 156	687	5 638	-4 951
Taimirskiy (Dolgano- Nenetskiy)AO	-8 627	1 017	-9 644	-3 887	378	-4 265
Evenskiy AO	-4 256	520	-4 776	-2 022	205	-2 227
Kamchatskiy region	-72 148	1 523	-73 671	-39 993	-1 624	-38 369
Magadanskiy region	-144 310	916	-145 226	-46 270	-1 101	-45 169
Sakhalinskiy region	-85 394	-7 582	-77 812	-69 890	-11 410	-58 480
Hanti-Mansiiskiy-Ugra	23 146	36 583	-13 437	80 164	30 945	49 219
Yamalo-Nenetskiy AO	-1 527	18 952	-20 479	11 221	17 120	-5 899
Chykotskiy AO	-73 605	2 755	-76 360	-26 917	840	-27 757

	2001—2005			2006—2010		
<u>European North</u>	-225 159	-110 443	-114 716	-274 525	-46 013	-228 512
Republic Karelia	-31 292	-30 272	-1 020	-53 282	-17 292	-35 990
Republic Komi	-57 851	-19 899	-37 952	-85 361	-4 464	-80 897
Arkhangelsk region	-77 748	-44 761	-32 987	-66 060	-18 330	-47 730
Murmansk region	-58 268	-15 511	-42 757	-69 822	-5 927	-63 895
<u>Asian North</u>	41 978	77 736	-35 758	-17 683	130 436	-148 119
Republic Sahaa (Yakutia)	-7 543	21 194	-28 737	8 086	29 665	-21 579
Republic Tiva	2 762	7 311	-4 549	-331	19 649	-19 980
Taimirskiy (Dolgano- Nenetskiy)AO	738	1 045	-307	-4 557	1 151	-5 708
Evenskiy AO	-734	198	-932	-1 014	312	-1 326
Kamchatskiy region	-17 160	-2 482	-14 678	-27 896	-95	-27 801
Magadanskiy region	-22 376	-1 774	-20 602	-15 075	-1 728	-13 347
Sakhalinskiy region	-33 814	-14 199	-19 615	-29 570	-6 998	-22 572
Hanti-Mansiiskiy-Ugra	94 729	46 464	48 265	58 686	63 440	-4 754
Yamalo-Nenetskiy AO	32 384	19 440	12 944	-5 836	24 414	-30 250
Chykotskiy AO	-7 008	539	-7 547	-176	626	-802

In 1991-1995. overall positive growth had only the Khanty-Mansiiskiy Autonomous Area - 23 thousand people and the Republic of Tuva - 0.6 thousand people. The European North of all subjects had negative natural and mechanical growth. On the Asian Se-belief was only natural decline in the Sakhalin area - 7582 Human and mechanical - everywhere.

In 1996-2000. had an overall positive growth only Khanty-Mansiysk (80 164 people), the Yamal-Nenets Autonomous Area (11 221 people) and the Republic of Tuva (687 people), and the Khanty-Mansiysk Autonomous Region had positive natural and mechanical growth and Yamal-Nenets and Tuva Republic - only the natural increase. In 2001-2005 positive population growth Asian North provided Tyva - 2 762 people, Taimyr (Dolgan-Nenets) Autonomous Area - 738, Khanty-Mansi Autonomous Area - 94 729 persons and the Yamal-Nenets Autonomous Area - 32 384 people. The first two areas have had only positive natural increase, and the second - both increase (Table 6).

In 2006-2010 -the demographic situation in the European North still remained troubled, and all areas had natural migration loss of the population. In general grouping of territories according to the influence of natural movement and migration on population change in 1991-2010.

Due to the nature of formation of population of the northern territories are developed than that of the overall age structure of the population. In the North, a higher proportion of children and people of working age and the lower the percentage of older people. However, this advantage is gradually reduced to zero (Table 6).

Table 6

*The total amount of the age of the groups in the total number of the population in the North subjects, territories which are fully refer to the Far North and to the similar areas, according to the census in 1989, 2002 and 2010 years., %*

Years	Population in the age	Russian Federation	North of Russia	European North	Asian North
1989	Earlier, than work age	24,5	29,3	27,0	31,5
	Work age	57,0	61,9	60,6	63,1
	Older, than work age	18,5	8,8	12,4	5,4
2002	Earlier, than work age	18,2	21,3	18,7	23,5
	Work age	61,3	66,2	64,9	67,5
	Older, than work age	20,5	12,5	16,4	9,0
2010*	Earlier, than work age	16,2	19,2	16,7	21,2
	Work age	61,6	64,9	63,2	66,4
	Older, than work age	22,2	15,9	20,1	12,4

Objective and subjective factors of the life of the population of the northern regions create difficulties in their adaptation, cause conditions to maintain high migration turnover and low survival rate. The high mobility of the population migration supports the existence of this relatively young age structure. If Russia's average proportion of working age in 2010 was 22.2%, according to Census 2010, in the Far North - only 15.9%.

For the average of the hidden areas of the significant difference, the settlement and the development of which took place in different historical periods. In a relatively populated areas of the North, which gradually formed a stable population in terms of migration, there is a tendency to approach the Russian age proportions. Thus, in the Arkhangelsk region and Karelia aging populations exceed 20%. Higher proportion of older people than the average in the Far North, in such subjects as: Magadan, Murmansk and Sakhalin Oblast Kamchatka Krai and the Republic of Komi. The proportion of people of retirement age ranges are from 16.7 to 19.6%.

Among the youngest Asian regions are the North: The Yamal Nenets (7.8%), chykchi (10.3%), Taimyr (Dolgan-Nents) (10.4%), Khanty-Mansiysk (10.6%) of the republic of Tuva (9.8%). In these regions, the age structure of the population, until recently, the most depended on migration, which maintain a constant growth in the number and proportion of young age cohort. In recent

years, along with a negative natural increase, its contribution to the decline in population and migration brings. However, the structure of migration flows still contributes to the North a younger age structure. Thus, among the arrivals from 2005 to 2010 went reducing the share of older persons and the share of young people. In the structure of the retired decreased the proportion of young age, while increasing the proportion of seniors. The structure of migration increase (decrease) by age also shows a positive impact on the age structure of the population (Table 7).

Despite the positive migration in northern regions have the aging of the population (increasing the proportion of older persons) and, as a consequence, the growth of the middle ages. Here are some examples of the most typical of the Northern Territory. During the period of 1979-2010 years. significantly increased the average age of the population: in Yakutia - from 27.2 to 33.0 years, in the Khanty-Mansiysk Autonomous District (Yugra) - from 26.4 to 33.7 years, and in the Republic of Komi - from 29.2 to 37.2 years. It should be noted that keeping these negative effects can create a number of problems for the innovative development of the economy of the North.

Table 7

***The age content of the migrants of the Northern subjects territories which are fully refer to the Far North and to the similar areas, in 2005 and 2010 %***

	2005			2010		
	Earlier, than the work age	work age	Older than the work age	Earlier, than the work age	work age	Older, than the work age
	Migrants in the age					
	Arrived					
Russian Federation	13,8	73,8	12,4	13,5	74,9	11,6
North of Russia	14,5	78,0	7,5	15,4	77,2	7,4
European North	12,5	78,7	8,8	14,6	75,9	9,5
Asian North	15,7	77,6	6,7	15,7	77,9	6,4
	Leavers					
Russian Federation	13,8	74,2	12,0	13,8	74,4	11,8
North of Russia	13,5	76,3	10,2	12,8	74,9	12,3
European North	12,3	77,2	10,5	12,2	75,0	12,8
Asian North	14,3	75,7	10,0	13,2	74,8	12,0
	The total migration gain (loss)					
Russian Federation	12,7	66,7	20,6	10,0	81,0	9,0

North of Russia	-9,0	-68,6	-22,4	-3,6	-66,5	-29,9
European North	-11,7	-72,3	-16,0	-7,5	-73,2	-19,3
Asian North	-6,0	-64,7	-29,3	2,2	-56,7	-45,5

In the northern regions of the Russian level much higher proportion of the working population. It is here 64.9 vs. 61.6% for Russia as a whole (Census 2010). The maximum proportion of the working population in the parts of Asia and the North (66.4%), where the most difficult working and living conditions. Some of the areas where the proportion of the labor force is above average is the Magadan Region and the Khanty-Mansiysk, Chukotka and the Yamal-Nenets Autonomous District. From the Figure 8 shows that in the period from 1989 to 2010 in the population of the northern territories of children decreased from 29.3 to 19.2%, or 34.5%. According to Russia, the proportion of children decreased from 24.5 to 16.2%, or 34.3%. It should also be noted that in 2010 the proportion of the children in the European North was up 4.5 percentage points (pp) lower than in the Asian north. Can cause some of the data and for a longer period of time. For example, from 1979 to 2010 the proportion of the children in Yakutia decreased from 31.8 to 23.3%, in the Khanty-Mansiysk Autonomous District (Yugra) - from 29.1 to 20.3%, in the Komi Republic - from 26.9 to 17.7%.

Better idea of reducing the proportion of young people (people under 30) can be obtained from Table. 8.

Table 8

*The age structure of the population before the age of 30 in the Northern subjects, territories which are fully refer to the Far North and to the similar areas,, in 1990–2010, in % from the total sum of the population*

Years	Regions	The number of the people in the age 0–29 years	In the age, years					
			0–4	5–9	10–14	15–19	20–24	25–29
1990	Russian Federation	44,6	7,9	7,9	7,2	6,9	6,5	8,2
	North of Russia	51,0	9,5	9,6	8,2	6,7	6,8	10,2
	European North	48,5	8,5	8,8	8,0	6,9	6,9	9,4
	Asian North	53,4	10,4	10,4	8,3	6,6	6,7	11,0
1995	Russian Federation	42,2	5,6	8,0	8,0	7,3	6,9	6,4
	North of Russia	47,3	6,2	9,3	9,3	8,3	7,2	7,0
	European North	44,7	5,4	8,6	8,7	8,1	7,1	6,8
	Asian North	50,0	7,0	10,1	9,9	8,5	7,3	7,2
2000	Russian Federation	41,1	4,4	5,7	8,3	8,3	7,4	7,0
	North of Russia	46,1	5,2	6,6	9,4	8,8	8,3	7,8
	European North	43,1	4,4	5,7	8,8	8,7	8,1	7,4
	Asian North	48,9	6,0	7,4	10,0	8,8	8,5	8,2
2010	Russian Federation	38,2	5,6	4,8	4,6	6,0	8,6	8,6
	North of Russia	42,0	6,5	5,8	5,4	6,7	9,1	8,5
	European North	39,5	5,6	5,2	4,7	6,2	9,1	8,7
	Asian North	44,0	7,2	6,3	5,9	7,1	9,1	8,4

From Table. 8 shows that from 1990 to 2010, the share of the population aged under 30 years has decreased in the country as a whole by 6.4 pp, while the North of Russia - by 9.0 pp, that



— Bad conditions with the ecological situation	0,2	0,1	0,1	0,1	0,2	0,1	0,1	0,1
— Inconsistency of the climatic conditions	0,3	0,2	0,1	0,3	0,3	0,2	0,2	0,2
— private, family character	59,3	45,0	45,2	44,9	60,0	48,9	50,9	47,8
— other reasons	5,1	4,0	5,1	3,2	12,0	6,3	8,5	5,3

It is well known that an unfulfilled need or encourage people to change their place of the work or the residence, or both simultaneously. Therefore, the second step in the study of the migration of population mobility is to examine the reasons why people leave the North.

According to the reasons of the arrival we can make several conclusions. The main reasons for departure from the Russian North are four: 1) the reasons for personal, family matters - 54.6%, and 2) in relation to work - 11.7%, and 3) a return to their former place of residence - 11.4% 4) connection with study - 10.9%. Reasons for leaving for North Asia from 2005 to 2010. remain on the rank of permanent value: the first place is the reason "personal, family matters", the second - a "return to their former place of residence", the third - "in connection with the work," and in fourth place - "in connection with his studies."

The European North has a distinctive set of causes out. In the first place overall for all reason "personal, family character" - 55.7% in second place - "in connection with his studies" - 13.7% (in the whole North 4th place) in the third - "in connection with work" - 9.5% in the fourth - "return to their former place of the residence" - 8.4% (Table 10).

Table 10

*The distribution of the migrants in the age of 14 years and older on the circumstances, caused the need for a change of the residence of the Northern subjects, territories*

*which are fully refer to the Far North and to the similar areas in 2005 and 2010 %*

The reasons for the leaving	Migrants of the leaving							
	2005				2010			
	Russian Federation	North of Russia	European North	Asian North	Russian Federation	North of Russia	European North	Asian North
All the reasons of the leaving	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
— education	9,1	11,7	14,1	10,0	8,4	10,9	13,7	9,1
— work	10,8	12,2	9,9	13,7	9,9	11,7	9,5	13,2
— coming back to the old residence permit	16,0	16,3	14,5	17,6	9,6	11,4	8,4	13,3
— Because of the aggravation of the international relations	0,1	0,0	0,0	0,0	0,0	0,0	0,0	0,0
— Because of the worsening crime situation	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
— Bad conditions with the ecological situation	0,2	0,2	0,3	0,2	0,2	0,2	0,2	0,2
— Inconsistency of the climatic	0,3	1,0	0,9	1,2	0,3	0,9	0,8	0,9

conditions									
— private, family character	58,5	53,6	55,0	52,6	59,6	54,6	55,7	53,9	
— other reasons	5,0	5,0	5,3	4,7	12,0	10,3	11,7	9,4	

In the Russian North in the demographic development and management of the national economy workforce consists of the extreme adversity, and if it is not correct to make every effort in the first place by the government, the consequences can be dire. This applies to the population of strategically and geopolitically important land, population density in the budget, preserve the unique northern people.

Today to explore the North with the previous methods (number, not a skill) is not possible. Demographic crisis has prompted the organization to look for other ways and, above all, through the development of human resources and their education. According to Census 2010, the level of education of the population aged 15 and older in the northern regions, areas which relate entirely to the Far North and similar areas, was slightly above the nationwide level: 996 against 994 per 1 thousand. But if you look at the level of training, we can see that the Russian North loses population with post-graduate, higher and incomplete higher education: 257 versus 280 per one thousand people, and wins at the middle and primary vocational education: respectively 406 and 368 (Table 11).

Table 11

*The level of the education of the population at the age of 15 years and older in the Northern subjects, territories which are fully refer to the Far North and to the similar areas according to the census in 1989, 2010, on the 1 thousand of the population of the same age*

Education	Russian Federation		North of Russia		European North		Asian North	
	1989	2010	1989	2010	1989	2010	1989	2010
At one thousand people aged 15 and older who are educated	935	994	967	996	958	996	975	996
Including professional	451	648	528	663	510	659	545	667
postgraduate education and high education	113	234	110	216	102	194	117	235
The beginning of the high	17	46	13	41	12	35	13	47
average	192	312	232	339	213	344	252	335
primary	129	56	173	67	183	86	163	50
common	484	346	439	333	448	337	430	329
average (full)	178	182	198	185	169	166	228	202
primary	177	110	159	111	175	124	143	99
primary	129	54	82	37	104	47	59	28
No education								
primary education	65	6	33	4	42	4	25	4

It should be noted that the educational level of the population of the region is enhanced if it has a positive balance of migration and, conversely, worse, if it gives people. Currently, the

North is losing population and, as a consequence, it loses the most educated, ie, with higher or incomplete higher education (Table 14). In these circumstances, need a fundamentally new socio-economic mechanism to attract and retain people in the newly developed areas of the North and the Arctic. Need to find a common ground to coordinate the interests of the state, society, family, and personal in this matter.

Table 12

*The distribution of the migrants at the age of 14 years and older on the level of education in the Northern subjects, territories which are fully refer to the Far North and to the similar areas in 2005 and 2010 years., %*

Regions	People, who have an education									
	2005					2010				
	High, Incomplete high	Average professional	Basic general	Primary general	Primary general education Or not	High, Incomplete high	Average professional	Secondary	Basic general education	Primary general education Or not
<b>Arrived</b>										
Russian Federation	24,6	28,1	31,7	11,8	3,8	31,5	27,5	28,4	9,0	3,6
North of Russia	25,5	29,4	31,4	11,6	2,1	32,2	31,6	24,3	9,6	2,3
European North	22,4	29,2	35,1	11,0	2,3	27,5	33,6	26,1	9,7	3,1
Asian North	27,4	29,5	29,1	11,9	2,1	34,6	30,5	23,4	9,6	1,9
<b>Leavers</b>										
Russian Federation	24,8	27,8	31,7	11,8	3,9	32,4	27,6	27,5	8,9	3,6
North of Russia	25,6	29,8	32,9	9,9	1,8	34,6	29,8	26,1	7,4	2,0
European North	23,6	30,4	33,4	10,5	2,1	32,3	30,9	26,3	8,1	2,4
Asian North	26,8	29,4	32,6	9,5	1,7	36,1	29,2	26,0	7,0	1,7
<b>Migration gain (loss)</b>										
Russian Federation	21,3	33,2	30,7	11,6	3,2	19,3	26,6	40,9	10,5	2,7
North of Russia	-25,7	-31,7	-39,2	-2,8	-0,6	-41,1	-25,2	-31,1	-1,4	-1,2
European North	-27,8	-34,2	-27,7	-8,9	-1,4	-40,5	-26,4	-26,7	-5,3	-1,1
Asian North	-23,5	-29,2	-50,8	3,3	0,2	-42,0	-23,8	-36,3	3,3	-1,2

To attract and retain people and, above all, young people in the newly developed areas of the North and the Arctic is necessary to offer a package of economic incentives and social services that can make the North of Russia attractive and competitive in determining their life strategies of the country's population. As a tool could be concept of youth migration policy, "Economic lending mechanism of demographic and migration measures to attract and retain young people in the

newly developed areas of the North and the Arctic" and several others. Currently, there is no such documents.

In the near future to propose and justify legislative initiatives, the list of the economic incentives and the social services designed to attract and retain people and, above all, young people in the newly developed areas of the North, to develop an effective mechanism for funding related to the solution of demographic and migration problems in Russian North, offer levels of liability and the amount of funds (co-financing) demographic and migration events to attract and retain young people in the North and the Arctic.

### ***Approaches to the formation of the population of the Arctic zone***

In practice, the development of the northern regions and the Arctic are widely used two approaches: the formation of a permanent population on the basis of fixed settlements and shift method with temporary settlements. As for the Arctic regions of Russia the approach of forming permanent population is unacceptable, a brief introduction to the shift's method. Shift work can be divided into two categories - the intra-Watch (residing in the far north) and interregional watch (employees residing outside of the Far North, delivered from Moscow, Ufa, Tyumen, Krasnodar, Belgorod, etc. ).

What gives the shift method of the state? The main benefits in the shifts works include: reducing the cost of the production of the mineral resources (due to the low cost of the maintenance of the social infrastructure), the possibility of labor migration (the use of unclaimed in the labor market), and increase local revenues (the effect on the growth of the purchasing power of individuals , shift work), reducing the burden on local governments in the implementation of the social programs for the residents of the Far North and similar areas (programs perform employers.

Thus, the use of the shifts Works opens to the state the following possibilities: an increase in the taxable profits of enterprises, mining minerals in the Far North and similar areas, as a consequence of the growth of budget revenues, reduction of state budget expenditures related to the maintenance of social infrastructure of items as well as the implementation of the social programs, the management of employment.

Limitations of the shifts works are mainly due to the negative impact on workers' health, as well as on the state of family and kinship. At the same time, employers usually do design and implement special rehabilitation and recovery programs for their employees. For example, the company "Yamburg gas extraction" contains in field camps planned unprofitable medical facilities equipped with the most modern medical equipment. In addition, each year more than 8000 employees are sent by means of the enterprise in the rehabilitation treatment and rest in the best

clinics and health resorts of the country. So, the benefits are obvious work in shifts (for the state and the employer). Disadvantages for workers leveled special programs and, in addition, high-income workers.

A few words about the benefits of bringing the work shifts of persons residing in the Far North and similar areas. It should be noted that the period of active development communities of the northern territories effectively ended. For example, the construction and development of the cities and towns of the Yamal-Nenets autonomous region entirely dependent on the pace of development of hydrocarbon fields (Table 13).

Table 13

*The number and size of urban areas of the Yamal Nenets AO according to the census in 1979–2010*

Year	number			Number, people		
	total	city	pgt	total	city	pgt
1979	7	5	2	80 100	69 526	10 574
1989	14	5	9	385 614	301 595	84 019
2002	16	7	9	422 826	357 303	65 523
2010	13	8	5	443 043	407 942	35 101

Cities such as Nadim, New Urengoy, Noyabrsk virtually exhausted the resources of growth. In this case, these communities have been highly professional workforce, they have created all the necessary infrastructure for the production, function-oriented gas industry and educational institutions, etc. The decline in production of hydrocarbons leads to redundancy of labor in the cities and towns of the northern territories. Excess capacity to provide employment in other sectors of the economy is virtually impossible because of unprofitability in the Northern regions of production, non-production of hydrocarbons, and in the service just is not enough jobs.

Taking into account the low mobility of the inhabitants of the Far North, low psychological readiness of citizens to migrate to regions with a much lower level of income, we can predict a gradual increase in social tension in the northern regions, the growth of unemployment, the constant increase in costs of local and federal budgets for the maintenance and updating of social infrastructure for the implementation of social programs for "northerners" relating to, among other things, to the resettlement of people living in the Far North in place, better to stay. мобильность

Avoid these problems, perhaps by attracting residents of the northern territories to develop new deposits in shifts of the work organization. For example, for the implementation of the largest in the last 10 years of the investment project of JSC "Gazprom" - Polar exploration fields - company "Yamburg gas extraction" were involved in the labor force of the Yamal-Nenets Autonomous District. More than 3 thousand northerners were provided with jobs, wages and social benefits. The practice of raising society "Yamburg gas extraction" the inhabitants of Yamal to work

shifts suggests the following: after the assignment of the right to retirement pension employees acquire housing outside of the district, carrying the family and go on inter watch (through appropriate social programs of employers).

The development of gas-ahead Yamal fields, mineral deposits of the Polar Urals, etc. Recently, the company actively developing so-called "small-TEK", who master the small and relatively low-profit field (again using rotational staff).

Thus, we can safely say that the use of the employers in the shifts Works can solve public problems: provide employment to the residents of the northern territories, the completion of the budget revenue of the municipalities of the northern territories, and the performance of the declared state of the social programs [13, p. 295-301].

As the part of the social policy in all key areas of business of OJSC "NK" Rosneft "implements the complex of the socio-economic programs. In 2011, the regions of the funded construction, repair and rehabilitation of more than 150 social projects. A number of projects were aimed at improving the social and domestic life for employees. In particular, on-site support base fishing Vankor commissioned a modern complex of buildings residential camp. The company provides about 170 thousand jobs [ 14, p. 7 ].

The area immediately adjacent to the coast of the Arctic seas are subject to the economic activities of industrial structures and the native population, but are unsuitable for the permanent residence in the permanent towns due to the extremely extreme climatic conditions. Therefore, these areas should be the presence of habitat is very limited contingent represented indigenous, native traditional way of life, and the employees of business entities engaged in labor activities in the shift-forwarding mode. In these areas must act "membrane" principle of persons, engaged in labor activities in shifts of the forwarding method. Arriving on the territory, the caregivers should be limited in scope to move it except territorial transactions related to production activity. Other types of the movement and the use of resources of the territory, especially biological resources and landscape, should be excluded.

Approach, connected with a ban on other activities besides production, for people working in field and forwarding mode must be fixed at the federal regulatory level. Of course, the Arctic territory does not have to be a place forbidden to stay in the connection with the research, educational and tourist and recreational purposes.

However, not all the Arctic regions are poorly populated. Areas located in the European part of the Arctic and Yamal-Nenets Autonomous Area and the northern Krasnoyarsk region have fairly developed settlement system, including large urban settlements. In this regard, the number

of regions of the Russian Arctic has passed the "point of no return", when all the talk about the need to reduce the population in the Arctic, including by closing the northern cities are nothing more than a source of the social and political tensions and objectively not consistent with the objectives of the socio-economic development of the Russian Arctic set forth in the Principles.

In the framework of the regional policy in the Arctic should be put through the principle of maximum use of the infrastructure and the human resource potentials of existing settlements. At the same time in the future economic development of the Arctic territories should apply only in shifts and forwarding method. This approach is justified as a medical and the social and human points of view, and from the standpoint of the rational use of the human and budgetary resources, environmental safety of the Arctic territories.

For the Arctic areas should be regulated by a number of the systemic principles. Here are just two of them.

First, to introduce statutory prohibition on the establishment of new settlements with a permanent population in the Russian Arctic, or the transfer of settlement shift to fixed. This should make the most unique cities in the working potential of the Arctic during the development of new areas of the Russian Arctic, through the application of intra-and inter-regional surveillance. Among other things, this will contribute to adequate behavior of employees in the Arctic, as they themselves live there permanently.

Second, as a priority, to direct budget investments to modernize Housing Arctic settlements. Already established communities with a permanent population and infrastructure to be considered as a result of the previously generated considerable public investment and, accordingly, as a real asset and a tool of the state participation in the economic development of the Arctic territories.

It should be added that the settlements are often the only element of the state presence, state "outposts" in large areas of the eastern sector of the Russian Far East and the Arctic, where only be commercial development [ 15, p. 65, 66, 68, 69 ].

### ***Conclusion***

Ahead of the difficult and important period associated with the development of measures to implement the priorities of the state policy of the development of the Arctic regions, have been described in the Principles of the State Policy [ 2, 3 ]. But all is not declarative, and, in fact, the center should take the man and his well-being, health and decent to this period. Developing the Arctic, we must not allow the mistakes that were made during the development of the Russian North.

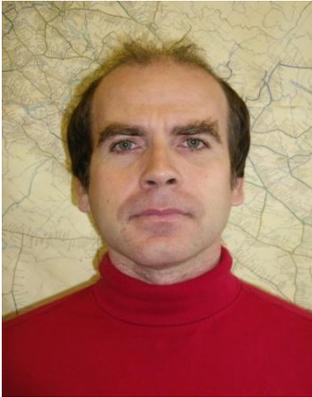
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UDK 796.5

## CULTURAL AND NATURAL HERITAGE, AS THE BASEMENT FOR THE DEVELOPMENT OF THE ECOLOGICAL AND ETHNOLOGICAL TOURISM IN THE EUROPEAN NORTH OF RUSSIA



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**Abstract.** In the article notices, the problems and perspectives of the tourism potential of the regions and tourism centers in the European North. Special attention is paid to the development of the ethnographic and ecological tourism

**Keywords:** museum-reservation, ethnographic tourism, Karelia, Veliky Ustyug, rural farm agro-eco tourism

In Russia, one of the most advantageous position in the terms of tourism development is the European North, with a unique combination of natural and recreational conditions and major cultural heritage. There are 22 historical cities and eight national parks, four Museum of world-wide concern, about 19 thousand objects of cultural heritage in the region. Russian North – is the monument of the world culture, are the cultures of the various people and the ethnic groups: Sami, Pomerania, the Nenets, Komi, Karelians, Veps, Finnish, Russian, which determines the scope for the development of the ethno-graphic tourism.

At the present stage, the most efficient and dynamic tourism in the Northwest of Russia is developed in the Republic of Karelia, which has become a real euro touristic region. In 2010 Karelia visited 1,000,000 620 thousand people with a combined income of all kinds of tourism totaled 4.18 billion rubles in the tourism infrastructure attracted 480 million rubles of the private investment. In the gross regional share of the product of tourism is 12.1% (1st place among the regions of the North-West). The rate of the growth of tourism behind other regions of Karelia several times.

The tourism industry is successfully developing in the most famous and popular tourist unique areas where new jobs are created, there is additional investment, supplemented revenues of the local budgets, developing new event-activities to attract tourists. On the Kola Peninsula is: salmons rivers and the city of Kirovsk, in the Arkhangelsk region - Museum "Small Korely" Kargopol, Solovki, Kiya Kenozersky island and national park, in the Vologda region - Kirillov (the largest Orthodox monastery in Europe), Gorizia and in Ustyug - the national Park "Russian North",

in Karelia - Valaam, Kizhi, Sortavala, Petrozavodsk, national parks, and in the Komi Republic - Europe's largest national park "Yugydva Island" and one of the Seven Wonders of Russia - "Pillars of weathering".

The most developed in the region are "elite" and expensive types of tourism: water motor-ship cruises (the most popular form of tourism), recreational salmon fishing, ski tours, business tourism in cities. Mass flows of amateur tourists (mostly rafting Karelia and the Murmansk region) is not bringing a special economic benefit regions.

The most successful implemented tourism project of the European North has an investment project "Veliky Ustyug - homeland of Santa Claus." Thanks to him, a small historic northern city became known throughout Russia, becoming one of the fastest growing tourist destinations in the region. Thus, the number of tourists has increased from three thousand in 1998 (the beginning of the project) to 209 thousand in 2010 (an increase of 70 times). Total income from the project for 11 years of its implementation amounted to 2.3 billion rubles. Great Ustyug also famous for its folk arts and crafts, monuments of civil architecture of the church and the world level ("North Suzdal"), a unique dialect of Vologda - the northern dialect of Russian. This sets the possible inclusion of the Great Ustyug a World Cultural Heritage Site.

For a short tourist characteristics of the region on a European scale can be used the slogan "Russian North - is the wildlife and water areas of Europe." That that's just the basic capital for the development of natural and ethno-ecological tourism - the fastest growing sector of tourism.

According to Russian experts the total capacity of the recreational and educational resources of the European North of Russia is 8.1 million people a year.

In the nearest future, special attention should be paid to the development of tourism such as environmental, ethno-graphic, agro-tourism, socio-cultural, sports and health, which are still in a nascent stage and the formation and can not compete with the elite and expensive forms of tourism. Must shift the flow of the domestic tourists - residents of the European North towards the region. In Russia, a sharp rise in tourism services begins deter not only the Russians, but also foreign tourists. The negative factors of Russian reality, you can also add the lack of the development of tourist infrastructure, dirty city with a huge flow of vehicles, broken roads, problems with the safety of tourists, the lack of advertising, tourist maps and guides to the interesting, unique remote territory.

In the neighboring developed countries of Fennoscandia (Norway, Finland), the total income from tourism is up to 30% of the total budget. For comparison, in the Vologda region profit

from tourism accounts for only 5% of the budget and 3.3% of the gross regional product, despite the fact that the flow of tourists to the Vologda region in 2010 increased to 1.5 million.

Tourism development strategy of the region – is the formation of its own tourist product and its promotion on the foreign markets. In the coming years, tourism can be a powerful factor in the stabilization of the economy of the North to the global economic crisis. For realization of this vision requires a significant investment in the tourism infrastructure, to create a favorable economic environment for the development of the tourism in the North West, the creation of a system of the economic incentives for the investors.

Formed on the European North of Russia as the largest European network of the national parks and nature parks, nature reserves and conservation areas can be considered as the basis and the main resource for the development of tourism.

From the point of view of the conservation of the indigenous people and live traditional culture of the Russian North is much more effective to develop the cultural and natural tourism. Small, opening up opportunities for livelihood throughout the region. It does not require large investments. The initial impetus for the implementation of the new idea would be to create innovative kernels based on ethno-cultural centers and ethno parks in different parts of the European North. Ethno park museum under the open sky – is the object of the cultural tourism, interpretive dialogue of the different cultures through the authentically created ethno yards where tourists can stay and develop manufacturing technology folk arts and crafts from the local artists.

Currently, the European North has three architectural-ethnographic museum reserve in the open: Kizhi in Karelia Small Karelians in the Arkhangelsk region, Semyonkovo in the Vologda region. Planned organization of the Finno-Ugric ethnic park in the Republic of Komi, ethno park in Lovozero district of Murmansk region. On the Kola Peninsula tourism on the main centers are: the village of Lovozero (valid Sami national cultural center, Sami held games), Uмба village (site of the international folklore festival Pomeranian), an authentic museum Pomor Tetrino fishing on the White Sea. Attracts tourists as cultural preservation in the historic village of Old Believers Kimzha (Arkhangelsk region) and Ust-Tzilma (site of the folklore festival "Ust-Tsilemskii Hill") in the Republic of Komi. In the villages of Karelia, Vologda and Arkhangelsk regions actively developing farm tourism.

Throughout the territory of the Republic of Karelia from veppskogo Sheltozero up to the White Sea Karelia to the process of the creating ethnic and cultural centers. One of the first such centers was organized in the administrative center of Kalevala national region (village Kalevala) ethno-cultural center "Vienan Karjala." Its main task, along with the solution of problems of revival

of spiritual and cultural heritage and the development of small businesses needed to create infrastructure of the international tourism in the White Sea Karelia, including the territory formed now ethno Kalevala National Park. The integration of the cultural heritage in the local areas of the ethno-cultural center can best combine the idea of keeping with the idea of the revival of the unique territory. The complex of the ethnic and cultural center, as a rule, includes the national museum, concert hall, cottage crafts and guest house.

Using the ethno-graphic rural tourism can be revived such unique Karelian villages as Panozero, Haykolya, Kinerma, Selga, Shueretskoe, who saved all authentic monuments of the wooden architecture and folk traditional historical habitat.

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## Geopolitics

UDK 327

### WILL BE THE ARCTIC LAST REDIVISION OF THE WORLD THEATER?

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**Abstract.** The possibility of military conflict in the Arctic between Russia and NATO countries is illusory, if Russia can maintain its military capabilities at least at current levels. In the more distant future, a party can be a redistribution of the Arctic, China, is experiencing growing demand for natural resources and rapidly increasing military power

**Keywords:** *Arctic, wars, USA, NATO, China*

In all the arguments about the possible redistribution or even peaceful economic development of the Arctic must be borne in mind that in this case, humanity is completely dependent on the climate, which has not yet run. The current active discussion of this problem started solely because of global warming due to a rapid melting of the ice cover of the Arctic Ocean, where melting uneven (the fastest ice relieve the Russian sector of the Arctic, especially the Asian part). But no one really knows the causes of global warming (the extent to which it is a natural process in which - man-made), the more possible it is unknown depth and duration. Some climate scientists believe that the warming of the peak has passed. And with regard to the foreseeable future in the Arctic could happen anywhere from complete extinction of the ice cover in summer and winter to a significant reduction in the Little Ice Age. If warming to cooling, which can not be completely ruled out, discussed topic will be closed automatically, because the costs of any form of economic activity in the Arctic would be too high.

If we talk about the military use of the Arctic, it is divided into two different aspects. First - is the use of the territories and waters in the Arctic for the global confrontation, the second – is the armed struggle for the redistribution of property in the Arctic.

#### ***Factor of the global struggle***

Military significance of the Arctic region since the Cold War determined, first, that it is through the polar regions are the trajectory of ICBMs and SLBMs from the USA to Russia and back, and secondly, the fact that only through the Barents and Norwegian Seas Russian Navy has the

only open access to the Atlantic (the Russian Northern Fleet, in fact, is not so much "Arctic" as "Atlantic").

Recently, with the rapid development of high-precision weapons in the USA, there is another point related to the first two: the possibility of applying the USA (in conjunction with strategic and possibly carrier-based aircraft) massive non-nuclear preemptive strike by SLCM "Tomahawk" Russian's strategic nuclear forces on objects. Such an attack would destroy a significant part of the Russian ICBM, the PKK CH and bombers, and without a global environmental catastrophe. In such a scene-American strategic nuclear theory retain all its potential. If Russia still dare to retaliate remains its strategic nuclear forces, it can be defeated with even a limited missile defense. And in reflection of this shock can also take part with USA ships SAMs "Standard-SM3» and radar, to provide for their missiles. To accomplish both of these tasks, American ships have to strike it from the Arctic, because here is exposed through SLCM "Tomahawk" most of the Russian territory (and most of the objects SNF). In addition American ships with the "Aegis" are under the flight path of the remaining Russian ICBMs and SLBMs of a hundred-Ron USA. (because their trajectories pass through the Arctic.) This greatly simplifies the task of minimizing the value from the ABM course option and the ability to shoot forward, and not vdogon and SLBMs launched from PKK CH Northern Fleet, generally can shoot down at the boost stage. In addition, the USA can assume that if the Russian strategic nuclear forces will be significantly weakened by the preemptive strike, despite the fact that the USA strategic nuclear forces will retain their full potential, Russia did not dare to strike back [1, 2].

However, this scenario has a number of significant risks and limitations.

- 1) preemptive strike must be unique, because if the first strike was not successful either brought limited success, opportunity, a second hit will not be, because Russia would automatically cause a full-scale nuclear attack on the United States. Therefore, the first and only strike must be engaged maximum potential Navy and The USA Air Force. However, the concentration cruisers "Ticonderoga" and destroyers of the "Orli Berk" USA Navy near Russian waters automatically destroy the surprise, which makes the whole event meaningless. If we only rely on the PLA, there problems with the number of SLCM.
- 2) Application of the preemptive strike by SLCM "Tomahawk" and the solution includes defense in conflict with each other, as SLCM and SAM "Standard" are placed in the same cell Mk41 OHR cruisers and destroyers. Thus, the greater the SLCM, the smaller missiles, and vice versa.
- 3) At this stage defeat ICBMs on a space station, their trajectories using SAM "standard" is not possible, can you modify them accordingly - is unclear.

4) Strategic Missile Division, stationed in Siberia, are beyond the reach of SLCM "Tomahawk", even when shooting at him from the Arctic waters (or the need to increase the amount of fuel by reducing the weight of warheads that will not provide high security target lesion even if directed).

Accordingly, the implementation of such a scenario is possible only at the same time as several conditions.

- ✚ There will be a complete degradation of the Strategic Missile Forces, the Air Force and Air Defense, the Navy and the space group of the Russian Federation to the rapid reduction of their operational capacity, which minimizes the number of targets for a preemptive strike and its ability to reflect and to retaliatory strike (both in the USA. and on the ships of the Navy USA. inflicting preemptive strike). In reality, in the past three years, this degradation stopped, there is even a slight increase of Russian military capabilities.
- ✚ The USA will increase the potential impact Navy and Air Force, which is not evident in the conditions of the early significant budget constraints (in particular, it is the accelerated write-off of seven cruisers "Ticonderoga", long out of service due to a fire PLA "Miami"). In addition, major efforts the USA military and naval forces in general in the first place will be taken in the APR. The forces of the Atlantic Fleet, which may be involved in the described impact will be reduced, making the scenario unworkable for purely quantitative parameters.
- ✚ American SLCM and SAM will be very substantially modified, which can not be guaranteed, since it requires the solution of many major scientific and technological problems and significant research and development expenditures. Moreover, increasing the speed and range of missiles, is likely to require an increase in their size. However, their size, there are strict limits defined by the cell dimensions OHR Mk41 or mines on PLA.
- ✚ Political relations between the USA and Russia will deteriorate to such an extent that the USA. government considers the risk of war with Russia acceptable. Currently, there is, rather, the opposite trend.

It should be emphasized that it is necessary to be performed all four conditions simultaneously, failing at least one hit will not be applied. Therefore the probability of such a scenario should be considered very close to zero, not only in the short term but in the longer term. Zero is the more likely a massive nuclear strike the pole from anyone, because no one is going to commit suicide mutual assured.

***The struggle for the redistribution of the Arctic***

Even in the case of continued global warming Arctic is still at least a very long time to be unsuitable for any mass residing population. In addition, none of the current Arctic countries no overpopulation problem, on the contrary, everywhere except in the USA, there is the problem of depopulation. Accordingly, the potential redistribution of the Arctic may be purely economic motives.

Thus, the most popular theoretical scenario of armed conflict in the Arctic is a struggle for the division of hydrocarbon deposits on the Arctic shelf. Because of the lack of oil or gas company will not agree to the implementation of such a project, if not dealt with the risks of a legal, political and especially military. That is, no one will "spur of the moment" to produce oil and gas in those areas of the shelf, which are controversial because such a project would be unprofitable known, besides, no insurance company will not cover it (or the price of insurance will be unacceptably high.) Accordingly, the scenario of the conflict can be considered completely illusory. Especially considering the fact that of all the existing oil and gas fields to date is not defined membership only 3%.

For similar reasons, illusory script conflict in the form of the naval clashes sides due to the unresolved problems of navigation in the Arctic, with the condition of its exemption of the ice for an extended period. Moreover, in 2010 commercial transit shipping on SMP has already begun. It became the pioneer gas carrier to deliver LNG cargoes from Murmansk to China. Its passage provided three icebreakers. Since then, the NSR was organized more than 30 transit flights (both domestic and international) in both directions. The annual turnover on the track reached 800 thousand tons, in the long term it may reach 30 million tons to any conflicts that did not lead.

In general, the experience of the war in Yugoslavia in 1999, and the incident with the capture of the Russian Airborne Troops Battalion airfield in Pristina, as well as the war between Russia and Georgia in August 2008, even the United States, not to mention the European countries are not psychologically ready to very limited military conflict with Russia, if it occurs outside the territory of both Russia and NATO countries. There is no doubt that the same applies to the potential clash of fleets in the Arctic because of the unresolved issue of the status of water areas. The situation can change only if a very substantial military weakening of Russia even in comparison with the current situation.

Moreover, the military capabilities of the European countries bordering the Arctic, and therefore theoretically interested in the redistribution is reduced much faster than Russia, denying them any power to influence the situation. It should be noted that the complexity of the climatic conditions in the Arctic, leading to a sharp rise in the cost of military systems used for the war in

the region. With the economic crisis, the construction and deployment of such systems in any significant numbers is not realistic. In general, it is possible that most of the European countries in the military has already passed or will soon pass the "point of no return" after which the restoration of the lost fighting ability is impossible for the economic reasons, since it requires too expensive. This can be seen today, if only because that NATO is not ready to launch a military operation against even covered the civil war Syria, though that by destroying the Turkish military aircraft, has created the perfect excuse for such an operation. However, Syria's military potential is too great to start against NATO risked her fighting. This shows that the scenario discuss the NATO aggression against Russia, which has several times more powerful than that of Syria, the conventional armed forces and also a huge nuclear arsenal, is possible only in the framework of the special propaganda, not the scientific discourse.

### *Chinese factor*

Thus, in the short term given the current geopolitical configuration of any military action in the Arctic, even on a small scale is not possible. The situation may change if ice melting continues, with the world in general will increase scarcity of natural resources, which can not be met through the development of deposits in other parts of the world. In this case, input prices rise sharply, making the profitability of the project in their production in the Arctic.

This development is almost inevitable, if we continue the current (or even a little slower) growth of the Chinese economy. In this case, in a few decades it will not be enough resources of the Earth for the population. If China to 2031 income per capita will overtake the U.S., it will eat up two-thirds of the world grain yield, power consumption of oil will rise by 500% compared to 2006, resulting in a shortage of 800 million tons a year of world production, demand for paper doubled its production will surpass the world. [3] Writes in his work Davydov, "proved that she wasteful model upon which the modernization of China, can not only bring down its economy, but also deplete the world's stocks of resources. The fact that until recently was sufficient to meet the needs of the "golden billion", will be in extreme short supply, if the "club of consumers" rightfully join 1.3 billion China "[4, p. 35-36]. Chinese political scientist Jin Tsanchzhun asks rhetorically: "Since industrialization, Britain had a population of 10 million people, but has created an" empire summer solstice. " United States, with its 100 millionth population, created the myth of the sole super power. What will this mean for the industrialization of the world, which provides China with a population of 1.3 billion people? "[5, p. 23].

Understanding well, the Chinese government and Chinese companies have already shown considerable interest in the development of the Arctic, although geographically China in no way be considered as Arctic countries. Also, it is China that is most interested in the freedom of navigation through the Arctic, as it will dramatically reduce the route from the ports to the ports of Europe and the North America.

China's entry into the Arctic is possible either through Russia (in the event of the further economic and demographic penetration in its Asian part), or through Canada (which is already very high proportion of the population of the ethnic Chinese), or through Norway (now up to Svalbard is China's first Arctic station, in the same Chinese icebreaker based) or via Denmark (through development of natural resources by Chinese companies in Greenland). Perhaps a combination of all these options. In addition, China in the next 10-20 years can create their naval base on the Atlantic coast (eg, Venezuela, Cuba, Angola), from which it will receive access to the Naval Arctic.

There is no doubt that the growth on the one hand, the PLA's military power, on the other – is the resource, stiffness of the China's foreign policy will continue to grow. There will also be activated and the Chinese version of "soft power", that is, a total of buying assets and people (especially the political and economic elites) that are needed to China, as well as demographic penetration. Obviously, the efficiency of the use of "soft power" will rapidly increase as providing its military power of China.

It should be noted that the military capabilities of the European countries, as mentioned above, tend to decrease below the critical level at which there is a complete loss of combat power. The expected budget cuts will inevitably reduce USA military capabilities, especially as the physical aging American military equipment, especially aircraft. The promised transfer efforts in the Asia Pacific can only partially compensate for the overall reduction in capacity. Prospects for military construction in Russia is extremely ambiguous and little expected because of the economic and political issues, besides Russia is highly vulnerable to the impact of China's "soft power." As for the PLA's military capabilities, they are growing rapidly, and once in all aspects and components [6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25]. This leads to a radical change in the balance of forces in the world. When you save these trends over the next 10-20 years, China will be able to project power to almost any point on the Earth (especially due to the massive penetration of Africa, which is a base of China), which will directly affect, in particular, the situation in the Arctic.

In the interest of the Arctic resources are the three Asian countries, which, in theory, have the sufficient economic, demographic and military capabilities to engage in the fight for the re-

gion. This is India, South Korea and Japan. But they are far behind China and the size of the Armed Forces, and in the availability of the sphere of the influence abroad, providing power projection to distant regions. However, one can imagine that the United States and / or Russia can exploit the potential of these countries, as opposed to Chinese expansion in exchange for giving them the right to have access to Arctic resources in their economic zones of USA in this regard may be eligible for an alliance with all these three Asian countries, Russia - an alliance with India, and possibly in Korea.

Accordingly, in the long term it is possible military confrontation in the Arctic in the USA - China - Russia. Participation of other countries and coalitions possible, but it will certainly be a purely auxiliary. Describe specific scenarios, this opposition is not possible, because they are affected by too many different factors. Exactly one can only say that if the Arctic will become the last great theater in the division of the world, one of the participants in the war will be China.

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## Historical Sciences

### SOLOVETSKY FORUM: ON A WAY TO CIVIL SOCIETY (1989—2012)



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**Abstract.** The paper outlines the key milestones of the informal social movement 'Solovetsky forum' and his contribution to the development of civil society in Russia

**Keywords:** *history, Solovetsky forum, a social movement, Solovetsky stone, citizens*

In numerous publications and archive activity of the Solovetsky Forum notes that social movement "Solovetsky forum" started its activity in 1989 as a voluntary association of citizens solely on the initiative of the bottom. His origins were passionary personality, of the famous scientists J. Luchini and P.I. Sidorov [14, c. 147-149]. Initially, in 1989-1992. Solovetsky forum had the status of informal social movement. During this time, were three inter-regional scientific conference devoted to the problems of de-Stalinization of consciousness, culture and politics, past and present Solovki and take other actions. Solovetsky Forum received recognition from the wider scientific community.

Among the ten people have already legalized the status of the public association "Solovetsky Forum" in 1992, four years after the start of vigorous activity were A.V. Griбанov, G.Y. Yesipova, N.S. Ishekov, A.A. Kuratov, Y.F. Lukin, V.A. Skovorodkin, P.I. Sidorov, A. Soloviev, N.M. Terebihin, K.A. Chudinov. At the founding meeting of 17 June 1992 was elected board of five members, co-movement "Solovetsky Forum" selected Y.F. Lukin, A. Martynov and P.I. Sidorov.

Gone are the next seven years, and again there was a legal problem with reregistration. June 30, 1999 public movement "Solovetsky Forum" passed state registration in the Justice of the Arkhangelsk region, was approved in the revised statutes of the Arkhangelsk regional public movement "Solovetsky Forum". Chairman of the Public Movement "Solovetsky Forum" elected YF Lukin. Were specified goals of the movement. These were the development of the activity and initiative of citizens to meet their interests and needs, protection of rights and freedoms. Movement has the right to participate in election campaigns, but really never took advantage of this right. Activity of the movement was based on the principles of voluntariness, equality of its members, government and law.

The legal status of AROD "Solovetsky forum " was changed again at the end of the first decade of the XXI century. The movement lost its status as a legal entity. As they say, everything is back to normal. Change of status did not affect the content of the social movement. Moreover, it remained, in essence, an informal social movement without a checking account does not lead any financial activities. Experience has shown that this kind of the social movements of citizens better not to have official status, which allows them to be less bureaucratic and more free within the existing political system [8, p. 363-373].

Solovetsky Forum – is an informal association of citizens, public in nature, which is attended by scientists, as well as people with different orientations: believers and atheists, liberals and conservatives, communists and democrats. Fixed membership in the movement does not exist. Its members are citizens, academics, social formation, taking part in activities and individual stocks



held by the Solovetsky forum. And the stated purpose in the statute, and in fact the content of their work is the Solovetsky forum and human rights, and environmental and creative scientific amateur organization and its core - a self-governing community of the new type. Solovetsky Forum holds various actions to strengthen cooperation and trust between individuals, establishes the scientific and cultural relations with the public in Russia and other countries, draws attention to the urgent problems of a complex culture, medicine, education, history, ecology, in close connection with the political realities of the modern world, promotes Russia's spiritual revival, preservation of historical memory, the natural and cultural environment of Solovki. Within the limits of their competence and capabilities were built

with modest expansion and improvement of cooperation with academic and research institutions, associations and foundations in the field of culture, science and education, the dissemination of truthful information, the implementation of joint projects.

12-17 July 1989, the I Solovetsky forum entitled "De-Stalinization of consciousness: Challenges and Prospects" [11]. In society, the second half of the 80s. was not the fear of being overcome totalitarian political regime. All structures that ruled the country for over 70 years, while normally. But the main thing was that Stalinism was alive in the hearts and minds of people, the persistence of stereotypes in society, associated with difficult historical past. To overcome fear in the hearts of people in search of answers about the past, which has been so controversial and complex, and were directed discussions, round tables Solovetsky first forum. Leaders welcomed the telegram Sakharov and Yuri Afanasyev, "On behalf of the Community Council and the Board of the All-Union Voluntary historical and educational society" Memorial "welcome the participants of the scientific-practical conference on the problems and prospects of de-Stalinization of consciousness - the key issue of restructuring and democratization in the country. Good luck to you, dear friends. "

After the plenary session and round table in Arkhangelsk forum, the members will continue the discussion on the Solovetsky Islands. Before the departure of the ship, "Tatars" to Solovki in Red pier in Arkhangelsk held a public meeting (it was one of the first meetings at the time). At the round table on the Solovki discussed two issues: the commemoration of victims of repression 1923-1939 gg. and to identify ways of mutual work with the Leningrad and Moscow offices of "Memorial". How to help preserve the unique museum, how to create a memorial in memory of the repressed? Many believed that the best monument to those killed thousands of innocent people will be actively involved in the development of innovative processes in the society then. And the beginning of this you need to put everyone, starting with ourselves. It would have been more substantial all appointments and meetings. [13]

It was on Solovki in 1989, the first time the idea of a granite boulder as a memorial to the victims of political repression. Talk about it in the debate came when the road to the mountain to the monastery Sekirnaya walking back from the tour L.A. Ponomarev, doctor of physical and mathematical sciences, a famous human rights activist and member of the board VDIPO "Memorial", Y.F. Lukin, Co JSC "conscience" Arkhangelsk branch of the "Memorial", and a member of the Board of "conscience." In the informal setting, it was decided to find a granite boulder and take him to Moscow, setting as a symbolic monument in the capital. Not just a handful of soil and solid granite boulder Solovki had to remind the citizens of Russia about the complex and tragic time as a silent witness to the suffering of tears, pain and grief of thousands of prisoners of the Gulag, their loved ones, as a sign of total disaster. This creative idea has been practically implemented in 1990 the All-Union Society "Memorial" and the Archangel Organization "conscience" with the active

participation of many people, seamen, railroad workers, architects, business support of the Government of Moscow [6, c. 13]. Two granite boulders selected Archangel architect G. Liashenko, were transported by ship "Sosnowiec" Northern Shipping Company (NSR was then chief AN Gagarin) to Arkhangelsk. One of the Solovki boulders under the Ministry of Transport of the USSR, Arkhangelsk branch of WCD was sent to Moscow, is set in the Lubyanka and opened October 30, 1990. Another Solovetsky boulder was installed in Arkhangelsk as a monument to victims of political repression October 31, 1992.

Solovetsky Stone for more than 22 years is at the Lubyanka in Moscow as a reminder of the victims of totalitarianism in Russia, as a silent witness of the tragic years in the history of Soviet civilization. This is not an artificial monument, he did not like regular sculpture. However, the strength of the spiritual and the emotional impact it's really hard to compare to any other monument. This is a real humanized natural spiritual artifact, a survivor with prisoners at Solovki tragic years. This was a symbolic design of this monument. Apparently only in Solovki, directly in its socio-cultural space, and not in some other place, and could come up this idea [9, c. 17-23]. In 2008-2012. Solovetsky Stone is not just a tourist attraction in Moscow but also informal place for the expression of civil protest, confirming thus the relevance of the main theses of the first treatment Solovetsky forum lack many of the real rights and freedoms, and formally proclaimed. Not to be the slaves of evil and violence, Appeal Forum in 1989 called for, after Solzhenitsyn to live without lies, do not tell lies, not to vote for what you think is improper and questionable.

Relevance of the II Solovetsky Forum held in 1990 under the title "Culture and Politics in the Modern World," was revealed, at first glance, simple words. Motto, "Beauty will save the world" is concise, reveals both challenges and solutions. The forum was divided into three areas: "Public health and social ills", "Philosophy, Ethics, Political Science" and "aesthetics and ecology", which brought together local and foreign researchers on medicine, sociology and other social sciences. [7]

In the work of the III Solovetsky Forum "Solovki in the past, present and future" in May 1991, attended by over a hundred scientists and university professors Arkhangelsk, Vologda, Moscow, St. Petersburg, Syktyvkar, Petrozavodsk, Tobolsk, Kursk, Yakutsk and other Russian cities. Worried about the fate of the Solovetsky Islands, they made an appeal to the authorities and called for the co-existence of the monastery on the Solovetsky Islands - relics of the Russian Orthodox Church and the Solovetsky complex historical and cultural monuments of national and global significance. The appeal stressed that the coexistence of the monastery and the museum is not only possible, but absolutely necessary for a genuine revival Solovetsky archipelago.

Solovetsky Islands is a sacred place, where there are closely interwoven material and spiritual aspects of human lives.

September 25-27, 1992 the IV Solovetsky Forum "Man and society: mental health and ecology of culture". [1] On behalf of its members co Solovetsky Forum Yu Luchini and PI Sidorov appealed to Russian President Boris Yeltsin and the Supreme Soviet of Russia RI Khasbulatov an appeal. In this document, the forum participants noted with concern the deterioration of mental health in recent years, social unrest, lack of culture, the decline of morality, the manifestation of spiritual climate degradation in society. The public sentiment is increasingly observed nihilism, permissiveness, aggression, violence, economic hopelessness. Diagnosis of public health has been put so well, that even 20 years later, you can safely put the signature on the "Solovki treatment" the revival of morality, tolerance, active personality. Today, many Russians are already in practice really convinced that "sick people do not build a healthy economy. It is the duty of all of us - to take care not only of the body but also to take care of the human soul "[10].

На V Соловецком форуме 22—25 сентября 1993 г., проведенном совместно с администрацией Архангельской области, On the V forum on Solovetsky September 22-25, 1993, held in conjunction with the administration of the Arkhangelsk region, Arkhangelsk branch of the Russian Geographical Society of Sciences, Pomeranian University named after M.V. Lomonosov, Arkhangelsk Medical Institute and other organizations, the problems of history, ecology, and international relations city. International scientific conference "Russia. North. Sea "was dedicated to the 300th anniversary of the first arrival of Peter the Great in the Arkhangelsk and the cradle of the base of the Russian fleet, namely Solombalskiy shipyard. The conference theme was not chosen by chance. Unique historical past of the North, rich nature of the region, a huge intellectual potential and today attract the attention of scientists, the public and foreign partners. [2]

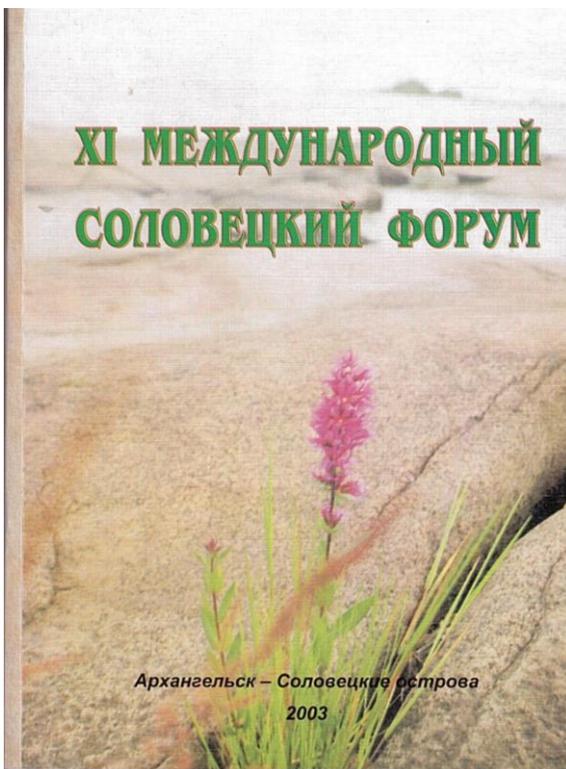
In 1994 was held the VI Solovetsky forum. [3] From 1 to 6 June in Arkhangelsk and worked on the Solovetsky Islands International Conference "Social work in Russia." Among the honored guests were first forum Solovetsky Grand Duchess Maria Vladimirovna, Crown Prince George and other high personages.

From 1995 to 1997. were three scientific forum dedicated to the important issues of the modern Russian society. VII, VIII and IX Solovetsky international forums have been called "Human Ecology: The Future of Science and Culture of the North" [15] "Children in Need", "60 years of the Arkhangelsk region." The book, published in 1999, had published articles on the economic and social development, culture, education, history of the Arkhangelsk region, dedicated to its 60th anniversary (1937-1997), documents and materials Solovetsky index from 1989 to 1999. [5].

Interdisciplinary approach in a forum to facilitate contacts and cross-fertilization of different scientific fields, whose representatives in joint discussions are deep and original solutions of concerns. All of these activities had a positive impact on the interaction between the two largest universities in Arkhangelsk - Pomeranian State University named after M.V. Lomonosov, and the Arkhangelsk State Medical University. The integration of those years the two institutions had accumulated valuable experience of equal and mutually beneficial cooperation, fruitful cooperation in the field of scientific activity.

X Solovetsky Forum "Socio-cultural space: tradition and innovation, global and regional dimension" was held from 6 to 9 September 2001 issue location Solovetsky Archipelago in the socio-

cultural space, which was discussed at the summit between President Vladimir Putin and Patriarch of Moscow and the whole Russia Alexiy II, was also discussed at the forum. Also discussed environmental problems of rocket and space activities in the Arkhangelsk region. The interest of the scientific community touched aspects of morality and law. He lay in the fact that morality is impossible without a stable and normal development of the existence of the economic, business and other spheres of human activity. Also covered the topics of religion and law in the past and present of Russia, the issues of self northern territories, the problem of interaction spaceport and territories. [12] In his speech the head



of the Arkhangelsk region A.A. Efremov said Solovetsky forum, participants always raise the key issue and not only offer them to the discussion, but have them on specific proposals.

17-19 September 2003 passed XI Solovetsky forum, which included the international scientific-practical conference "Local government in Russia in XXI century." Symposium "Solovki: science and education" and the conference "Managers of the XXI century.". The forum was attended by Russian and foreign scientists, experts, MPs, state and municipal officials. The conference focused on issues of local self-government in modern terms, historical experience and traditions of local self-government in Russia, the strategy of the development of municipalities, financial and economic basis of local self-government. In addition, on the Solovetsky Islands in an international symposium was the presentation of scientific and educational center "Solovetsky Islands." Confer-

ence "Managers XXI century." Was an original result of the tenth anniversary of the Institute of Management, Law and professional development at the head of the Arkhangelsk Pomor State University named after M.V. Lomonosov. [4]

XII Solovetsky forum was held in September 7, 2005 in Arkhangelsk. The participants discussed the issues of the professional education topics related to the professional development, professional retraining for the local government, as well as the Bologna process. In this forum, presented the work plan of the "Master of Public Administration", developed by the School of Business Administration in Arkhangelsk<sup>1</sup>, interest in which is then displayed RAGS, RAU, Moscow and other Russian universities.

From 16 to 19 September 2009 as the part of the Solovetsky XIII Forum in Arkhangelsk was held an international scientific-practical conference "Regionology: Arctic Circumpolar civilization", as well as round table discussions in Severodvinsk on the Solovetsky Islands. At the conference, among other issues discussed noo sphere approach to upgrading in the Arctic, where the very existence of human populations in the circumpolar conditions requires the creation of specialized structures for the social mediation of core natural environmental factors and to ensure the social security of people. Have been affected by the problems of the Northern Sea Route, remain untapped reserve of the international transport system, difficulties of the Arctic navigation, the need for restructuring of the economic and financial, transport and management of the SMP in the market economy. At the round table organized by JSC "PO" Sevmash ", issues of management training, resources, increase the efficiency of the Presidential program in the region, the role of regional business schools. On the Solovetsky Islands in the roundtable touched on the development of culture of the Russian North.

The topic of XIV Solovetsky Forum, held in June 2-3, 2011, was devoted to the geopolitics of the Arctic. The participants discussed the geopolitical situation in the Arctic, the problems associated with the definition of the borders and the development of the continental shelf of the Arctic, maritime activities, social and cultural space of the northern territories. Scientists have talked about the Arctic as a zone of high geopolitical tension associated with its resource potential. Questions of national identity subsurface Arctic increases the likelihood of crisis situations in the high latitudes. At the plenary session of the forum dedicated to Russia's national interests in the Arctic, it was emphasized that our country in the XXI century. again have to prove their right to the shelf, Arctic space previously officially hers. JF Kefeli, vice-president of the Academy of Geopolitical Prob-

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<sup>1</sup> Master of Public administration. URL: [http://narfu.ru/pomorsu.ru/www.pomorsu.ru/8fbabae5a9298ca298b181682f3dd983.html?page&id=mba\\_index](http://narfu.ru/pomorsu.ru/www.pomorsu.ru/8fbabae5a9298ca298b181682f3dd983.html?page&id=mba_index) (Date of access: 17.12. 2012).

lems, it is noted that the main contenders in the development of the Arctic, Russia will be the U.S., Canada. C report "Regional presence of Russia in the Arctic: the geopolitical and economic trends" made Kozmenko S. Yu, director of the Northwest Research Center of Marine Policy of Murmansk State Technical University. On military and political potential of the Arctic states and scenarios of possible conflicts told AA Khranchikhin, deputy director of the Institute of Political and Military Analysis. O.N. Shadrin Associate of NArFU, addressed the plenary session of the forum on "geocultural European North: identity in a globalized world." S.I. Shubin advised to the focus on the integration of the northern regions through or forming the Northern Federal District, or a close-up of the region 'Dvina-Pechora region. " Y.F. Lukin made a proposal on the establishment of the Arctic regions of Russia Union as a network organization of the horizontal integration.

At the Institute of Management and regionologii, Arkhangelsk, Ural Scientific Center RAS, Arkhangelsk branch VZFEI June 2 meetings were held five sections: 1) "Geopolitics, Arctic strategy and calls for Russia", 2) "Socio-economic problems of the northern territories" and 3) "Ethnocultural landscape of the Arctic and the North ", 4)" Gender Arctic geopolitics: demography, history ", 5)" Ecology of the Arctic and the North. "The participants in this section A. Evseev, F.N. Yudakhin, M.H. Shraga concluded abandon purely technocratic approach to the surrounding environment of the Arctic, to take into account the seismic characteristics of the region in the development of hydrocarbon deposits.

In the June 3, 2011 in the field meeting on the Solovetsky Islands "Solovki as a spiritual and civilizational center of the Arctic region and the whole of Russia" forum participants:

- ✓ took part in the excursion of O.G. Volkova "Solovetsky Monastery as the northern spiritual and civilizational center";
- ✓ attended lectures by A.Y. Martynov "Solovetsky Museum-Reserve: 1967-2010. The main stages of the development "and" primitive history of the Solovetsky Islands "in the exhibition hall" at Veshnyak ";
- ✓ conducted a scientific debate on the strategic development of the Solovetsky Archipelago, slum village, the interaction between the different actors control operating in the Solovki;
- ✓ acquainted with the current literature on the history, architecture and nature of the Solovetsky Islands, including learned new book, published by the Solovetsky monastery;
- ✓ met with the leadership of the Solovetsky Museum and exchanged views were to ask questions about the development of Solovki, the interaction of the museum and the monastery.

Solovetsky XV International Forum "Russian Arctic: Past, Present and Perspectives" continued the tradition of the scientific forums on a range of the issues of geopolitics, political science, regionology, Management and Economics, Cultural Studies. Conference was held on 18-20 September 2012 with the assistance of the Administration of "Seaside municipal district", but "Ar-

khangel'sk Regional Tourist Association", NGO "Association of Tourism and Service," Solovki State Historical, Architectural and Natural Museum, the center "Arctic Partnership" CAFU and the magazine "The Arctic and the North." Thanks to the new format of the scientific forum in plain extended dialogue, adapting the standard scientific approach to modern standards, an international conference has opened up new opportunities for dialogue, science, society, business in the Arctic and northern Russia. The main themes of the forum were Solovetsky geopolitical space "Arctic XXI" model Arctic geo-economic area of the Russian Arctic, Putin's breakthrough in the Arctic, social and geo-cultural Arctic and the northern Russia, the environmental problems in the Arctic, as well as the activities of the National Park "Russian Arctic". The forum was proposed initiative to declare the capital city of Arkhangelsk Russian Arctic territory of dialogue, solidarity and partnership of the Arctic. The move underlines the vital geopolitical importance and the historical development of Russia's priority in the Arctic area.

Thus, during this period there have been many significant events. More noticeably becoming a regional and humanitarian, Arctic areas of scientific and practical conferences, satellite symposia held under the Solovetsky forums. In addition, all the recent forums have international status. The workshops attended by guests from Norway, Sweden, Poland and other countries.

Summarizing the practice of the functioning of the social movement, one can refer to the conclusions of Professor Y. F. Lukin, who made in the book "Global society self-governing communities." During the 24 years of its activity the Solovetsky forum certainly made a positive contribution to the development of the civil society in Russia. It is also important to highlight some organizational and conceptual aspects.

- 1) Legal status of self-governing non-profit organization does not matter. This is demonstrated not only the experience of the Arkhangelsk regional public movement "Solovetsky Forum", which in spite of the state registration and remains virtually non-formal social movement. Many such organizations established at the initiative of the citizens themselves, prefer to have informal status, not to fall into dependence on bureaucratic, fiscal policy.
- 2) The freedom of activity of public organizations, of course, has its limitations. And the content of their work. And financial security. And in other ways. Be free, independent - to be poor and "broken."
- 3) Solovetsky forum freely discussed at the conferences, symposia, urgent questions of public life, led the information, education and human rights work, to shape public opinion, formulated in their appeals to the power problems that require resolution. In this case, as soon as connected to his conduct regional authorities and the management or policies of the conductors, the forum became boring and not so free.
- 4) The activities of the movement was based on the principles of voluntariness, equality of its members, government and law. And the stated purpose in the statute, and in fact the content

of their work is the Solovetsky forum and human rights, and environmental and creative scientific amateur organization and its core - a self-governing community of the new type.

- 5) Social movements - self-governing community, network formation can become a serious alternative political organizations. In the absence of membership, party discipline they provide for freedom of choice, freedom of expression without regard to one's mind and leadership based on principles of self-management, self-organization, respect for individual rights. [8]

This is one of the main outcomes of the numerous movements in post-communist Russia. Freedom to participate in certain actions without having to meet the tight party discipline is a great boon for the citizens, but requires a high level of culture, civic responsibility. Social movements – are self-managed communities connect people with the same interests, largely satisfy their social needs in communication, creativity, recognition and less - the political needs of the citizens [8, p. 373-375]. The forums 1989-2012 topical issues of public life, having not only a regional but also national significance. In the resolution, addressed the Solovetsky forum for local and central authorities and management reflects many of the concerns of not only scientists, but also all the social strata of Russian society. Also a lot of attention paid to the analysis and prospects of development of social relations, culture, education, science, tourism, economy, and politics. Almost every forum has been a feature of their environmental orientation, saving not only the natural and cultural environment, but also the man himself.

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### **Polar poppy**

**(photo by M.V. Menshikov, The diploma of the photo contest «My North. My Arctic»)**



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## CITY OF ARCHANGEL MICHAEL



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**Abstract.** In this article the initial history of Arkhangelsk, which owes its calendar with date of foundation of the monastery of Archangel Michael in 1388

**Keywords:** *monastery, military fortress-city, date of foundation*

Relevance of the topic is determined by the fact that in 2013, marks the Archangel quite considerable age - 625 years (1388-2013), if we start counting from the date of establishment of the monastery of Archangel Michael at the mouth of the Northern Dvina River, which flows into the White Sea<sup>1</sup>. However, the concept of the founding of the monastery Archangel does not fit into the Russian Empire or the Soviet state, and today, in a democratic Russia, - the official state position, leading the countdown of the Tsar Ivan the Terrible, March 5, 1583, when the territory of an existing nearly two centuries of monastic settlement was built in the years 1583-1584. Arkhangelsk wooden military fortress, then get on the state level a city. This position was confirmed in 1884 by the king, which marked the 300th anniversary of the city of Arkhangelsk. This tradition was continued as the highest governing body of the Communist Party of the Soviet Union: in 1984, is widely celebrated 400th anniversary of Arkhangelsk.

In the light of the historical facts the legal age of Arkhangelsk greatly underestimated due to the various circumstances. Both before and after the 400-year anniversary date of the founding of Arkhangelsk questioned. At least among historians certainly was not a single, common point of view, but rather, were called and settled a variety of dates at the mouth of the Archangel of the Northern Dvina. The scientific world as the author of these lines, then the senseless arguments, in which year - 1583 or 1584-m - was completed wooden fortress around the buildings already existing monastery of Archangel Michael. Many researchers have relied not on the facts, and take into

<sup>1</sup> Another Archangel Michael Monastery was founded earlier by the monk Cyprian in Great Ustyug in 1212, originally Cyprian sett the cell, in 1212-1216 years. has built two wooden church in honor of the Presentation of the Virgin in the name of Archangel Michael. Having taken over the management of the monastery, and Cyprian to his death (1276) remained a simple monk, refusing to take holy orders. URL: <http://sobory.ru/article/?object=00247> (date of access: 18/01/2913).

account only the political situation, were cautious in their conclusions, referring to the early history of Arkhangelsk.

The official position of the government was quite conservative, politically understandable and pragmatic. In 1984, Archangel widely celebrated the 400th anniversary of the founding of the military wooden fortress (town) in the mouth of the Northern Dvina. 400th Anniversary helped solve some of the problems with urban development, the streets are cleaner, well-maintained.



And the state awards were never superfluous. May 10, 1984 by the decree of the Presidium of the Supreme Soviet of the USSR for his great contribution to the development of the Navy, development of the northern regions of the country, noting the achievements of the working people of the city in World War II, advances in economic and cultural development and in connection with the 400th anniversary of the founding of the city Archangel was awarded the Order of Lenin. From the standpoint of ideocracy Soviet power, by definition, just could not celebrate the anniversary of Arkhangelsk based monks. If in 1884 our ancestors celebrated the 300th anniversary of the Archangel, there is no need to change anything, they were as smart as we are. Such was the

logic of those in power.

For all of the above, it is very important to analyze the initial history of the founding of Arkhangelsk, and to give arguments to justify its 625-year anniversary, counting from the base of leading monastic settlement, which gave the name of Archangel hail. Each of us, living in Arkhangelsk, can be proud that the city is bright name one of the most revered of the heavenly angels. Arkhangelsk city – is a city named after the angel messenger, chief host of the Lord in the fight against the dark forces of all evil, revered as a fighter against any lawlessness.

Archangel Michael Monastery, who gave his name to the city of Arkhangelsk, was named in honor of the Archangel Michael. The name Michael in Hebrew means "Who is like God." When Lucifer, by the grace of God, a former light angel impact Gorda, said: "I am God!", The archangel, put God Archangel (commander) of Heaven ratification, designed to fight against Satan and fallen away part of the angels with him, exclaimed in anger "Mi ha II!" This is translated from the ancient Aramaic means "Who is like God? Who is God? " The Archangel Orthodox are called - Michael. Archangel Michael, the head of the heavenly host, pray at the beginning of any significant business

(for example, building a new home), and at the start of each day and at bedtime. On icons, he is depicted with a flaming sword or spear overthrows the devil.

The Birthday of the Arkhangelsk city, in my opinion, can be celebrated on November 21 as a celebration of the holy angels, who are headed by the archangel Michael. This holiday – is one more day of Arkhangelsk. But this holiday spirit associated with the name of the city of angels. Arkhangelsk – is the city of Archangel Michael - has a powerful positive energy and charisma.

### ***Hardarika — is the country of the Russian cities***

Date of foundation of any city is firmly connected with the life of people, their migration. Birth of urban settlements begins with the first resident who came to something he really liked the place, the first of its structure. No matter what it is - a wooden hut, dugout, hut, a small chapel, monastery church or something. But it is important to note that all other buildings (monastery buildings, military fortress, the arcade, marina (port), gubernatorial and other house) will appear later. After selecting a location. After coming to this place was originally a person or group of people. Once they start to settle in this place on a regular basis and do not tend to move on in the search of the very best in location.

The word "city" in Church Slavonic "hail" (the word "city" and "town" - synonyms) for its original etymological and economic importance not only conform to the Latin «uxbs» (city), but «hortus» (garden) and means any enclosure. City-fence consists of several fences (gradezhey in Bulgarian). City as the oldest form of settlement of the Eastern Slavs, then formed the Russian people, "was subjected to large changes at different times assumes the most diverse forms," - said Kliuchevsky in his lectures [13, p. 239]. Connoisseur of Russian life, the largest domestic historian are four types of Russian cities.

- 1) The fortified **city-yard** bee-hunter-trapper is an ancient form of Russian cities. Basically, it was just a single fortified yard, later called odnodvorok. Countless remains of shafts or "settlement", scattered over thousands of our plain, were, according to Kluchevsky, remnants of the East Slavic cities of Kiev and old scattered huts. Each reinforced cabin and was called the castle, the city.
- 2) **The city-village** with agricultural settlement appears later. It is a city made up of a few yards, which took their individual fences and standing close to each other, surrounded by all of one common wall. It could be a generic city, when the increase of the family is an expansion of the primary court, divided into several houses. Or economic linkage shifted a few scattered huts fortified one fortified place. Such cities are primarily agricultural settlement that occurred frequently picket fence consisting of upright fortified thick logs with pointed upper end "to the enemy of the people live it carefully." Permanent external threat brings to life such strengthening of the Russian city of settlement in the plains.

- 3) **The city-gate** - is the third form of urban-military government of origin, it is akin to a fortified village, only with a different economic conditions of life. In these border towns, military outposts has always been people, martial people. Their main function - protecting the borders of their country. That was such a monastic settlement of Arkhangelsk city, in 1583, received the status of "city" as a military fortress.
- 4) **City - Posad trading**. This is a later form of cities, villages and trade and industry people. City-townsmen largely has combined all forms of previous Russian cities. It is important to emphasize that the city in ancient Russia, Russia as a fortified, enclosed form of resettlement of the population did not remain fixed, constantly developed. [13]

Vikings (Normanns), who walked through ancient Rus ways "from the Varangians to the Greeks" or "from the Vikings to the Persians", named Rus Gardariki - country towns. In Norman sagas sometimes briefly called Rus - Garda (without riki - the country). A Scandinavian word «gard» meant just a fence, fence, fence, yard.

History of Russian state generally also called the city. The city-region, that is, or that in Russia, involving many cities fenced yard, city-settlements. There were "Zamoskovnye", "Zaotsskie", "Seversky", "Ukraine", "bottom", "Vyatka" and other city-region. Border city gates, which began in the XVI century. Arkhangelsk, functioned to protect Russian borders. If we proceed from an understanding of the city only as a fortress, the largest in the North Solovetsky Monastery with its powerful stone walls and towers can also be called a city-Gate, especially since he does not stand a military siege and self contained military garrisons in the White Sea populations.

The two distinct types of cities that existed in the sixteenth century., On the grounds of function and mission, that is destiny.

- 1) **The capital city of Moscow**, performing political, administrative, military, diplomatic, social, economic, commercial, cultural, and religious functions. The historic mission of Moscow - to be the capital of the Russian state, to carry out the administrative and territorial administration of the country. In the capital city were represented virtually all social groups of the time, with a predominance of the serving, military, trade and crafts.
- 2) **The county town** – is an administrative centers exist in Russia in XVI. counties, and other administrative units. Fulfill the mission of public administration in the field. Historically, counties were formed from land-counties led by the city, were subordinated to the governors and the governors of cities. Zavolochye (from the fourteenth century. - Dvina land), for example, after the annexation of Novgorod to Moscow in 1478 was divided into three lots: Dvinskaya, Vazhskaya and Onejskaya. Stood out from the Dvina Land: Dvinskaya, Mezenskaya Kevrolskaya and counties. Vazhsky land in the sixteenth century. formed in Vazhsky county.
- 3) **The border town** - is the military fortress, the city-gates to the presence of more or less than the number of military forces, military men, fortifications and weapons. The mission of the walled cities - security, protection of the borders of the Russian state. Among the cities defenders Arctic borders of Russia are Kola prison, Solovetsky Monastery, Arkhangelsk military fortress, etc.

- 4) **City-area**, that is certain in Russia, involving many cities fenced yard, towns villages. Northern areas were named in the sixteenth century. Pomor cities.
- 5) **Cities - commercial and industrial suburbs**. The population of these cities (Novgorod, Pskov, Kholmogory, Great Ustyug, etc.) engaged in trade, crafts, production of commercial products. Their mission in the development of market relations, trade, production, operation of the urban population, the size of which was quite unstable, which can be seen in the Arkhangelsk tenements in the late sixteenth century - the beginning of the seventeenth century.
- 6) **the port - city**, located at the mouth of the river basins, and on the coast. These include: Narva, Archangel, Kola, Kholmogory, marina St. Nicholas (Nicholas Korelsky monastery), etc. Their main purpose defined by the needs of Russia in the development of domestic and foreign trade. Implement trade, customs, diplomatic, military, logistics (transport and storage) functions.
- 7) **Monasteries-city**, the monastic settlements arising under the forest desert monasteries. These settlements include Archangel which was founded in the fourteenth and sixteenth centuries. based on Michael the Archangel Monastery. Vologda is its chronology from the base of the Trinity Monastery. The town was Zagorski in the XIV century. put the Holy Trinity Monastery. Fortress-outpost in the north of the Moscow principality was Cyril-Belozersky monastery.

History habitation of Dvinskih lands of the Arctic coast of the White Sea, the northern base of the settlements is closely connected with the monasteries. Monastery in translation Greek - "hermit's cell." This is a community of monks (nuns) with certain rules, its charter. Monasteries such as Archangel Michael, as opposed to those that are located in existing urban areas, appear in desolate places. Hermits left in the wild places, they were joined by others, appeared abode. People want to worship there, there is a settlement, fortress, established fairs, to form the focus of fisheries and trade. Thus, the whole wild, impregnable North with his impenetrable forests and swamps to its monasteries dot the Arctic Ocean. To them, as to the focus of life, poured colony courageous and hard-working people who are ready for a hard struggle with the inhospitable nature.

**Monasteries** have played a very significant role in the initial development of the European North of Russia, became the center of public life, religious, and economic support of the peasantry. It is noteworthy that the famous historian Kliuchevsky into the course of the national history marked the movement of the monastery as "the beginning of the XII century Russian life from the south to the north." Widening the circle of monasteries he regarded as "breeding centers of public life." In 1212, at the confluence of the Ustyug Sukhona to the South was built on an ancient north of Archangel Michael Monastery, whose founder was born in the village SAVKIN monk Cyprian. Vologda began his story, according to tradition, as the monastery. In August of 1147 the city of Kiev came to a river Vologda Rev. The holy Grasim's, created Trinity Monastery and lived there for

almost thirty-one years (1147-1178). [6] The date of foundation of the city of Vologda, therefore, quite rightly considered in 1147, when there appeared the first monastic cell.

Archbishop of Novgorod creates in the fourteenth and fifteenth centuries. permanent network of Orthodox monasteries in the Russian North: Archangel Michael, Nicholas Korelsky, Lyavlensky and others on the islands in the White Sea (in fact, in the Arctic, as the White Sea is included in the Arctic Ocean) in the 1429-1436 years. Solovetsky Monastery was founded. Numerous churches and the existence of a small area of monasteries that arose almost simultaneously reveal a significant permanent population of the province [26, p. 37]. Monasteries, receiving from the Novgorod Veche or individuals more land and good land in remote locations with razymi privileges and benefits, tried to settle them, summoned voluntary eager people, give them reinforcements and different benefits, built churches. "Great Monastery was an essentially city inhabited by monks, novices and dependent people," - said Mikhail Tikhomirov [29, p. 61]. Northern monasteries, especially the desert, carried out not only the spiritual and the religious, cultural, information and communication, and business functions, and often the administrative, financial, defense. Orthodox monasteries functioned as warriors, defenders of Arctic Frontiers Lord Novgorod the Great, and later formed the Russian state, as the monastery-fortress in the northern territories, the islands and the coast of the White Sea.

Archangel Michael as the Solovetsky are other northern monasteries undoubtedly played an important role in the development of the local socio-economic life of the Dvina Land, White Sea. [2] Among the archives of the monastery of Archangel Michael XV-XVI centuries. survived many peasant agrarian private documents - bills of sale, data, domains, separate, mortgages, drainage, compensation, contract, Megeve. Black township peasant life touched extracts from scribe and accountant books, county cut, payment and preferential certificates, receipts authorities to pay taxes and other, mainly monastic, documentation. Studied private acts of northern farmers show the active life of the social environment that surrounded the city of Arkhangelsk, in all its diversity at a time when there was not officially built a new military fortress - the city at the mouth of the Northern Dvina. The basis of the economy for the Dvina farmer was not only the land they cultivated, but the forest, marine, coastal, river and lake fishing. Sell, pledge fishing grounds - Tony Little and Big Nyachere on the Dvina, Kegostrove on Andreyanova Bank and in other places. Kekhta mentioned settlements, Kegostrovo, Nenoksa, villages Bukarkinskaya, Upper Angler, Omelyanivske, Ermolinskaya, Loginskaya, Lastoha, Lai, Chasovenskaya, Fofanovskaya etc. The monastery was not only real center of social life of the lower Dvina, but an active participant, the owner of the land and water areas, the buyer and the seller, the lender and the money-changers.

He performed a variety of commercial and economic functions. The monastery had estates, various land and fishing in the Dvina land. Complained by royal charter in 1542, he had peasants Nizovskaya Parish, Lisostrovskom camp in Zaostrovsky camp in Velikokurskom camp in Knyazhostrovskom camp in the parish Lots, at Kholmogory in Nenoksa and three courtyards of the monastery [14, p. 30-31]. Each year, the monastery sent carts winter and summer trial with fish and salt to Kargopol, Vologda, they brought back bread. Near the monastery, has long been a natural center of attraction nearby parishes functioned surely your local Torzhok was an exchange of goods, trade. That is real life at the mouth of the Northern Dvina, social and economic relations in the monastery of the Archangel Castle evolved much earlier than had been built "new city - a military fortress" in the years 1583-1584.

In the case, that in Archangelsk we can trace the evolution of almost all, which were named by Kliuchevsky historical forms of Russian cities: from the first city court, which started the monastic settlement of Archangel Michael Monastery in XIV century to cities - force or the sovereign's military fortress, built in 1583-1584, and then sit with the Archangel 1587 confusion "walled city" with that of "the city" as a focus of industry and commerce, was common in the works of historians who came to the study of Russian cities from a legal point of view. City for them was a settlement, which was officially that status in a given era. In the XX century. Peter Smirnov, S.V. Bakhrushin and other local historians understood as the city is mostly suburbs, that is commercial and industrial settlements.

Archangel city in dynamics - is a city yard, city monastery, a fortress, a port city, commercial and industrial Posad. Arkhangelsk served the spiritual and cultural, social, economic, trade, transport and storage (logistics), port, military and defense (defensive), political, communication, administrative, customs functions. Thus, the Archangel, founded at the end of the XIV century. as the Archangel Michael Monastery, was even more versatile Russian city than other settlements of the time. It suffices to note that in Russia, the sixteenth century. generally had little seaports.

Modern Russia has a chance to become the new Gardariki – is the country of millions of "polis-towns", the future of the settlements, built on the principles of local urbanization, the good earth, we have enough space. At the beginning of the twenty-first century. "Lonely hut" on the ruble, or in the suburbs, in the suburbs of Arkhangelsk, in other parts of Russia today, surrounded by multi-meter high fences, too, can probably be called the "city", following the conceptual logic of the Ancient Russia "my house - my castle," and hence the "my city." Family urban estates with amenities may be available not only to local oligarchs, but also to every hard-working and industrious citizen of Russia, in the North, Siberia and the Far East. Scientific and technical possibilities

now use environmentally friendly technology to ensure the autonomy of (getting wind and solar power, bio fuels, advanced water and wastewater treatment, communications). It is even believed that in modern Gardariki "we go from old town. For in them for our people has no future ", create less wasteful economy based on innovative principles of life. Utopia? <sup>2</sup>.How to Know! It has long been known that North America is largely a "one-story". Russia is also developing low-rise building, and part of the population is already urbanized prefer to live in their cottage outside of urban cities.

The conclusion is simple and lies in the fact that the conceptual notion of "city" is not eternal and immutable nor in history, nor in the life of society itself. Addressing issues of justification for any city, you must consider the dynamics of its status in the past and the present, and looking a little bit into the future.

***The older the city, the more we should respect it***

Cities, like people, have their age, time of prosperity and decline, his youth and maturity. The older the city, the more respectful attitude. This also applies to Arkhangelsk. And here, in my opinion, it is necessary to answer the question "what event as the beginning of life in the city, date of birth?" Historic alignment is obtained as follows.

Conceptually, there are two variants: 1) Arkhangelsk began its history as a monastic settlement at the mouth of the Northern Dvina from the date of the monastery of Archangel Michael at the end of the XIV century., If not earlier, as did V.V. Krestinin, V.N. Bulatov, this author of these words 2) Arkhangelsk was founded in 1583-1584 as sovereign wooden military fortress, which at that time was called officially "city" (G.G. Frumenkov, L.D. Popov, etc.).

There is now no doubt that the real story begins far from Arkhangelsk to the Tsar Ivan the Terrible on March 4, 1583, and on the grounds of the monastery of Archangel Michael Archbishop of Novgorod, that is, from the end of the XIV century. [3, p. 63]. The first official record of the castle is the beginning of the Archangel Blessed John mention Archbishop of Novgorod, who gave blessings everyday service of the Holy. Michael, abbot of St. Luke. Michael and the entire population, the peasants of Emtsy to sea.

It seems not difficult to determine the age of the monastery, if there is such a blessed charter. The whole question is to determine the authorship and dating of the said letters, the original of which, unfortunately, has been lost. It is known that the original certificates stored in the Blessed Michael the Archangel monastery until 1812-1813 years. (Ambrose, silence). Some historians consider the foundation of the monastery to the XII century. (N.M. Karamzin, VV Krestinin),

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<sup>2</sup> Science and technology». Gardarika — is a country of Russian cities. (Date of access: 26.11.2012).

others - the second half of the XIV century. (Metropolitan Macarius, arhimandrit Amvrosiy, A. Kirillov, V.F. Andreev, A.A. Shahmatov).

Modern reader is required to give a brief explanation of who the Archbishop, what was the procedure or, more precisely, his rite of initiation into the church at this important post. Archbishop of the Greek language means "elder among the bishops," "chief bishop", the bishop – is the head of a large church, uniting several dioceses, then - as the head of the Diocese church administrative district. In Russia, the first bishop, was promoted to archbishop in 1165, was in Novgorod [27, p. 247-248]. Up to half of the XII century. Russian metropolitan archbishop ordained bishops to the cathedral in Kiev. But the second half of the XII century. Novgorod began to choose from the local clergy of his lord, going "all city" in the Chamber and sending then elected to the Metropolitan Archbishop of Novgorod for ordination.

What the functions does the Archbishop of Novgorod in his possessions have? First, the church, the canonical defined ecclesiastical rules, regulations. Second, socio-political, the power functions of government in accordance with the customs of the Novgorod. According to the canonical authority of Novgorod ruler was subject to all the clergy, not only in Novgorod and its suburbs, but in remote rural districts, including Zavolochye, Dvina land. The jurisdiction of the Bishop had oversight of all public faith in all the world's people of Novgorod possessions. Bishop Court subject to all cases on family relationships, disputes on property inherited. Lord with Sofia clergy headed the trade measures and weights. At Novgorod Episcopal, that is at the church of St. Sophia, was a special staff, composed of religious and secular people known in the annals of the name Sophia. This staffed Protopopov, priests, deacons and other church officials, nobles and servants of the laity. Novgorod lord all the affairs of the church and the court management and the management of villages and towns in their possessions entrusted it sofiyanam. He was a wealthy landowner in Novgorod, he owned a huge parish in Zavolochye. Performing political functions, ruler of Novgorod was the first powerful person in Novgorod boyars had shelves and military men with their banners and governors. He had the right to send or not send their shelves with Novgorod Ratiu, he gave the magistrates personal commandments, how to act during the campaign. Lord took an active part in all negotiations with the princes of Novgorod, in all external relations with Sweden, Denmark, the Livonian Order, Lithuania. All of the treaty ratification Novgorod written with the blessing of Bishop and approved by its stamp. He acted as a mediator during the political conflict in the Novgorod, often assumed the considerable costs for public affairs, led the construction, giving cash benefits.

To understand the certificates authorship of Blessing Novgorod Archbishop Abbot of the monastery of Archangel Michael monastery, Luka needs a comparative analysis of various written sources, which are available to the researchers. First of all, we should define the years of the reign of John the Archbishop of Novgorod. The fact that the list of Novgorod Bishops XII-XIV centuries. really means three people wearing the name of John. First John in 1110-1130 was not an archbishop, as the Archbishopric was introduced in 1165 in the 1165-1186 Second John's tonsure to the Great Schema, as a bishop, was named Elijah. Therefore, you should refer to the letter of the Arkhangelsk blessed time of John the third, archiepiscopal Novgorod, a service which continued in 1388-1414 Priest Kirillov reasonably attributes the letter to the time of John the third, but the date of his ministry leads other reason: from 1386 to 1414 years. [23, p. 5]. The well-known researcher in the Dvina letters XV. Shakhmatov believed that John Archbishop of Novgorod held a chair at the Sofia 1388-1414.

How was held the procedure of the election of the Archbishop third? In the spring of 1388 the Archbishop of Novgorod Alexiy, who ruled Novgorod church thirty years without one year and five months, voluntarily left the throne of the Lord and retired to the monastery of the Holy Resurrection on Derevyanitsy. Novgorod asked him to specify his successor. In response, he proposed to elect three men worthy, put three lots in the holy meal, writing names, "and whom God will give to you, that I am blessed." According to this advice lord Novgorod Veche elected three worthy men - Hutynsky Abbot John, abbot of the Annunciation and the Nativity Parthenios Abbot Athanasius. Their names are placed on the altar in the church of St. Sophia, the priests served the liturgy, and the Novgorod veche stood at the church of St. Sophia. At the end of Mass priest Ishmael began to take out lots, first took out a lot of Athanasius, then - Parfenov. John's fate remained on the throne, and this was recognized indication that God and St. Sophia chose John communicates Novgorod Chronicle. [24]

Chronicle of sources that Archbishop John was elected Novgorod Veche May 7, 1388 of the abbots Hutynsky Savior Monastery, but consecrated in Moscow Metropolitan Archbishop of Novgorod and the whole Russia - Pimen in the Church of St. Michael the Archangel and of Great only January 17, 1389 [24]. As we would say, using modern terminology, a church organization delayed approval process elected by the people on the alternative basis Archbishop of Novgorod. Since his election to the Chamber prior to the approval of office by special church ceremony - hirotonisanii been more than eight months. Such precedents c delaying approval of the position of Archbishop of Novgorod were before. Dedication elected to the Chamber Arcadia, for example, took place only two years later [12, p. 188].

At the end of the XIV century. because the church confusion during the election of John the situation was even more complicated. Permanently conflictual situations as to the appointment of the Patriarch of Constantinople Russian metropolitans (Cyprian Michael, Pimen), and the struggle for the unity of the Russian Metropolia, with isolation of the church in Veliky Novgorod. December 2, 1375 Metropolitan of Kiev and All Russia on the proposal of the Lithuanian prince was put Fr Cyprian. This was done even during the life of the current Metropolitan St.. Alexis (1353-1378), entirely devoted to the interests of Moscow. In addition to the Metropolitan Cyprian in 1380, was ordained Metropolitan of Kiev and All Russia, Archimandrite Pimen, now supposedly on the proposal on behalf of the Prince of Moscow. This was generally a detective story, as Prince Dmitry Ivanovich sent in summer 1379 in Constantinople for approval Moscow Metropolitan Michael (Mityaya), who died on the ship at the approach to Constantinople. Russian embassy, accompanied by Michael, the forger and submitted for the approval of Patriarch Pimen - Archimandrite Pereyaslav Goretskogo monastery (in the embassy had three Archimandrite). Angered by the Prince of Moscow did not want to see nor take Pimen, invited by then Metropolitan of All Russia outcast before Cyprian. Then he sent away Cyprian (1382) and called from prison Pimen ... This kind of intrigue and games with the Metropolitans continued for several years. Once the new Duke Vasily (1389-1425) agreed to Cyprian, who served already in a strong position, Metropolitan of Moscow 16 years (1390-1406). This confusion and over. To be confused with the Metropolitans of the Church added the Great Novgorod conflict with both Metropolitans Pimen and Kyprianou because of payment of tribute for the month of Metropolitan Court. Novgorod in the Chamber decided not to give the monthly Metropolitan Court in Novgorod, and plead with their master. This long drawn-out conflict has a negative effect on the attitude of the Moscow Metropolitan and Archbishop of Novgorod, Moscow and Novgorod [12, p. 322-333, 335].

Another opportunity to refine the dating of blessed letters by Iovan gives a mention about Arkhangelsk Abbot Luke. Novgorod Bishop John blessed in his deed "to the abbot of St. Luke. Michael. " With a name in the monastery in the fourteenth and fifteenth centuries. mentioned only one person. With the blessing of the Arkhangelsk literacy Luke was first approved by the abbot of the legitimate Archangel Michael monastery. He was abbot of the monastery of Archangel Michael at the end of the XIV century. - Presumably from 1388 to 1400 (AP build). Prior to its approval of the head of the monastery, to bless him to the post of Novgorod Archbishop John Luke was a priest. As you know, the internal management of monasteries were also elected. Elected abbot, cellarer and housekeeper. Of these, only the abbot was approved ruler of Novgorod. Allow the participation of lay people in the election of monastic superiors. Abbot means leading, ruling, gov-

erning, head of every monastery. In ancient times, the abbot was not necessarily a priest, then a practice of electing abbots of priesthood. Abbot, who is head of the monastery, has the right to wear a staff [27, p. 927]. Specifying the date abbacy Luke, we thus determine the age of the monastery of Archangel Michael the Archangel and the date of establishment of the castle. That is why it is important to determine when Luke was abbot, who was his successor, and when they ran the monastery.

Without going into the content of the discussion on this issue, here are the names of the first Archangel abbots of the XIV and XV centuries, using the researcher works of A.A. Shakhmatov, the list by P. Stroyev 1877, a historical sketch of the priest Arcadia Kirillov (1898), article by F. Andreev of the date of foundation of the monastery of the Archangel Michael (1988), an inventory of 57 State Archives of the Arkhangelsk region, composed Shumilov N.A. (1989) and archival sources (GAAO, f. 57, op. 2), examined by me personally in the state archive of the Arkhangelsk area (letters, deposits, bills of sale, etc.) [23, 3].

Abbot of Luke can be considered the first legitimate ruler of the Archangel Michael monastery and the legitimate founder of Arkhangelsk. This is, in modern terms, the abbot-mayor, combining positions Orthodox abbot of the monastery and the "first mayor" of that little old monastic settlement of people in the mouth of the Northern Dvina - Archangel Castle. [19]

As a result of this analysis it is possible to determine the chronological framework of ratification of the blessed Archbishop of Novgorod John Luke, the abbot of the monastery of St.. Archangel Michael, dates no earlier than 1388 (John was elected Archbishop of Novgorod May 7, 1388), and no later than 1400, as the Abbot Luke replaced in the fifteenth century. other chiefs of the monastery. "From this ratification shows that the Abbot Luke was a contemporary of Archbishop John (1388-1414 gg.)" - Wrote Shakhmatov in the preface to the published text of the blessed them with copies of letters in the first application [30, p. 145]. In contrast, the dating of VF Andreev counts Archbishop John from the time of its approval in Moscow, quite unreasonably prejudice the legitimate value solutions Novgorod Chamber of May 7, 1388 According to V. Andreev, blessed mention is made on or after February 8 in 1389, when he returned from Moscow to Novgorod after hirotosaniya not later than January 20, 1415, when John refused to chair or "ellipsoid with dominion" [3, p. 67-69]. The foundation of the monastery, according to V.F. Andreev, suggests its founding date of Arkhangelsk. Following V.F. Andreevym (1988) A.A. Kuratov in "Pomeranian Encyclopedia" (2001) also indicates unproven 1389 founding date of the monastery of Archangel Michael [17, p. 247].

However, there are enough good arguments for believing the date of foundation of the monastery of Archangel Michael monastery is still in 1388 given the fact that the monastery has actually existed at the time. Do the in-depth analysis of the letters of the blessed Archbishop of Novgorod John, during the reign of the abbots of the monastery of Archangel Michael, acts Dvina land fifteenth century., Other evidence give reason to conclude that the time of the monastery at the mouth of the Northern Dvina not determined by the content of even the letters of the Archbishop of Novgorod the third, paradoxical as it sounds. Archangel Michael Monastery really could be based before 1388, and even more so in 1389 and the second, and have, in the words of V.V. Krestinina "superior antiquity between Russian monasteries." In "Complete Orthodox Theological Dictionary" is mentioned that "Michael the Archangel Monastery is located on the outskirts of Arkhangelsk, founded earlier fourteenth century" [27, p. 240]. Even the blessed letter referring to the time of John the third to the fourteenth century., The author of a historical sketch of the Monastery of St.. Archangel Michael in Arkhangelsk priest Arkady Kirillov (1898) philosophically noticed that there is no reason to deny the existence of the monastery and described much earlier time. In support of this he cites the following valid arguments:

- ✚ Archbishop of Novgorod literacy only blesses his everyday service at St.. Michael, which involves quite a large staff of monastic brotherhood and livability of the monastery;
- ✚ at the same time, Archbishop John "blessed abbot Luke" than not to deny the existence of his elders-builders in the early days of the monastery;
- ✚ charter itself is a consequence of the application Dvina Novgorod authorities only on everyday service of the Holy. Michael, as the monastery at the time in question was both a parish church for the local residents, which is evident from the text of the letters: "... and you're the abbot, with the whole herd of the cathedral and St. Michael pray God for all the peasants.

Blessed charter of Novgorod prince, so that only records the existence of an earlier monastery, allowing it to carry out everyday service. Monastic settlement at the mouth of the Northern Dvina, obviously, there was in earlier times. No compelling reason is the emergence of Michael Archangel Monastery to 1389th or some other year between 1388 and 1400 years. When crossing service Novgorod lord John and third abbot of the monastery of Archangel Michael Luke. Because the real date of the Arkhangelsk city – is the monastic settlement at the mouth of the Northern Dvina will not even 1388 or 1389's, but much earlier period. Therefore, noting in 2013, 625 years of Arkhangelsk, we did not sin against the truth.

There is also speculation that its existence of the monastery had to "zeal of some rich family of Novgorod", had its ownership Zavolochye because of the harateynyh charters, attributable P. Stroyev to the fourteenth century, in the bills of sale in the monastery on various grounds under priest Akaky John and Athanasius, the former abbot after Luke, we see that the Monastery of St..

Michael already had at that time a very large funds. And where did the "very big money" if, in the words of the chronicler, the monastery put "out of the princes and boyars, and tears, fasting and vigil"? But on such a great ascetic, as the founder of the monastery of Archangel Michael, antiquity does not give us any indication. However Dvinskaya Chronicle says zavolochane depended Novgorod still under Vladimir saint who enlighten their baptism with the Russians.

Of all the authors, perhaps more objectively, as compared to other Arkhangelsk historians approached the issue of the base Arkhangelsk Professor V. Bulatov, carefully observed in his third book on the history of the Russian North, "Michael the Archangel monastery arose not later than the second half of the fourteenth as the head monastery of the Dvina land between the Novgorod government. I think that from now properly maintain the early history of the city of Arkhangelsk "[5, p. 159]. Professor A. Kuratov, unlike G.G. Frumenkova and others, divides the history of Arkhangelsk in the six periods, highlighting the first monastic settlement:

- 1) The end of the XIV century. - Monastic settlement;
- 2) 1584-1613 - The formation of the international sea port;
- 3) 1613 - the beginning of the XVIII century. - The main sea port in Russia living with stone courtyards (1668-1684)
- 4) The beginning of the XVIII century. - 1862 - the administrative center Arkhangelogorodskaya (later Archangel) province, design of "three-part" of the city, activity Solombalskaya shipyard Archangel Admiralty, a military port (up to 1862), urban development (planned April 1, 1794);
- 5) 1863-1917 two stages: the sunset sailing seafaring and shipbuilding (1863-1890) and the development of shipbuilding and ship's navigation (1890-1917). Commercial and industrial center, the development timber - export;
- 6) modern Arkhangelsk in 1917 [18, p. 41].

Historical confirm of the earlier date of the monastery foundation than the end of the XIV century, but not necessarily written, will appear. Someone watching us postpone the date of foundation of the Archangel hail more years to two or three hundred, or even more. This is perfectly normal endless learning process. In substantiating the date of the city of Kazan as the major arguments used data from archaeological research. Why should our archaeologists do not attempt to assign the date of establishment of Arkhangelsk in the earlier period than the end of the XIV century.? Hoards of ancient coins in the mouth of the Dvina find archaeological expeditions conducted. Or, the search for the beginning of life in the city of Arkhangelsk Kegostrov, Solombala and elsewhere?

Must take into account the fact that the northern lands of the delta of the Northern Dvina, on the White Sea were inhabited for a long time. White Sea – is the cradle of civilizations and cultures, not only of the northern people in terms of: 1) the concept of the Hyperborean civilization as the polar focus of all languages and cultures (V.N. Demin, etc.), 2) theories on the origin of the

Arctic Russian, similarities in language and Slavic culture and Aryan tribes (ancestors of Indo-Europeans), the formation of primary nuclei that occur in the Arctic (B.G. Tilak, N.R. Guseva, etc.), and 3) the data of archeology, philology, linguistics and other spatial sciences oldest cultures on territory of the Russian North, in the Arctic. Just look at the archaeological map of Murmansk and Arkhangelsk regions and on up to Chukotka, to make sure that for thousands of years on the banks of the northern seas, and rivers was life. Archaeologist P.Y. Pavlov believed that the first man entered the north-east Europe in the early Paleolithic, in the second half of the Middle Pleistocene - at least 130 thousand years ago. Archaeologist A. Martynov their truly selfless scientific work on Solovki convincingly proved that the beginning of the ancient history of the development of the White Sea islands out in the Mesolithic, the V millennium BC. e. [21].<sup>3</sup> Petroglyphs on the islands of the White Sea, the river Vig, shore of Lake Onega, in Kanozero on the river Ponoj, parking lot of primitive hunters and fishermen in the territory of the Arkhangelsk often dated IV, III, II millennia BC that is at least 4 thousand . years ago, at the mouth of the Northern Dvina there human life.

Some information on the Northern Territory can be found in the Norwegian explorer Otero (Ottar), done at 70-80 years. IX. voyage to the White Sea for extracting teeth and walrus skins. He sailed to the mouth of the Northern Dvina (Cape Pur Navolok), where the local population, according to his observations, engaged in shipping, fishing for sea animals and agriculture. In the Icelandic sagas (stories) tells about the campaign Viking Harald gray cloak in summer 965 to Biarmia. In "Saga Bosi and Herraude" says Viking squad month journey deep into the taiga to Biarmiya they called Dvinsk forest [4, p. 22-26]. A voluntary militia of Novgorod and the Dvina povolnikov, princely ratey themselves make long military campaigns in the fourteenth and fifteenth centuries. in Norwegian, Swedish land, including the sea, in 1320, 1411, 1496 years. Povolniki Novgorod in 1320 the two parties have made two rather large and remote hike sea. The brigade under the command of Luke, a wealthy nobleman in Zavolochye, c his friend Ignat Molyginym two squads went Dvina and the White Sea to Murmansk, that is, in northern Norway. [10, p. 99, 385-386].

### ***Arkhangelsk city — a fortress, frontier in the Arctic***

Arkhangelsk as a spiritual and cultural center of monastic lands and the Dvina to the White Sea in 1388 became the subject of socio-economic life of the Russian North in the XV-XVI centuries. At the end of the XVI century. Arkhangelsk change its status and significantly expands its functions through the construction of a wooden military fortress ("City") and the beginning of the first sea Arctic port of the Russian state. Since Archangel is a fortress and a frontier of Russia in the Arctic.

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<sup>3</sup> Petroglyph from the ancient Greek language means «carving on the rock» (Petra — rock, stone, glyphe — carving).

In autumn 1582 the royal governors arrived on Dvina: Petr Afanasevich Nashchokin and Zaleshanin Nikiforov, son Volokh. They built a monastic settlement on the lands of the house with numerous buildings, bath, ice, beer-Varna. With neighboring settlements raising money in the case of a policeman in the arrival and stern royal governor, who come to grips with the preparation of construction documents for the construction of a new fortress at the mouth of the Northern Dvina.

March 4, 1583 Tsar Ivan signed a charter to build a city at the mouth of the Northern Dvina River, which was sent to the the Dvinskii governors – P.A. Nashchokin and A.N. Zaleshanin - Volokhov.

With the ratification of this story begins Arkhangelsk fortress. Official state approach in those days was to the fact that if a military fortress built, then the settlement gets the status of the Russian city. That time known diplomat S. Herberstein twice visited Russia, he wrote that "they (Russian. – Y.L.) called the city all that is surrounded by walls, fortified fence or otherwise obscured" [7, p. 112]. This is a significant statement to understand that appeared as a result of construction 1583-1584. It was built a wooden military fortress, which is called the city of Arkhangelsk. In the royal charter lists the monastery buildings that need to be left under the protection of a wooden fortress, as well as those that need to be taken outside the city limits.

In its early years, Arkhangelsk fortress city and the port does not have a permanent name. At first it was Novogorodok, Newtown. The very name implies, was the old city - Archangel Castle, which included monasteries and other buildings. Called him and Dvinsk city, New Arkhangelsk city, new city of Arkhangelsk, New Kolmogorsky city. All of these names appear in documents dating back to June 1585, January 1586, January 1587, June 1589, March 1596, the beginning of the seventeenth century. In royal charters foreign merchants in March 1600 and June 1613 at the same time there are two names: Archangel and New Town and New Kolmogorsky city. Later followed a firmly entrenched name "Archangel", from the monastery of St.. Michael, who gave his name to the city in the XIV century.

It has been documented that the construction of a major urban facility – is Arkhangelsk military fortress (the city), which began in the spring of 1583 after receiving the Tsar was not immediately completed and continued even in 1584 given that the military fort was put into operation in 7092 (till August 31, 1584), in August 1584 can be considered as the date of completion of the conditional Arkhangelsk fortress. A.A. Kuratov noted that "in Arkhangelsk were established and built a wooden fortress-city (1584) and Posada (1587). The connection of the two components in the end formed a city in our sense of the word "[16, p. 47]. The construction work, since 1583,

continued in 1584-1585. In the summer of 1584 being built port. However, the Arkhangelsk sea port, not even with his ship pier, could make trading ships at anchor in the monastery of Archangel Michael (1582 - the first foreign ship under the command of Captain Claes Janson). In March 1585 was formed Arkhangelsk Port Customs, April 1, 1585 royal charter dates from the cash collection of customs house of the Archangel [15, 31]. In 1585 close to a military fortress built the first wooden decorations. Commercial center of the port city, leading an extensive trade with foreign merchants, was a German-Russian court yard, which became, according to L.D. Popov, the center, whose role in many other Russian cities served Kremlin [28, p. 15].

Among the main reasons for the construction of a military fortress and Arkhangelsk sea port at the mouth of the Northern Dvina are the following:

- ✚ convenient strategic, military, marine, geographical location of the monastery of the urban settlement at the Cape Pur Navolok at the mouth of the Northern Dvina River, where it was then built a military fortress, marina, living neighborhood;
- ✚ unsuitability of the administrative and commercial and artisan center Dvina Land (Kholmogory) to serve as Chief marina at the mouth of the Northern Dvina because shallow inconvenient location;
- ✚ security on the northern borders of the country, the creation of the current system of fortifications on the coast of the White Sea;
- ✚ military protection only after the loss of the Baltic Narva free access to the open sea, to Europe through the mouth of the Northern Dvina and the frozen North Sea;
- ✚ total demand of the Russian economy in the development of foreign trade with the European (England, Holland, Denmark, France, etc.), and other foreign countries (Persia, Buchra);
- ✚ a need for import of weapons and other "military instruments" from Europe to strengthen its armed forces;
- ✚ social and economic interests of other lands, cities across Russia in the development of export and import trade in the Northern Dvina River basin, where the sixteenth century. there was already a well established market;
- ✚ establishment at the mouth of the Northern Dvina reliable marina (port), which would entirely under the control of the Russian government, not the British, Danish, Dutch merchants;
- ✚ gain control of the foreign trade, its government regulation;
- ✚ customs policy, the desire to focus on the collection of trade taxes in the Northern Dvina and the White Sea in a very convenient location, not in a few points. Arkhangelsk in the late XVI century. still behind hilly, but most of the customs duty to be levied was foreign merchants already in Archangel;
- ✚ Archangel castle from the XV century. was the meeting place of Western European and Russian civilizations, wide open sea window in the western world, have kept this role until the beginning of the XVIII century.

*Description of Archangelsk as a military fortress* and tenements have preserved for us the book in 1622-1624. M.A. Veliaminov. According to them, the city of Arkhangelsk (referring to a military fortress. – U.L.) wood, the rubble in two walls, smearing clay, and at the three gates of the city: Arkhangelsk, Resurrection and St. Basil's Water. On city walls and gun towers were: food iron, copper, rapid-fire cannon, iron, shot. In Arkhangelsk were churches, eleven sister cells, yards, five granaries, prison, court, customs, and other yards and barns. Above and below the Dvina on the tenements were churches, houses of priests, deacons, taverns, baths, forges, two mills, living neighborhood, a district. Solovetsky Monastery Strelezkiy District and others a lot of shops [25, p. 49-54].

Arkhangelsk city(grad) in XIV—XVI centuries included:

- ✚ Michael-Archangel Monastery – is the church, cells and other religious and economic construction in monastic settlement at the mouth of the Northern Dvina
- ✚ New City - newly built in 1583-1584 years. wooden fortress, acted as a military frontier fortresses, defender northern borders of Russia;
- ✚ Posad shopping city with the arcade, Musketeers District, courtyards, shops, barns, drinking establishments;
- ✚ Voivod courts with all services, office buildings (prison, hut I will go, etc.);
- ✚ Maritime trade and military port (marina, the arcade, customs).

As you can see, Arkhangelsk in the late XVI century. - It is an entire mixed-use urban system, forming the Arkhangelsk city environment with its unique style of-kind-of the monastery, a military fortress and sea border of the port city, the meeting place of civilizations. Complexity to change the official foundation date of Arkhangelsk arise mainly because of the perception of public opinion, state and municipal authorities and management concept "city". It should be emphasized that the criteria of modern cities in the XX-XXI centuries. act at all those signs that have significance four to six centuries ago. Of course, the historical evolution of the concept of "city" is considered today to work. Naturally, the city XIV-XVI centuries. is not a settlement, which we now consider the modern city.

Mission, the purpose of modern Arkhangelsk - is, above all, a city for the citizens. Modern Arkhangelsk – is environmentally friendly, tolerant city, comfortable and convenient accommodation. It is a city revival of spirit and form polar Arctic movement of XXI century., The capital of the Russian Arctic, the Russian North. Viva Archangel! Prosperity and well-being of your people!

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## AN ENIGMATIC IRON ARTIFACT FROM OKSA BAY COAST, THE NORTH OF THE SEA OF OKHOTSK



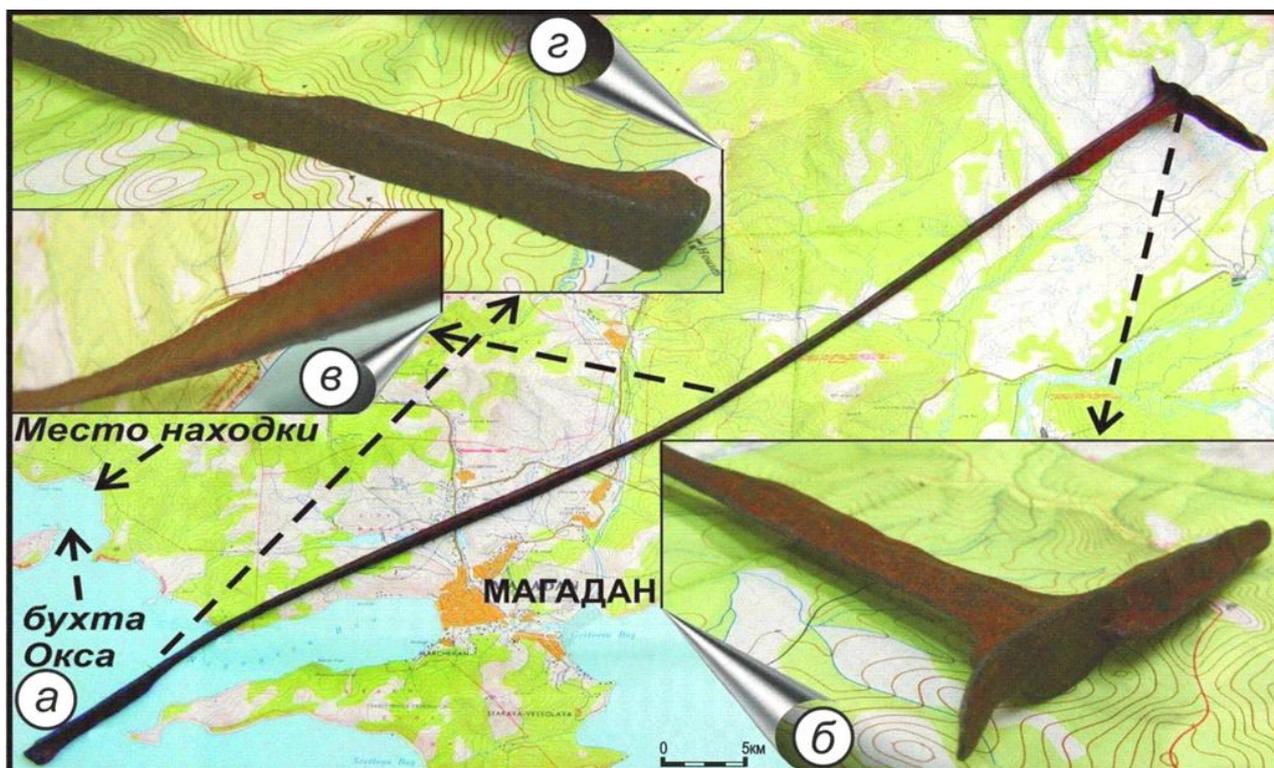
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**Abstract.** A forged iron item found on the Sea of Okhotsk shore displays some similarity with items representing different cultural traditions, but, however, it appears somewhat different from all of them. It can be a walking-stick, pick, graze or poker. Its ethnic origins, place and time of its manufacturing can be established, if providing similar artifacts are reported from other areas

**Keywords:** *iron artifact, graze, chisel, the Evens, the Evenks, the Koryaks, Magadan, tsunami, the Sea of Okhotsk*

### **Introduction**

August 8, 2007 during the field work for the study of the geological traces of tsunami in Primagadane on the bay in the north of the Oxus Okhotsk found strange iron artifact that has similarities with several artefacts of different ages and at the same time does not look like the end any of them. These are: a cane, pick, rake, Klevets (or check). The subject of forged steel, has a brown color due to its solid crust overlying oxide, in some places worn on the edges (Figure 1). The appearance of an artifact, despite some design complexity, gives the impression of archaism or home-made, which implies the assumption of its considerable age.



PIC. 1 Mysterious object and the place, where it was found

***The description of the artifact and its place of its discovery***

The artifact, which was found in the top of the bay near the mouth of the Oxus unnamed creek on the south-eastern part of the beach, lined with large boulders on the surface. He was lying horizontally, parallel to the coast, under the newly blurred heavy storm scarp sea accumulative terrace height of about 4 meters, composed of fine gravel, eight alternating layers of buried soils. This terrace formed of tsunami genic peresypi, blocked from the sea part of the ancient Proto-bay Ochs, stretching above the north-east to the foot of the mountains (Pic. 2).

Artifact has its interesting, not so understandable form and if found people could probably be blown away. Bay, despite the fact that it comes through the valley of the Oxus only tractor road 8 km long (from the highway Magadan - Arman), regularly visited by fishermen from Armani (18 km by sea) and Magadan (24 km by sea), because there are found marine fish and crabs, and the Oxus river in summer goes on spawning salmon. Near the bay - on the mainland and on the island of misunderstandings - there are three houses, one or two of which are inhabited permanently. Preserved skeletons of the barracks, and their picture on the old maps showed an increase of the use of local land in the Soviet period. Previously, they were in the sphere of influence and Evens Kamchadals, and from the middle of I millennium BC. e. and to about, XVII century. here, as elsewhere in the North Okhotsk Sea were settled possession sea hunters and fishermen - protokoryakov and Koryak. On the shores of the bay studied their three parking Neolithic and paleometal [1, 1990, p. 27-36].



Pic. 2. The place of discovery of the artifact in the bay Oksa

It is possible and even more likely to hit an artifact of the beach from the terrace deposits as a result of the erosion of its turf-covered ledge heavy storm in the summer of 2007. Insignificance corrosion artifact sufficient to indicate that it is likely to be long in buried, the dry fine gravel of the terrace (Fig. 3), and not at its base, where he was subjected to regular moisture precipitation and periodic action of aggressive - in terms of corrosion - the sea water during storms at high tide, and abrasive machining pebbles and sand with wave-cut of the sea. For these reasons, he would remain here in almost perfect condition for even a few decades. Being in the same terrace gravels, it can be protected from corrosion and water impermeable layers of buried soils. These "pureed" peel oxides only "here and there" on the edges of the artifact may also indicate that the recent hit it on the beach. This section of gravel with layers of buried soils, most likely, could have been formed due to repeated burial of each of the newly formed land cover on the surface of the terrace-peresypi - just the way there, and now, (Fig. 3) - by moving gravel tsunami waves from the adjacent bench and the beach on the surface of the terrace.

Pic. 3. Blurring heavy storm in summer 2007 marine terrace-ledge peresypi up to 4 m, folded small pebbles with layers of buried soils, which was found under mysterious iron object

Contrary to popular belief that it is impossible manifestations tsunami in the north of the Okhotsk Sea due to the low power of earthquakes (with a magnitude of up to 5.8 for the instrumental observation period) on North Ohotskom shelf, they are all the same happened. In 1952, in the next bay Nagayeva entered waves up to 2 m from the South Kamchatka tsunami that de-

stroyed the Severo-Kurilsk on about. Paramushir (where the waves reached a height of 10-15 m). The source of this tsunami was the South Kamchatka earthquake of magnitude 8.5 with a fireplace in the Pacific Ocean, east of Paramushir Island and the southern tip of the Kamchatka Peninsula [2, 1998, p. 225-226, 3, 2000, p. 82-84]. Even higher waves - up to 2.2 m - marked tide gauges Nagaevo trading port in 1960 [2, 1998, p. 225-226, 3, 2000, p. 172-174, 4, 1974, p. 29].

In addition to the seismic sources in the northern shores of the Sea of Okhotsk may affect (and weak) volcanic tsunami sources [5, 2006, p. 659-663]. So, as a result of an explosive eruption 1933 severokurilskom Harimkotan island in the Pacific Ocean collapsed volcano Severgina peak of about 80 million cubic meters. m (Fig. 4). This caused a tsunami on the island of Paramushir 150 km to the north-east had a height of 9 m [6, 1964, v. 2, p. 411]. And such a volcano on the Kuril Islands is not unique. There are about 100 land of volcanoes and islands, volcanoes, 38 of them active [6, 1964, v. 2, p. 411]. More than 116 submarine volcanoes found at the bottom of the Sea of Okhotsk near the Kurile island arc [7, 2003, p. 101], each with an explosive eruption could generate a tsunami wave, a significant part of the energy that will be sent to the northern shores of the Sea of Okhotsk. In this case, the explosive nature of the eruption is not something exotic for the Kuril volcanoes. Traces have numerous catastrophic explosions at volcanoes Severgina (island Harimkotan) Alaid (island Atlasova) Daddy (Kunashir Island) [8, 1980, p. 20-44].



Fig. 4. The island Harimkotan and the volcano Severgina with traces of explosive eruptions in 1933 and in the XVIII century. in two falls from the top, causing the formation of a tsunami in the Pacific (1933) and the Sea of Okhotsk (XVIII c.). The arrows indicate the direction of failure stimulated volcanic landslides: red - in 1933, the violet - in the XVIII century.

A striking example is the volcanogenic tsunami that arose during the eruption of Krakatoa in the Sunda Strait on 26-27 August 1883 waves of the tsunami tide gauges recorded even in the English Channel [4, 1974, p. 29, 9, 1981. 92-93].

The Northern Okhotsk Sea has obvious cumulative properties against tsunami, which improves their impact on the northern shores of the Sea of Okhotsk. So, at the entrance to the tsunami in narrowing the horizontal and vertical bays (such as Tauskaya lip) and bays (Ochs, Gertner) waves are decelerated, and their height increases, and they come to the shore in the form of a water wall, scrambling, and moves like a bulldozer all in its path. It is no accident that in all these and other tsunami in the Sea of Okhotsk maximum wave height was observed at its northern coast [10, 2010, p. 312-317]. Thus, seismic and volcanic tsunami in northern Sea of Okhotsk were and will be, and lack of information about them is related to the fact that no one was here to geological and geomorphological traces. Therefore, the hypothesis of tsunamigenic burial and then save the iron artifacts buried in the state is not so fantastic as it may seem at first glance.

In general, an artifact like a cross between a style of a letter "G" and "T" and, at the same time, like a stick (Fig. 1 a). It consists of a triangular "core" (Fig. 1) with a length 89 cm, width 1.1-1.6 cm and perpendicular to it as a "handle" (Fig. 1 b) 12 cm, width 1.6-2 , 4 see "Handle" is located asymmetrically with respect to the axis of "core" (Fig. 1 b). Dimensions of the long and short of it - 8 and 4 cm.

The resemblance ends artifact with a cane. The first difference is that it is forged from steel. The weight of such sticks (610 g) was too large compared to the conventional wood. "Handle" it is inconvenient for a hand - cold, awkward and "neuhvatista", which is exacerbated by the original cross-section of the long end of the "handle". He tetrahedral (Pic.. 1 b), reminiscent of the famous three-linear faceted bayonet Mosin rifle. Long part of the "handle" is narrowed toward the distal end, what looks like a bird's beak straight. Unclear assignment of unusual shape of the cross-section "of the rod sticks" (Pic 1c, d). It almost looks like an isosceles right triangle with a side length of about: 1.2, 1.25 and 1.6 cm top of the right angle is rounded. The other two angles are acute. The long side of the triangle has the form not a straight line but an arc concave inside the triangle (Pic. 1). The curvature of the sides clearly sustained throughout the length of "the rod" in conjunction with its width varying from 1.1 to 1.8 cm Rib "rod" with sharp edges are uneven and wavy. "Core" of slightly tortuous, has two smooth kink in the opposite direction to the deviation from a straight line to 3.9 cm curved it in the plane perpendicular to the long side of the triangular section. His face, coupled with the right angle, differ almost perfect plane. At the distal end of the

"rod" has a ribbed thickening (Pic. 1 d), and when you pair "core" to the "handle" - the edge stiffness (Pic. 1 b).

The second item, which is similar to the found artifacts is poker, which follows from the almost  $\Gamma$ -shaped in its shape. However, there is a short part of the "handle" (in terms applicable to cane), needless to poker, four face long part of the "handle" (Pic. 1 b) and the unusual triangular cross-section, "rod" is making a significant doubt that it is manufactured for bedding coals and ashes in the stove or in a fire.

### *The discussion of the results*

Archaeologist S.B. Slobodin (NEISRI FEB RAS) suggested that at the other end of the "rod" was another "handle." Then the subject would remind long bracket, suitable, for example, to bond logs or log raft. The presence of flat and thin short part of the "handle" and a strange triangular profile "core" does not allow us to consider this version persuasive.

Four planes cross-section of the long "arms" and its pole rotor suggest, the similarities found objects with an almost-forgotten medieval knives called Klevets or check. Klevets (checkan) – is the former shock edged weapon, a kind of battle-ax - had a narrow pole rotor blade and hammer shaped. Klevets of coinage distinguished by a narrow and long beak-blade. Handle length was 0.6 to 2-2.5 m Weight weapon was 1-2.5 kg. It was made of iron, bronze, often, hammers known ancient Chinese jade. In the first millennium BC. e. Klevtsov and hammers were widely distributed in the population of Siberia. They were used to engage the enemy, protected by chain mail and armor. In Russia Klevets used in X-XVII centuries. His penetrating power to the chain mail and armor was higher - in comparison with the sword - by focusing on weapons of mass end of a long handle, and even higher than the battle-ax - by pole rotor blades. Since Klevets and chisel marks of distinction were also military leaders, they were decorated with engraved, inlaid with gold. In the XVII century., Exit from the use of armor, they lose their military significance, but as an honorable weapon and symbol of power persist for some time, including in Russia [11, 1984, p. 335, 805, 12, 2001, p. 727, 13, 2000, p. 66].

"Shaft" (Pic. 1) results in the artifact can be viewed as a handle Klevtsov, long part of the "handle" (for cane, rice. 1 b) - as a pole rotor blades, and the place Hammer shaped (Pic. 1 b). Last discrepancy can be explained in different ways. Butt broke off or break off the ground down and place somehow and cannot be interpreted unambiguously, or he somehow was attached to the short side, or it is not there at all. Lack of butt on such alleged Klevtsov can be explained by the fact that it was not necessary due to a lighter - mostly leather - local enemy armor likely than those used in Europe and China. Adds doubt of the offense as an artifact Klevtsov all the same

strange triangular shape cross-section "of the rod-arm" (Fig. 1c, d). It is inconvenient for the hands to strike, as ribbing, but also thin and does not have the necessary rigidity.

Officer of the Magadan Regional Museum I.E. Vorobei said that, it's probably - the Even cane and pick to dig roots and broad concave face (Fig. 1), "rod" is used to bind to it round the stick to increase its rigidity (insufficient without this to be used as impact weapons or even a cane), and to increase "uhvatistosti." You can add to this that the fineness of the rod reduces product weight and saving scarce metal.

Ethnographer L. Hahovskaya (NEISRI FEB RAS) has suggested that the curvature of the "rod" is intentional - to avoid fidgeting bound (not direct) a stick along the "core", but the forging of such an unusual profile, apparently, very demanding and skills. However, due to the low rigidity of "core" it's easy to bend in the right places to match the curvature of a suitable stick.

It is doubtful whether the ancient artifacts are slightly undulated fill in the corners between the edges of the handle tetrahedral or beak resembling electric welding seam (Fig. 1 b). However, even with the VIII-VII millennium BC. e. known method of casting metal welding, in which the parts were heated, and the gap between them is filled with molten metal in the same [14, 1976, v. 23, p. 24-26]. Whether such welding is used in this case?.

Laboratory chief of the Magadan mechanical plant O.I. Metlyakovoy on the "SL-11A" made a spectral analysis of the chemical composition of an artifact Seam with manganese and silicon (0.6 and 0.2%) is close to modern welding electrodes. Yet both the metal itself and the seam is not quite on the same chemical composition with modern counterparts, although this similarity and adds doubt ancient artifact.

### **Conclusion**

Answers to the questions on ethnicity artifact, place and time of manufacture can give search of his counterparts in other regions (including the Evenki in extensive areas), as well as information on the history of ancient metallurgy.

Even if it turns out that the iron object is not as old as it can be assumed, as is, for example, to far creating period of Soviet history, and in this case there are questions about his appointment. Himself this time, just like the others, is worthy of study, including by examining artifacts.

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## Biology, Science about the Earth

UDK 551.340

### ANTHROPOGENIC TRANSFORMATION OF PERMAFROST CONDITIONS OF THE EUROPEAN NORTH OF RUSSIA AND THEIR CONSEQUENCES<sup>1</sup>



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**Abstract.** The anthropogenic changes of permafrost conditions in the key areas of the European North of Russia – village Koida (Mezenskaya tundra), village Nes (Kanin peninsula), village Shoina (Kanin peninsula), Mezen city, Vashutkini lakes (Bol'shezemel'skaya tundra), Amderma (Yugorsky peninsula), the northern part of the island Vaigach. Geocryological characteristics of sites and the main types of anthropogenic changes in permafrost conditions describe

**Keywords:** *anthropogenic transformation, permafrost conditions, Dvinsko-Mezenskaya plane, Kanin peninsula, Vashutkini lakes (Bol'shezemel'skaya tundra), Amderma (Yugorsky peninsula), island of Vaigach, cryogenic processes*

#### **Introduction**

No doubt the need for the estimation of the anthropogenic changes of permafrost conditions of the European North of Russia due to human activities, which is reflected a number of studies [2, 3, 5, 11, 13, 14, 16-21, 25, 26, 28 - 31, 35, 36]. However, it is important to determine the location, nature and specific types of such influences. Need to develop a set of measures that will either be excluded from nature, or to reduce the load on the number of natural complexes located in permafrost.

European North of Russia and adjacent subarctic regions play an important strategic role for socio-economic development. It concentrated large mineral deposits, its abundant biological resources. However, ecosystems differ weak resistance to human impacts and extremely slow rate

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of recovery. For the study area is characterized by territorial remoteness from the main industrial centers of Russia, patchy distribution of productive forces, the use bio resources potential of landscapes (traditional crafts, nature background), low ecological capacity of the environment. [16]

### *Permafrost conditions of the research area*

In the western part of the Dvina, Mezen plains east Kanin Peninsula permafrost (MMP) are common in the Mezen plain, on the Kanin Peninsula and beyond their southern border width goes to the east. On the coast are widespread thermo karst lake. Mezenskogo Gulf coast of the White Sea and intensively exposed thermo denudation thermo abrasion [1, 3, 7, 14]. Cryogenic processes and thermal abrasion along thermo denudation Abramov (Mesen tundra) and Konushinskogo (Kanin Peninsula) coasts are associated with high tides to 10 m Maximum speed retreat coast in the study area (Morzhovets island, White Sea) occurred in 1869-1882 years. and formed from [1] to 39.5 m / year. On the territory of Dvina-Mezenskaya plains and the Kanin Peninsula meet IMF late Holocene age rare island and type of distribution. MMP temperature range from -0.5 in the south to -1,0 ° C in the north area. IMF power can be up to 15 m in Mezenskaya tundra (Koide vil-lage) and up to 25 m in the east of the Kanin Peninsula [11, 28, 29, 35]. MMP confined mainly to the peat deposit. In the vicinity of the village of Koide MMP found in peat (up to 10 m), but absent in the mineral soil (Fig. 1, 2). The key area of the village Nes MMP found in tundra wetlands (ca-pacity from 0.4 to 1.0 m) and peat (average thickness of 3 m).

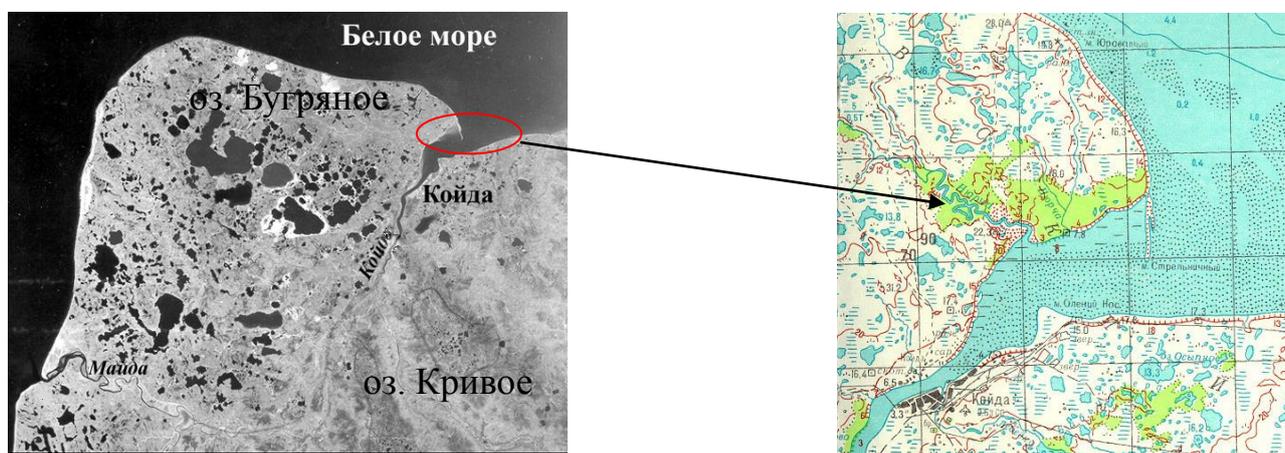
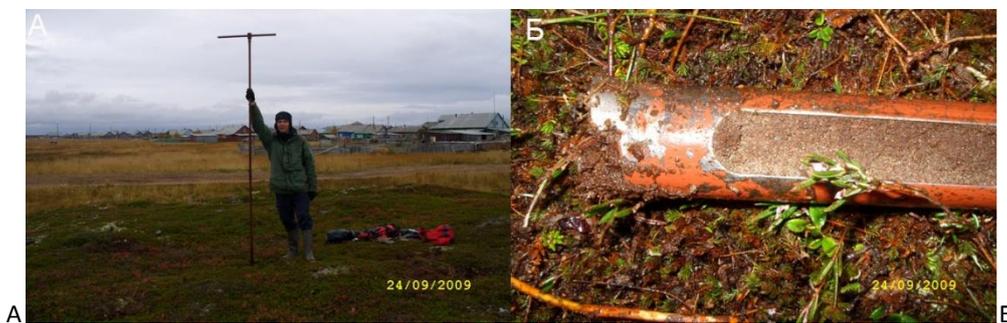


Fig. 1. Fragment satellite image (1986) 1:500 000 scale with the rapid development of thermo karst terrain in northern Dvina, Mezen plains (bold red line - the zone of birch)

crooked in the area of karst development)



Pic. 2.1\_Migration permafrost heaving mound in the village of Koide (September 2009)



Pic. 2.2. Drilling of the well on the migratory swelling mound: A - Drilling, B - core which revealed non-frozen sand beneath the frozen peat (photo Iglovskogo SA, NG Skyutte)

In tundra Konushinskogo shore height migration heaving mounds up to 2 m in the northern part of the Kanin tundra in the key area of the village Shoina MMP confined to the marshes. Capacity of peat in them ranges from 0.1 to 0.3 m at the height of hillocks from 0.5 to 1 m and a diameter of 3 m Migration heaving mounds have a two-layer structure - this moraine loam (up to 0.7 m), covered top top fyanymi deposits up to 0.3 m by geo ecological zoning [3] territory enters the unstable region with poor defended under-ground water.

To the south of the hills, large coolie Mylk and the Greater and Lesser Sava Mylk are Vashutkiny lakes, some of which are extended in length by 3-4 km [8, 9]. They fall into the area of continuous permafrost. The maximum capacity of the IMF to 510 470 m recorded on the watershed of the rivers Adzva (Fig. 3) and the Sea-Yu, Shapkina and Black [3]. They are characterized by the lowest in the region of temperature ( $-5^{\circ}\text{C}$ ). Of cryogenic processes should be made frost heave, frost cracking, thermo erosion and thermo karst, solifluction, cryogenic and slumping.

The area is characterized by a wide range of cryogenic phenomena: cracks, polygonal-veined ice, hills and areas of swelling, thermo karst and thermo erosion form. Total area of frost heaving measured in hundreds of meters, the height of hillocks is not more than 2 m, the length of the base widths from 3 to 8 pm Modern thermo karst has spread almost all over the territory. It

develops in the most icy lake and marsh and lake-alluvial deposits, which wedges and injectable ice intrasoiled reservoir on ice, as well as less icy glacial-marine and marine sediments. Widespread swamps, Aeolian forms on sandy soils.



Fig. 3. Geo radar gramma fragment (river Adzvy, neighborhood Vashutkinyh Lakes): A - yellow line at the top of geo radar gramma - boundary-layer and permafrost, B - depth CTC is 0.2 m visible ice crystals up to 5 cm (photo by S.A. Iglovskogo)

The total capacity of marine Quaternary deposits exceeds 80 m [7]. The southernmost shore of Lake Vashutkinyh terraced height of 15 m, composed of pebbles and boulders. Its area is 8.3 square meters. km [8, 9]. By geo ecological zoning [3] area falls into unstable region with a satisfactory ground water protection.

Coastal area of the Yugra Peninsula enters the zone of continuous permafrost and intensive development cryopeg. For the territory of the characteristic temperatures up to  $-5^{\circ}\text{C}$ . IMF power reaches 200 m Amderma thermo abrasion processes developed throughout the coast to the Ugra Bowl and on the shores of large lakes [4, 14, 15]. When wave action is thawing icy sea, lake and marsh, lake and alluvial sediments and massive ice, the further collapse and slumping of rock blocks. The result is a coastal bluffs, often with canopies permafrost in height from 3 to 40 m intensive distributed epigenetic ice wedges mostly in peatlands. By geo ecological zoning [3] area falls into unstable region with a satisfactory ground water protection.

Insularity territory Vaigach creates a characteristic condition of development and continuous permafrost. [15] Dissected topography in the form of rocky ridges up to 150 m is typical for the central part of the island. Between the ridges and marine terraces spread swampy tundra and thermo karst lakes with a total area of about 3% of the territory. Thermo karst lake depth up to 5 m of glacial and tectonic (Lake Yangoto) to 45 m [14, 15]. The average annual temperature ranges from  $-6,5^{\circ}\text{C}$  in the north of the island and up to  $-7,0^{\circ}\text{C}$  in the south. For SSC is characterized by rather low temperatures ( $-5^{\circ}\text{C}$ ). Depth of seasonal thawing is 0.2 m in the peat up to 2 m in the sand. Permafrost island is represented by two tiers. The upper tier is composed IMF, whose thick-

ness increases from the coast of 10 m to the center of the island - 180 The lower layer consists of chilled rocks with temperatures generally from  $-1$  to  $-3$  ° C, and sometimes below, the power of this stage is reached near the coast of 100 to 300 m has been suggested that in the central part of the island total capacity of MMP than 400 m [4, 14, 15]. Most directly measured during the drilling power MMP was 100 m [4]. The island Vaigach small ice wedges developed in the upper layer of dispersed sediment marine terraces [4, 14, 15]. On Vaigach presents all cryogenic processes. There were various forms of hilly terrain, patches, medallions, process-related swelling. Polygonal-veined structure represented as developing forms (re-growth of ice wedges), and degradation – thermo karst lakes (Talatinskoe), which are formed in the areas with the greatest volumetric ice content of soil [4, 14, 15] (Fig. 4). Solifluction is manifested in the form of terraces on steep slopes. Thermo erosion confined to areas of icy surface soils, sometimes on the beach it is combined with thermal abrasion. By geo ecological zoning [3] area falls into unstable region with a satisfactory ground water protection.



Pic. 4. Solifluction cirque, which was formed as a result of solifluction splay material on unstable slopes (Vaigach Island, August 2010) (Photo J.H. Bolotov)

### ***Material and Methods***

The study of anthropogenic transformation of the IMF European North of Russia carried out a number of key areas Dvina, Mezen plains and the Kanin Peninsula - in the village of Koide (Mesen tundra) in June-September 2000, 2001, 2005, 2009., In the village of Nes on the Kanin Peninsula in June and August 2002, in the village Shoina Kanin Peninsula in July-August 2003, in the town of Mezen in 2003, around the lake, you Vanyukov (Vashutkiny lake Bolshezemelskaya tun-

dra) in July 2009, 2010. in Amderma (Yugra peninsula) and in the northern part of the island Vaigach in August 2010 [3, 5-7, 13, 17, 18, 21, 23, 24, 32, 35] (Pic. 5).

The area of the research was 5 key sites square. km. Traversed pits in permafrost heaving mounds of migration to 1.5 m depth were measured seasonally thawed layer (SPC), ground temperature below the CCC, GPR survey conducted to a depth of 35 m with a GPR SIR-3000, with a set of antennas Subecho-40 (40 MHz), Subecho-70 (70 MHz) (Geoscanners, Sweden), 501 (400 MHz) (GSSI, USA) on a conveyance devices with work in bistatic mode and bind the coordinate data describing the cryogenic processes, types of human activities on frozen landscapes and the extent of human impacts on them.



Pic. 5. Overview map of the study area of anthropogenic changes in permafrost conditions Dvina, Mezen plain Kanin Peninsula, Vashutkin Lake (Bolshezemelskaya tundra), Amderma (Yugra Peninsula), the northern part of the island Vaigach. Legend: • - key areas which conducted field studies

### ***Results and discussions***

Using the classification of human impact on the environment by A.G. Isachenko [13], the author divided the impact of the study region into two types:

- 1) impacts associated with gathering, hunting, grazing, directed mainly to the use bio resources potential of landscapes (traditional coastal fisheries, environmental background);
- 2) the impacts associated with the production and urbanization. Main sources of the second type (enterprise, public utilities, roads) have little (focal or linear) distribution pattern and confined mainly to the settlements on the White (village Koide, Nes, Shoina), Barents and Kara (Amderma, Vaigach Island) seas.

Maximum spatial distribution has a background of nature. It includes the following types: traditional use of indigenous people, forestry and resource-trade. [13]

Anthropogenic disturbances, changing the properties of the components and their interactions in the natural environment, can serve as a "trigger" for the development of adverse destructive cryogenic processes. [11] At high ice content of deposits in all key areas of tampering cryogenic landforms with anthropogenic disturbance provokes a catastrophic change in permafrost terrain. Given the fact that the coastal zone aggradation thermo denudation actively influence processes and thermal abrasion, in combination with anthropogenic disturbances are destroyed heaving mounds of migration, the development of thermo karst lakes and their subsequent discharge into the sea, which causes permanent loss of coastal land areas.

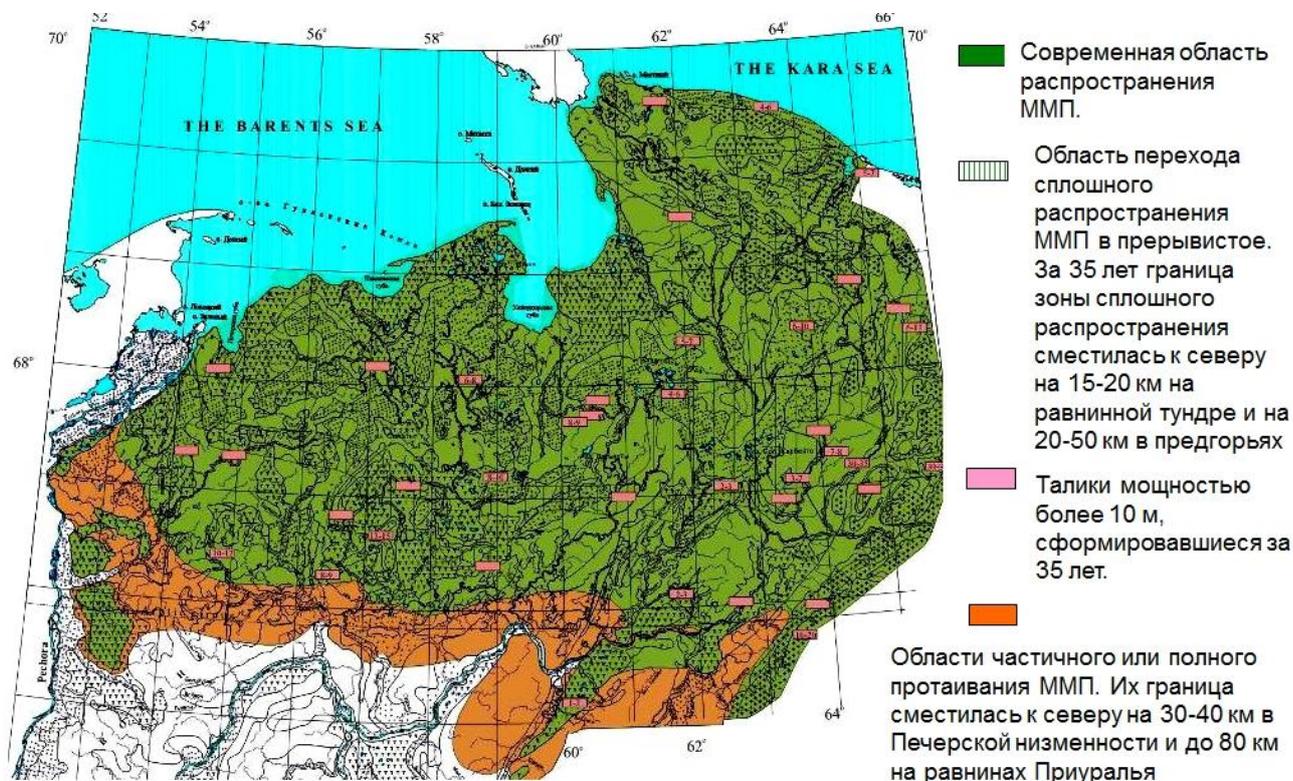
Damage to the integrity of the immigration heaving mounds composed of sediments with very high, can dramatically increase the thawing permafrost, which in turn will develop adverse destructive cryogenic processes (thermo erosion and thermo karst) and swamp formation [1, 3, 5, 7, 14].

Considering the situation on permafrost and anthrax cattle burial in the European North of Russia for the past 40 years, we can draw the following conclusions. Most of the continuous permafrost zone (through the Naryan-Mar - Vashutkiny lake by 68 °. Lat.) For the period from 1970 transformed into a zone of partial distribution to, what led to the thawed zones [21, 22]. So, in the basin Tedinyaha, Peheheyaha, Urenyaha (disadvantaged anthrax), the depth of thawing in the period from 1970 ranged from 6 to 8 m in Vashutkinyh lakes - from 4 to 6 m, the western part of the basin Adzva - 8 9 m, the river Korataiha - from 5 to 7 m, rivers Yunyaha, Yareyyu - from 6 to 10 meters, the river Yunkoshor - from 6 to 12 m in the Kara lips - from 5 to 7 meters, the river Tab-U - from 4 to 6 meters in the north of the NAO (area south of Bolvansky lips Ureryaha basin, river basin Yunkoshor, neighborhood Amderma) also reported sporadic occurrence thawed zones in areas disadvantaged by anthrax.

We can conclude that occurred significant "restructuring" permafrost of northern European Russia in the last 40 years (Fig. 6). She put it: the receding north to tens of kilometers of the southern border of permafrost areas and zones of continuous permafrost and a significant increase in power not through taliks the pre-specified period, reducing the area of permafrost due to the appearance of new taliks; dramatic increases MMP and development of thermo karst subsidence [21, 22].

Transformation of permafrost conditions of anthropogenic change can be seen in several aspects. [17] However, the form of violation of the natural landscape components MMP in them-

selves reduce the quality of land and the narrow scope of the possible nature of the tundra. Assessment of the sustainability of geo-ecological conditions of the European North of Russia can be done on the following parameters: sensitivity of permafrost engineering and to the destruction of the land cover and pollution, protection of groundwater from surface contamination.



Pic. 6. Changes in permafrost since the 1970's. by 2009 in the European North of Russia [21, 22]

Virtually all of the research area of permafrost can be attributed to the area "very sensitive" to the appearance of exogenous geological processes in the destruction of soil and vegetative cover. Parts of it are differentiated by the degree of protection of groundwater. [3]

### ***Consequences of the anthropogenic transformation of permafrost conditions***

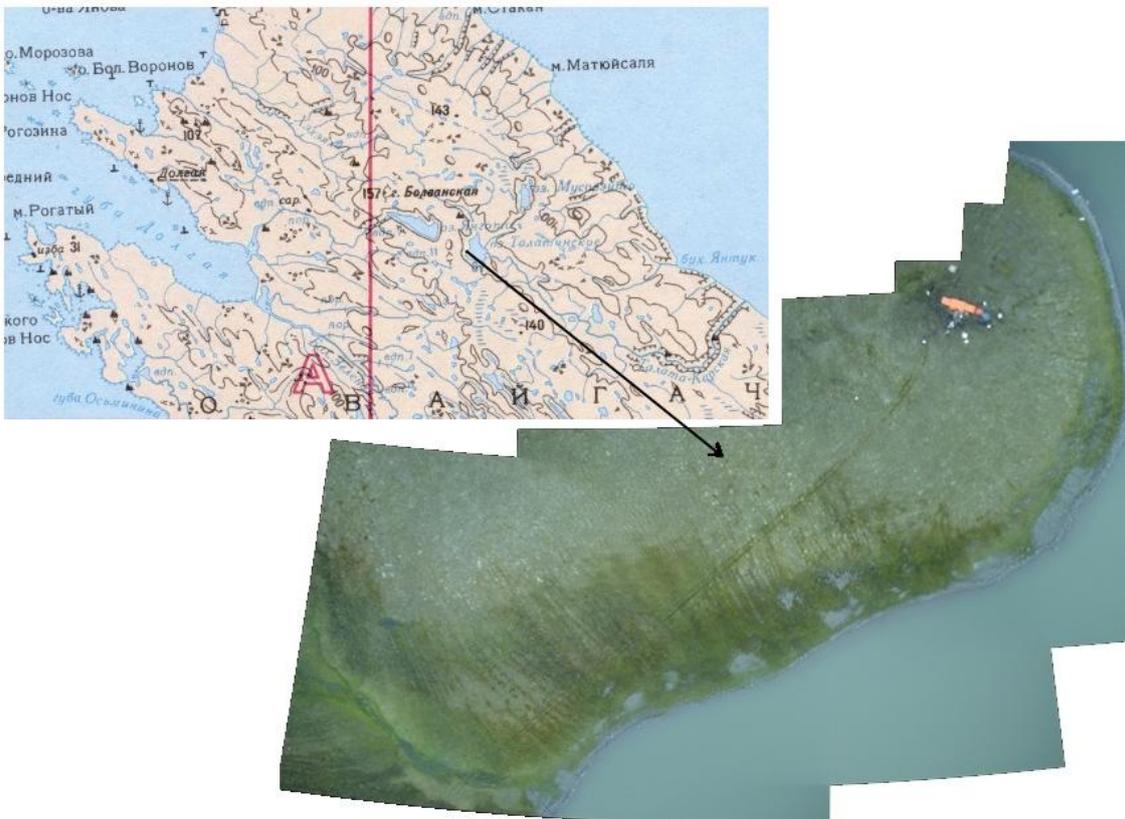
Multiple aspects of business, engineering and construction activities and equipment require large number of specific types of human-induced change of permafrost conditions [12, 13]. For the territory of Dvina-Mezenskaya plain Kanin Peninsula, Vashutkinyh lakes Amderma, northern part of the island and found Vaigach author identifies the following specific types of human transformation.

Local disturbance of vegetation on single passage tracked vehicles leads to rutting and mixing of soil horizons, which is celebrated in all the studied areas. In disturbed areas of soil has a higher temperature, a greater depth STS. Repeated passage (12 times in the tundra, up to 6 times in the swamp) tracked vehicles leads to the destruction of land cover, changes in the upper soil horizons and micro relief with rutting, erosion and thermo karst development process, which is observed along the temporary roads around villages along Abramovskaya (Mesen tundra) and

Konushinskogo (Western Kanin Peninsula) Mezenskogo Gulf coast of the White Sea, in the vicinity of lakes and Vashutkiyh Amderma, partly Vaigach Island (Lake Yangoto, Talatinskoe). On the road, to stop southern tundra wetlands, vegetation recovers very slowly (Fig. 7). It is known that the succession recovery of such sites can take 20-25 years [3, 35].



А



Б

Pic 7. Land development thermo erosion: A - near the village of Koide (2000), B - near Lake Talatinskogo, Vaigach Island, (2010) after a single passage through the ridge of tracked vehicles migration heaving bounds (photo by S.A. Iglovskogo) Valikova zone (unmanned aerial Gofarov M.I.)

Piles of soil are removed to the transformation of the micro relief, burial and destruction of vegetation, soil, redistribution of snow, hydrological regime around the settlements, as noted in the villages of Koidu, Nes, Shoina, Amderma. Digging pits leads to violations of the integrity of the local surface of the IMF (village Koide, Shoina, settlement Amderma). Thus, in the village of Koidu residents was made an attempt to dig up the ridge migration mounds heaving a 200 and a length of 600 m for the subsequent use of these lands for agricultural purposes. However, the result on the site was generated firebox peat bogs, and the site in the center of the village has been withdrawn from use. Construction site without following the rules and the second principle of building on frozen soils is accompanied by the destruction of the IMF, the development of thermo karst, thermo erosion, breach of vegetation, destruction and deformation of objects in the integrity of the array of the IMF (Koide village, Nes, Shoina). They all ended deformation structures as soil compaction has taken place and the presence of frost heave is not taken into account.

Local pollution STS and upper layers of permafrost fuels and lubricants leads to the accumulation and concentration in these layers of oil from the operation of facilities. Failure to comply with the rules of operation when working with fuel and lubricants in most filling stations, located mainly in the areas of military units, communications port and airport on the White and Kara Seas (city Mezen Koide village, Kamenka, Shoina, settlement Amderma ) identified oil spills in the STS. This has implications for contamination of surface and ground water and the destruction of the land cover. Required reclamation. In areas of melted rocks such spills lead to a deeper accumulation of oil in the spill area. Installed water pollution by oil products, exceeding MPC in tens and hundreds of times, in a fuel depot in the village of Kamenka and Mezen Mezenskogo district. [11] This causes the creation of all the local fields and streams of contamination in cryogenic landscapes are powerful potential mechanisms of physical-chemical, mechanical, biotic and other changes in these areas.

In the tundra and forest-tundra zones almost universally observed effects of deer grazing on the vegetation cover, which is expressed in delihenizatsii of tundra. The most easily broken marsh and moss tundra. At long parking deer herd grass-sedge-moss tundra destroyed completely. Significant effect on the upper layers of frozen soil have thousands migration of domestic and wild reindeer from the North Kanin Peninsula in the Southeast White Sea-Kuloy plateau (village Shoina, Nes, Koide) in Vashutkinyh lakes. Under current count of the total number of deer grazed on the NAO in 176 thousand heads [16], including up to 30 thousand in the Kanin Peninsula, an evaluation of the impact of their grazing on permafrost landscapes. Repeated use of the technique leads

to noise pollution, which has a disturbing effect on animals tundra (village Nes, Shoina, Vashutkinny lake).

At the moment, the intensification of natural resources in the research area due to the orientation of the majority population to use bio resources capacity of traditional crafts. All this can amplify human influence on the freezing conditions of the area.

Analyzing the situation to spread on the territory in the anthrax cattle burial, most of which are now in a mess, you can make the following assumptions. The greatest changes in temperature of the IMF (an increase of 1 ° C) occur in the eastern part of the NAO and river Komi (Urals, Pai-Khoi). Here, you may want to pay attention as troubled anthrax districts: Small basins Usa, Big Syryaga, Halmershor (Komi Republic), Yunkoshor, Kara Bay neighborhood, the river Tabyu (NAO). In this area will continue geo cryological change the situation. May increase the water content and wetlands, increased cryogenic processes (thermo karst, frost heave, thermal abrasion shores of seas and lakes) [21, 22]. Temperature increase of 0.4 to MMP 0,6 ° C can affect disadvantaged anthrax territory east of the river Porchtyvys, Syadeyyu, Adzvy, Pyayyu, Vashutkinny lake, Savaii, Syarnayu, Yareyyu, Yunkoshor. Temperature increase of 0.2 to MMP 0,4 ° C can capture almost all the NAO. The depth of thawing in 2020 could reach near Vashutkinnyh Lakes, Western Basin Adzva of 1 to 2 meters, the river Korataiha - up to 1 m, rivers Yunyaha, Yareyyu - up to 2 meters, the river Yunkoshor - 4 m in Kara lips - to 1 m, the river Tab-U - 1 m to the south of Bolvansky lips Ureryaha basin, river basin Yunkoshor, neighborhood Amderma possible sporadic appearance of thawed zones in areas disadvantaged by anthrax.

Currently in the Kanin Peninsula, Ugra, Bolshezemelskaya Malozemelskaya tundra and changes the environment in more than two dozen centers, most of which have developed in the field of hydrocarbons. If 30 years ago, these areas were mainly territory ecological framework, now there is a constant increase in the impacted areas and impacts on permafrost conditions in the area that could occur and others [10].

The greatest mechanical effect on permafrost conditions, leading to the appearance of man-made landforms, providing the mining complex, located in the Vorkuta region. Special significance of the above problems in connection with the natural features of the area under consideration, due to confinement to the northern latitudes and slow recovery process. [10]

### ***Measures to reduce the anthropogenic impact***

Necessary to create an effective strategy for developing the territorial system "nature - population - economy" where regulatory mechanisms should certainly speak environmental, legal and economic mechanisms.

One of the solutions to this situation can be justified and the creation of a network of protected areas (PAs). On the Kanin Peninsula there is one P.A. Shoinsky Biological Reserve (area 164 sq. km.) On the unique wetlands of the White Sea with sea Layden and the mouth of the river and Shoina Thorne. Necessary to create on the Kanin Peninsula natural monuments of regional significance. [11] Among the rare plant species should be included in the list of monuments of nature: the area Mikulkina Nose (northeast Kanin Peninsula) from the mouth of the Pearl River to the north with a 25-km (common endemic species of plants), the most northern "forest island" in the western part of the peninsula near Cape Kanin Konushin Shomohovskih on hills. On the steep bank of the Cape in the frozen peat is well preserved birch stumps and trunks of spruce, is a relic remains of "thermal optimum 'Holocene. You must save the larch "island" in the river valleys and Nes Semzha (south Kanin Peninsula). Siberian larch is located at the northern limit of distribution. Necessary to create a natural monument "Colony Barnacle Goose" between the rivers and Shoina Kambalitsy (Kanin Peninsula).

Institute of Biology, Komi Science Center developed a project to establish a biosphere reserve in Vashutkinyh lakes. Unfortunately, the project has not been implemented in practice. Necessary to create a reserve, which could contribute to the conservation of this unique place. On the territory of Vashutkinyh lakes is important bird area of international importance. Necessary to include land in the list of wetlands of the Ramsar Convention to the status of national importance [11, 31].

A good example of environmental policy can serve Vaigach Island, which, thanks to its geographical location is of strategic importance and with increasing volumes of cargo transportation along the Northern Sea Route and increase hydrocarbon production will experience a growing anthropogenic pressure. Reserve status will help to conserve the flora and fauna of this unique area, historical and cultural heritage of the North and the Arctic landscape. Of the Red Book of the NAO on the island grows 10 species of lichens, three moss species, 47 species of vascular plants, 26 species of birds inhabit, six of which are included in the Red Book of the Russian Federation and the NAO. The territory is one of the most popular nesting waterfowl on the west of the Russian Arctic. The total area of the reserve is 242,778 hectares. Still in need of protection and Atlantic walrus rookery located on Cape Large Lyamchin nose Islands Karpovo becomes and more deer. The reserve are more than 230 cultural heritage sites. For the Nenets people Vaigach Island has historically sacred status. The island preserved traditional crafts associated with the use bio resources capacity: herding, hunting, and fishing. Currently, human impact small and confined to the

neighborhood Varnek village in the southern part of the island. Local roads tracked reported in the north-western part of the island and are associated with geological activity.

Thus, there are 10 protected areas (PAs) covering 974.05 hectares in NAO, of which 797 hectares - is part of the land with ponds and 181.9 hectares - the sea area. Land portion of the protected area is only 4.5% of the area of the district, which is small in the face of strong economic development in the territory. [31]

Reaching and projected changes in permafrost conditions can significantly influence the situation in areas where anthrax cattle burial, especially in those areas where common with very high MMP that result thawing can lead to increased water logging areas and thermo erosion thermo karst activity. Necessary to conduct geotechnical and permafrost research in the field in order to clarify the situation and to develop measures to protect against emergencies in close collaboration with the users of the territory, the administration of villages, districts, counties, emergency, etc.

### ***Conclusions***

Ecosystems of the Northern European Russia differ weak resistance to human impacts and extremely slow rate recovery. This largely determines the specifics of the biota and ecosystems. Among the types of human activities should highlight those that are associated with gathering, hunting, grazing and are aimed primarily for use bio resources potential of landscapes, as well as those effects which are associated with local zones of production and urbanization. Settlement enterprise, housing facilities, roads, airfields, military bases have IMPACT - focal or linear - the nature and distribution in the study area are confined mainly to the coast of the White, Barents and Kara Seas. We should note the kind of local human impacts inherent in the entire region. This is a violation of vegetation when driving tracked vehicles, and the construction site without following the rules and principles of construction on frozen ground, accompanied by the destruction of the IMF, the IMF and local pollution with fuel, lubricants, heavy metals, leading to the accumulation and concentration of these pollutants in the STS and a number of others.

Small indigenous people of the tundra preserves traditional crafts associated with the use bio resources capacity: herding, hunting, and fishing. Significant effect on the upper layers of frozen soil have driven thousands of reindeer migration that lead to tundra. Migration routes heavily disturbed wetlands and moss tundra. At long parking deer herd grass-sedge-moss tundra destroyed completely. The formation of secondary succession. The need for monitoring of traditional migration routes of deer in order to determine the extent of human influence on permafrost land-

scapes and measures to reduce it, as well as the effects of climate change on the time and space to shift their migrations.

Now in the Kanin Peninsula, Ugra, and Bolshe zemelskaya Malo zemelskaya tundra is a change of the environment in areas where hydrocarbon deposits are developed. If 30 years ago, they were chiefly territory ecological framework, now there is a constant increase in the impacted areas permafrost zone of impact.

One of the fundamental measures to reduce anthropogenic impacts on permafrost conditions of the study area may be the creation of protected areas: the Kanin Peninsula and Vashutkinyh lakes - natural monuments of the regional importance, which will either be completely excluded from natural resources, or to reduce the load on the number of natural systems. The need to include the territory in the list Vashutkinyh Lakes wetlands of national importance.

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## Informational resources

Kola North: Encyclopedic reviewers<sup>1</sup>

<sup>1</sup> Kola Peninsula: encyclopedic essays. Popular science publication / comp. and Society. Ed. AS tub. Murmansk: educational center "well-wishers", 2012. 504p.

A new book on the Kola North, published in 2012, is made in the genre of encyclopedic essays and beautifully illustrated. In the preface, "From the Editor" by A.S. Lokhanov emphasizes: "We set out to not only tell about the Kola North, but also to show it in the book so many pictures." It also says: "Our book - is a declaration of love to the Kola land. Polonius our heart has its edge, speaking the language of science (significant distinguishing it) properties and characteristics."

In different historical periods, this end of the earth as a Russian Lapland, Murmansk, Kola, Kem, Alexander, Murmansk county Arkhangelsk province. In February-March 1920, there was a very short Murmansk province, established the Provisional Government of the Northern Region. Decree of the Central Executive Committee on June 13, 1921 was established Murmansk province in the RSFSR, which in 1927 became part of the Leningrad Region as the Murmansk Region. Murmansk was founded May 28, 1938 Today is a strategically important, industrialized entity of the Russian Arctic, northern outpost of our state. Here are the Northern Fleet of the Russian Navy, is based nuclear icebreaker fleet, of the northern sea route.

Encyclopedic essays cover in a single book, many aspects of life of the Kola Peninsula in the historical dynamics from the Mesolithic to the present. The content of the book is revealed in the following topics:

- overview of the Murmansk region;
- toponymy of the Kola Peninsula;
- the nature of the Kola Peninsula;
- the Murmansk region;
- history of Murman;
- archaeological sites of the Kola Peninsula;
- the scientific research of the Kola North;
- economy of Murmansk Oblast;
- fishing capital;
- public education in Murmansk;
- Health in Murmansk;
- architecture and urban planning at the Kola Peninsula;
- art in Murmansk;
- religious life in the Kola Peninsula;
- physical culture and sports in the Murman;
- tourism in the Kola North;
- the Northern Fleet;
- Sami;
- Pomorie
- chronology of the Kola Peninsula;
- pointer cuts;

➤ authors encyclopedic essays.

A new book on the Kola North is of interest to readers. In essence, it is a presentation of the Murmansk region, which includes not only the text of essays and drawings, photos, maps, tables, which almost every page is full of this work. Pleased to present this book, it is interesting to read as a specialist, or to any pupil, student. The book is made with love for the land, can not cause a positive response in the soul of the North.

Encyclopedic essays on Kola Peninsula will undoubtedly take its worthy and significant place among other similar publications of the rugged and beautiful land as "Kola encyclopedia" - a regional encyclopedia universal, scientific reference book on the Murmansk region, including information on its nature , history, politics, economy, social, culture, art, and the place and role of the region in the history of Russia, the neighboring regions and countries, the people who have made an outstanding contribution to its development, as well as scientific works of the Kola science Centre, Murmansk State Technical University, Murmansk Humanities University in various disciplines and other publications regional orientation.<sup>2</sup>

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<sup>2</sup> «Kola Enciclopedia»: Problems and perspectives. URL: <http://vmnews.ru/uncategorized/2011/12/02/kolskaya-entsiklopediya-problemyi-i-perspektivy/> Date of access: 27.01.2013). In 2008-2009. was published the first two volumes. On the 75th anniversary of the Murmansk region in 2013 to be released 3rd and 4th volume of the "Encyclopedia of Kola." This universal reference encyclopedic edition all articles published in alphabetical order. In addition, the personalities are, supposed to include statistics and other background information, to publish the electronic version of "Kola encyclopedia."

### New journal «Arctic news»<sup>1</sup>

In 2012 was published four issues of the new information and analytical journal "Arctic news." The journal is published by the Russian Geographical Society. Chairman of the Editorial Board is a member of RAS, Director of the Institute of Geography, Russian Academy of Sciences V.M. Kotlyakov. His deputy - A.V. Vasiliev, Ambassador for the Russian Foreign Ministry, a senior official of the Russian Federation in the Arctic Council and the Barents Euro-Arctic Region. Editor in Chief – A.A. Ignatiev, diplomat.

**Reference:** A.A. Ignatiev – is an ambassador Extraordinary and Plenipotentiary of the Russian Federation, was born in 1943, graduated from the Moscow State Institute of the USSR Ministry of Foreign Affairs in 1966, the Diplomatic Academy of the USSR in 1980, worked in various positions at the Ministry of Foreign Affairs of the USSR and RF diplomatic missions abroad, 1992-1997. - Advisor to the Embassy of Russia in the Republic of Finland, 1997-2000. - Deputy Director, European II Department, May 2000 - January 2001 - Director of the Second European Department of the Russian Foreign Ministry. Since January 2001, he was Ambassador Extraordinary and Plenipotentiary of the Russian Federation in the Republic of Kenya and the Permanent Representative of the Russian Federation to the International Organizations in Nairobi (Kenya) in combination, released in July 2005 in connection with his transfer to another job. Chairman of the Committee of Senior Officials of the Arctic Council (2004-2006), Ambassador at Large of the Russian Foreign Ministry. Has the diplomatic rank of Ambassador Extraordinary and Plenipotentiary (granted by presidential decree on February 6, 2007). Fluent in Finnish, English and Swedish<sup>2</sup>.

The journal has regular columns about the international cooperation projects and activities of the Arctic Council, the Northern Sea Route, the Arctic regions, rich information section. The main thrust of this periodical, of course, is international cooperation activities of the Arctic Council. In the fourth issue of the journal in 2012 published an article by Ambassador-at-Large of the Russian Foreign Ministry Alexander Vasilyev of the Senior Arctic Officials in Haparanda<sup>3</sup>. Magnus Johannesson, the first director of the Permanent Secretariat, reported on the work of the Arctic Council, chaired by Sweden. Results of operations and prospects of the Working Group on the Conservation of Arctic Flora and Fauna led E.E. Syroechkovsky, chairman of CAFF, head of the center of biodiversity in the Arctic Institute of Environment Ministry of Natural Resources. Deputy Director of the international activities of Russian Emergencies Ministry I.A. Veselov spoke about international training in search and rescue in the Arctic, "the Greenland Sea 2012." About the Arctic Council – is the Report on the viability of the Arctic (Arctic Resilience Report). Article published collective Annika Nilsson (Stockholm Environment Institute), Sarah Cornell and Kathy Wilkinson at the

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<sup>1</sup> URL: <http://www.arctic-herald.ru/>.

<sup>2</sup>Resources: URL: <http://andrianov.viperson.ru/wind.php?ID=12165>; <http://www.biografija.ru/biography/ignatev-aleksandr-aleksandrovich.htm> (Date of access: 31.01.2013).

<sup>3</sup> Arctic news. 2012. № 4. C. 24—27.

Stockholm Center for Sustainable Development, Tatiana Vlasova (Institute of Geography, Russian Academy of Sciences). The purpose of this project is to study and anticipate potential threshold changes in the Arctic and the ability of ecosystems and society to react to these changes.

It must be emphasized that the journal "Arctic news" is meaningful and necessary niche among other periodicals on Arctic issues (electronic scientific journal "Arctic and North," "Russian polar research" – is the information-analytical collection SRC RF AARI, etc.) being, in essence, the spokesman of Russia's official position on international relations in the Arctic, publishing exclusive, succinct information on the content, as the saying goes, "first-hand" about the work of the Arctic Council. "Subject Arctic today attracts attention - said in an address to the reader is the first issue of this publication, Russian Foreign Minister Sergei Lavrov. - The dynamic changes in the region not only create additional opportunities and new challenges. It is gratifying that the constructive dialogue and energetic interaction of the Arctic basin are the prevailing trend. The Arctic – is our common home, and Russia is actively involved in its construction. "<sup>4</sup>.

Each of the four rooms full coverage as the life of one of the inner Arctic regions of the Russian Arctic. The first issue was devoted to the Nenets Autonomous District, the second - the Republic of Sakha (Yakutia), the third - the Yamal-Nenets Autonomous District, the fourth - the Arkhangelsk region. <sup>5</sup>. The latest issue features an interview with the governor of the Arkhangelsk Region I.A. Orlov, two articles of his deputy A.V. Alsufeva, ASC chairman of UB RAS V.I. Pavlenko and other materials on the development of the subject of the Russian Arctic.

Information materials are of the great interest, published under the heading "Information". The fourth issue, for example, published an interview with the governor of the Nenets Autonomous District I.F. Fedorov, Post Doctor of Military Sciences G.V. Ivanov on the activities of the Expert Council of the Arctic and Antarctic by the Assistant Governor of the Nenets Autonomous District of D.P. Selivanov prospects of Naryan-Mar sea port, and a short note about the city of Severodvinsk shipbuilders.<sup>6</sup>.

The editorial board of the electronic edition of the scientific journal "Arctic and North" wishes to the shef editor of the journal "Arctic news" A. A. Ignatiev and his colleagues to further success in informing the general reader, both in Russia and abroad about the current situation in the Arctic, in the preparation and publication of materials in order to protect and promote the national interests of the Russian Federation in the Arctic macro-region.

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<sup>4</sup> Arctic news. 2012. № 1. p. 2—3. URL: <http://www.arctic-herald.ru> (Date of access: 31.01.2013).

<sup>5</sup> Arctic news. 2012. № 1—4. URL: <http://www.arctic-herald.ru> (Date of access: 31.01.2013).

<sup>6</sup> Arctic news. 2012. № 4. p. 162—189.

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**The mist is Near us. Matochkin Shar**  
**(photo U.A. Nesteki, a diplomat of the photo competition «My North. My Arctic»)**



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**ABSTRACTS, KEYWORDS****Regionology of Arctic and North: management, economy, society, culture**

© *Konov A. M. Interdisciplinary approach to the solution of problems of management of the Arctic zone of the Russian Federation*

**Abstract.** The article analyzes the possible ways of the decision of problems of management of the Arctic zone of Russia from the position of the interdisciplinary approach.

**Keywords:** *Arctic, policy, management, problem, Russia, trust, respect, and an interdisciplinary approach*

© *Spiryagin V. I. Theoretical approaches to study of rate proportions for two regions*

**Abstract.** This article is dedicated to long-term forecasting of growth rates on base of development of problems of the North and Arctic. Information is presented in this work about condition and particularities of operations of region, correlative features of prospects are determined.

**Keywords:** *Arctic, north economy, North, Russia, long-term strategic landmarks, Far East, sustainable development*

© *Fauzer V. V. The demographic potential of Russia's Northern regions as a factor of the economic development of the Arctic*

**Abstract.** The demographic potential of Russia's northern regions on the basis of population dynamics, fertility and mortality is considered; the reasons for the migration of population movement are given; the affect of demographic potential of the northern regions on the economic development of the Arctic is shown.

**Keywords:** *demographic potential, migration, the northern regions, the economic development of the Arctic*

© *Grushenko E. B. Cultural and natural heritage, as the basement for the development of the ecological and ethnological tourism in the European North of Russia*

**Abstract.** In the article notices, the problems and perspectives of the tourism potential of the regions and tourism centers in the European North. Special attention is paid to the development of the ethnographic and ecological tourism.

**Keywords:** *museum-reservation, ethnographic tourism, Karelia, Veliky Ustyug, rural farm agro-eco tourism*

**Geopolitics**

© *Khramchikhin A. A. Will be the Arctic last redivision of the world theater?*

**Abstract.** The possibility of military conflict in the Arctic between Russia and NATO countries is illusory, if Russia can maintain its military capabilities at least at current levels. In the more distant future, a party can be a redistribution of the Arctic, China, is experiencing growing demand for natural resources and rapidly increasing military power.

**Keywords:** *Arctic, wars, USA, NATO, China*

### Historical sciences

© *Lavrentieva A. Y. Solovetsky forum: on a way to civil society (1989—2012)*

**Abstract.** The paper outlines the key milestones of the informal social movement 'Solovetsky forum' and his contribution to the development of civil society in Russia.

**Keywords:** *history, Solovetsky forum, a social movement, Solovetsky stone, citizens*

© *Lukin Y. F. City of archangel Michael*

**Abstract.** In this article the initial history of Arkhangelsk, which owes its calendar with date of foundation of the monastery of Archangel Michael in 1388.

**Keywords:** *monastery, military fortress-city, date of foundation*

© *Vazhenin B. P. An enigmatic iron artifact from Oksa bay coast, the north of The Sea of Okhotsk*

**Abstract.** A forged iron item found on the Sea of Okhotsk shore displays some similarity with items representing different cultural traditions, but, however, it appears somewhat different from all of them. It can be a walking-stick, pick, graze or poker. Its ethnic origins, place and time of its manufacturing can be established, if providing similar artifacts are reported from other areas.

**Keywords:** *iron artifact, graze, chisel, the Evens, the Evenks, the Koryaks, Magadan, tsunami, the Sea of Okhotsk*

### Biology, sciences about the Earth

© *Iglovsky S. A. Of Russia and their consequences*

**Abstract.** The anthropogenic changes of permafrost conditions in the key areas of the European North of Russia – village Koida (Mezenskaya tundra), village Nes (Kanin peninsula), village Shoina (Kanin peninsula), Mezen city, Vashutkini lakes (Bol'shezemel'skaya tundra), Amderma (Yugorsky peninsula), the northern part of the island Vaigach. Geocryological characteristics of sites and the main types of anthropogenic changes in permafrost conditions describe.

**Keywords:** *anthropogenic transformation, permafrost conditions, Dvinsko-Mezenskaya plane, Kanin peninsula, Vashutkini lakes (Bol'shezemel'skaya tundra), Amderma (Yugorsky peninsula), island of Vaigach, cryogenic processes*

© *Loshkareva A. R., Koroleva N. E. Special traits of the large-scale mapping in forest-tundra zone*

**Abstract.** Some special characteristics and process of large-scale mapping of forest-tundra zone in the northern part of Kola Peninsula are discussed and illustrated. Vegetation types of mountain birch forest, wetlands and tundra are characterized.

**Keywords:** *large-scale vegetation map, space images Landsat TM, legend, structure of vegetation, tundra, forest-tundra, mires, Murmansk province, Kola Peninsula*

## **ARCTIC and NORTH**

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